The Personal and Professional Development of a Radical Non-radical: An Overview

Professor M.R. Mathews
Formerly, Professor and Head
School of Accounting, and
Sub-Dean Accounting
Charles Sturt University
Bathurst,
NSW 2795
AUSTRALIA

February 2006

An overview presented in partial fulfillment of the requirements for the award of the degree of Doctor of Philosophy of the University of Glamorgan.

Glamorgan Business School
DECLARATION

This is to certify that the work submitted in this thesis under the title: The Personal and professional development of a Radical Non-Radical: An Overview, is the result of original research. It has not been accepted in substance for any degree and is not currently submitted for any other award. All authors and works to which reference has been made are fully acknowledged.

Signed
Candidate..............................................

Supervisor...............................................

Date......................................................
ACKNOWLEDGEMENTS

I acknowledge the assistance and support of both Professor Neil Marriott and Professor Hugh Coombs of the Glamorgan Business School in assisting me in completing this project. They provided timely and valuable feedback and advice about format and presentation and were excellent hosts during a visit by the candidate to the Glamorgan Business School in September/October 2004, which provided the encouragement to begin the process.
This overview explains the perceived origins of the candidates research record beginning with the study and work experiences which led the candidate to the research work that has taken up the majority of his professional career. The overview then considers a number of important publications in three groups which, it is argued, have influenced others interested in social and environmental accounting. In addition some investigation of the extent of citation of the candidates work has been reported herein, together with details of a number of publications that have reproduced the candidates work as examples of important contributions to the study of this sub-branch of accounting. The overview concludes with statements justifying the overall contribution as being worthy of consideration for the award of the degree of Doctor of Philosophy by publication.
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Declaration</td>
<td></td>
<td>i</td>
</tr>
<tr>
<td>Acknowledgments</td>
<td></td>
<td>ii</td>
</tr>
<tr>
<td>Abstract</td>
<td></td>
<td>iii</td>
</tr>
<tr>
<td>Table of Contents</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>1.0</td>
<td>Introduction</td>
<td>4</td>
</tr>
<tr>
<td>2.0</td>
<td>The overview</td>
<td>4</td>
</tr>
<tr>
<td>2.1</td>
<td>Summary</td>
<td>10</td>
</tr>
<tr>
<td>3.0</td>
<td>Introduction to the three themes</td>
<td>12</td>
</tr>
<tr>
<td>4.0</td>
<td>Theme 1: Development of normative models</td>
<td>12</td>
</tr>
</tbody>
</table>


3.44 Mathews, M.R. (2003). Revisiting externalities and exploring the Environmental Account as a basis for internalising internal costs. *Accounting, Accountability and Performance, 9*(1), 35-60

4.1 Contribution to knowledge: Through the development of normative models | 14 |
5.0 Theme 2: The development of classification and analytical frameworks


5.1 Contribution to knowledge: Through the development of classification and analytical frameworks

6.0 Theme 3: Educational programmes to assist the development of social and environmental accounting


6.1 Contribution to knowledge: Through the development of educational programmes

7.0 Concluding statement
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.0</td>
<td>Appendices</td>
<td>23</td>
</tr>
<tr>
<td>8.1</td>
<td>Publications included in the final list for consideration</td>
<td>23</td>
</tr>
<tr>
<td>8.2</td>
<td>Publication list : All refereed publications</td>
<td>25</td>
</tr>
<tr>
<td>8.3</td>
<td>Development of a citation record</td>
<td>28</td>
</tr>
<tr>
<td>8.4</td>
<td>Journals in which the work has been cited</td>
<td>29</td>
</tr>
<tr>
<td>8.5</td>
<td>Citations in accounting texts</td>
<td>29</td>
</tr>
<tr>
<td>8.6</td>
<td>Other evidence of support</td>
<td>30</td>
</tr>
<tr>
<td>8.61</td>
<td>Message from Professor L.D. Parker</td>
<td>30</td>
</tr>
<tr>
<td>8.62</td>
<td>Letter from Professors Parker and Guthrie re AAAJ</td>
<td>31</td>
</tr>
<tr>
<td>8.63</td>
<td>Communication from Professor R.H. Gray re: Festschrift</td>
<td>33</td>
</tr>
<tr>
<td></td>
<td>Detailed CV</td>
<td>35</td>
</tr>
</tbody>
</table>
1.0 Introduction:
The regulations for the degree of Doctor of Philosophy (PhD) of the University of Glamorgan provide for the award based on a coherent collection of publications together with an overview. The collection offered here covers a period of more than 20 years and consists of eighteen items grouped into three themes. Each theme is considered separately and a case is made for the originality of the contribution to knowledge by the articles within the theme. Although an extensive contribution to knowledge has also been made through conference papers, seminars and working papers none of those outlets for scholarship have been included here. The case for the award of the degree is based solely on refereed journal publications and books.

2.0 The overview:
The candidate has had a long and interesting period of development as an academic and scholar beginning as a 16 year-old school leaver from the lower stream of a modest Grammar School in 1956. Employment was initially as a laboratory worker with part-time day release to study for an Ordinary National Certificate in Chemistry (ONC) at a local Technical College. The ONC was attained in 1960 and after several laboratory positions the candidate entered the ranks of junior management as manager of a small factory located in the Forest of Dean in Gloucestershire in 1962 and began to study for membership of the British Institute of Management (AMBIM) at a local Technical College. Economics, management and accounting were studied. With a young family to support the candidate emigrated to Australia in January 1964 without completing the course of study, but having demonstrated some academic ability in business studies subjects.

The following six years were spent in Melbourne and Perth as a paint chemist and in junior managerial positions with some part-time study of subjects such as paint technology and business studies. In 1968 the candidate returned to Melbourne as a shift chemist at a polystyrene plant. The candidate was subsequently given the opportunity in 1970 to transfer to a new plant within the same complex, manufacturing latex for carpet backing. With this new position came the opportunity to undertake part-time study at a local College of Advanced Education (CAE) for an undergraduate Diploma in Business Studies majoring in Accounting. The institution was Footscray Institute of Technology in Victoria and is now the
Victoria University of Technology. Some credit was obtained for prior study in some of the first year subjects. As a mature student of 30 years of age the candidate surprised everybody (including himself) by achieving very high grades in the remaining first year subjects, and became determined to excel for the entire programme. Four semesters of part-time study was succeeded by two semesters of full-time study supported by a secondary school teaching bursary and accumulated annual leave from the employer. During the period of full-time study additional study was undertaken (an overload) in order to finish the Diploma in three years. At this point the candidate was suffering from chemical dermatitis thus preventing any return to laboratory work.

After completing the undergraduate Diploma, which also gave provisional membership of the Australian Society of Accountants at that time, the candidate was committed by the educational bursary to undertake training as a secondary technical school teacher and complete a Diploma of Education at the State College of Victoria at Hawthorn in Melbourne, which required that two days be spent in a school and three days at the training college. In addition the candidate undertook a degree conversion programme (three semesters of part-time study) at Swinburne Institute of Technology (now Swinburne University) studying Economics, Finance and some Management subjects. The candidate gained a prize in Economics and completed the conversion course in one year, thus completing the Dip Bus Studs, BBus, Dip Ed and ASA in four years.

Having discovered previously unknown abilities the candidate was eager to pursue further study at the graduate level and to join the staff of one of the Colleges of Advanced Education (CAEs). However, this required a Masters degree and at that time (1974-1975) higher education in Australia was still strongly influenced by the binary divide between the CAEs and the university system. The candidate found that that despite achieving excellent academic results to date, enrolment in a Masters degree could not be achieved and that the expectation was that CAE graduates would proceed to enrol in a Graduate Diploma on offer by a CAE. These qualifications were not academic and often offered advanced technical treatment of Auditing Systems or Management Accounting, rather than academic theorising and research preparation so that even gaining that qualification did not greatly assist entry to a Masters degree.
In frustration the candidate and family returned to the UK to seek employment and study opportunities and remained there from 1975 to 1979. During this period the candidate found employment as a Lecturer in Business Studies at Worcester Technical College and was accepted as a postgraduate student at The University of Birmingham on the Master of Social Science (MSocSc)(Accounting) degree. At that time Professor T.E. Gambling was the Head of the Department, the atmosphere was intellectual, and just the sort of place in which the candidate had been seeking to study.

The events recounted so far have shown that the part-time study embarked on in the 1970s was crucial to the pattern of intellectual and professional development required by the candidate to change life direction. The 1975 to 1977 graduate enrolment and employment combined to form a second defining event. The two and a half years as a Lecturer in Business Studies at Worcester Technical College (Jan 1975 to August 1977) was a turning point in the development of the candidate as a teacher, and the enrolment at the University of Birmingham was significant in the development of the candidate as a scholar and researcher. The MSocSc degree at that time required advanced coursework in three subjects (known as Accounting I, II, and III and a dissertation). The content of each subject differed considerably with Accounting I containing accounting theory with a generous dose of Russian Accounting Systems since that was the research area of the lecturer, and the first exposure that the candidate had to social accounting issues. Accounting II was management accounting and taught by Professor Gambling based on his PhD thesis which had developed into a text-book, Accounting III was a finance course and not all that different from that which had been studied at Swinburne as part of the degree conversion programme described above. The dissertation written after the conclusion of the coursework was entitled 'The Disclosure of Lease Arrangements in Financial Statements' and was passed without any corrections being needed.

The introduction to social accounting issues and the dissertation on the disclosure of leases led to the first in a long list of publications. Leases are theoretically similar to executory contracts and the first article to appear in the Australian Accountant was a normative-deductive article arguing the case for the development of an accounting and disclosure for executory contracts. Although the dissertation was cited by professional bodies in their
development of a standard for leases, the advocacy of disclosure of executory contracts fell on 'deaf ears' and little progress has been made in over 20 years.

After completion of the MSocSc, the candidate moved to Loughborough University of Technology to take up a Lecturership in the Department of Management Studies at that time led by Professor John Sizer. The candidate was involved initially in teaching and tutoring management accounting especially to non-accounting majors. The mentor appointed by Professor Sizer to introduce the candidate to academic life confirmed that research was required, but counselled against enrolment in a doctoral degree arguing that, at least in the UK, publications were more highly respected. In the context of Australian and New Zealand academia this may not have been the best advice in hindsight. The candidate spent two years at Loughborough and although qualified to the extent of MSocSc, BBus, DipEd, AASA, felt the need to undertake further study in education to become a better and more rounded academic with a better understanding of education as a companion discipline to accounting. This led to enrolment at the University of Nottingham in the part-time MEd programme. One year was completed before the candidate underwent a major change in circumstances in moving to New Zealand in October 1979. Research whilst at Loughborough consisted of completing the work for the article on executory contracts already referred to, and extensive reading in the area of social accounting (which at that time encompassed environmental issues as well). The latter had a long gestation period from the original study in Birmingham eventually resulting in the first refereed article by the candidate, published in the US Journal of Accounting and Public Policy (JAPP) in 1984. This work eventually became a Masters thesis and a book. The content was the product of considering a large volume of literature and recognising the difficulty in reconciling different strands and the influence of normative-deductive approaches which were accepted more readily at that time than they are today, because of the rise of agency theory and positive accounting theory. The work of Chambers, Stirling, Edwards and Bell and others of the 'General Normative Theory Period 1955-1970' (Henderson and Peirson, 1983) encouraged work of this nature, and there may have been some influence from Gambling (1974). This 1984 paper ('A suggested classification for social accounting research') has been cited over the past 20 years, and the general ideas therein have influenced later work as will be demonstrated below.
In 1979 after publication of one article in a professional journal, the candidate was encouraged by his family to return to the antipodes, and after a few months of searching found a position as a Senior Lecturer at Massey University in New Zealand. The candidate spent 22 years on the staff of Massey University, beginning as a Senior Lecturer from 1979 to 1984, gaining promotion to Reader in 1984 and was advanced to a Chair in Accounting from January 1985. As a senior staff member in a relatively poorly qualified and inexperienced Department, the candidate was expected to teach graduate students and supervise research as well as developing a personal research agenda including publications in a short period of time. In addition the candidate resumed the study of education completing a Master of Philosophy in Education in 1984.

The reward of a Chair after six years (1979 to 1984) demonstrated how much the candidate had achieved. The 1984 JAPP article was the first of a number of successful publications in the area of social accounting. The candidate continued to use the normative-deductive paradigm for theory development and was also interested in the classification of the literature relating to the social accounting area, as well as attempting to assist newcomers to achieve a speedy understanding of what was becoming a large volume of literature. A thesis was submitted to Loughborough University of Technology based on an expansion of the work done for the 1984 JAPP article. It was deemed worthy of the award of a Master of Philosophy by research in accounting and this was conferred in 1988. The next turning point, comparable to 1979 was an invitation in 1989 by the Dean of the Faculty of Business Studies to become Associate Dean on a shared-time basis whilst retaining the Chair in the Department of Accounting and Finance. This role continued for seven years during which period about 60% of time was devoted to Faculty administration, including the role of Director of Graduate Studies, and 40% as Professor of Accounting including graduate teaching and research supervision. The personal research programme continued with an increasing academic reputation as evidenced by invitations to become a member of a number of Editorial Boards, to present papers, act as Chairperson and discussant at international conferences and to review journal submissions on a regular basis.

After three years as Associate Dean and having earned three Masters degrees from three different universities in accounting and education, the candidate was granted a 12 month study leave in 1991-92 and went to study and teach at the University of Montana (which has
a sister university arrangement with Massey University). During this period the candidate taught both undergraduate and graduate students in the School of Business Administration and studied as a graduate/doctoral student in the School of Education. This was another defining experience for the candidate, leading to a Doctor of Education degree majoring in Educational Leadership being conferred in 1993. The rapid progression through this programme was the result of credit granted under the US Doctoral program for the considerable prior study in many places including the incomplete and unused MEd study at Nottingham University. In order to maintain the links with accounting and accounting research the doctoral dissertation was entitled 'The Reactions of Academic Administrators to the Accounting Education Change Commission 1989-1992'.

This qualification fitted well with the role of Associate Dean and Director of Graduate Studies to which the candidate returned in 1992, continuing in that role until the end of 1995 when the Dean left to take up a role as Head of a Government Department and the candidate became Acting Dean for the whole of 1996. Research and Scholarship continued throughout this period with an additional interest in that the candidate now published work related to accounting education in addition to previously established interests. Although a number of articles have been published in accounting education journals these have not been identified as a separate theme within the case for the PhD by publication because the candidate has already earned the EdD and wishes to balance this achievement with the PhD for published work in accounting including education related to social and environmental accounting.

In late 1996 the candidate competed unsuccessfully for the substantive position of Dean of the Faculty of Business Studies. The then Vice-Chancellor appointed an outside candidate to the position and the candidate returned to his full-time tenured Chair in the School of Accounting. Research and teaching continued, however, but the negative consequences of the rejection led to the candidate negotiating an early retirement contract in early 2000, leading to several visiting appointments in the US and the UK and then in 2001 the candidate was approached to apply for the position of Head of the School of Accounting at Charles Sturt University in Bathurst, New South Wales, Australia. Shortly after arriving on a three year contract in July 2001 the candidate was appointed Sub-Dean for Accounting with responsibility for the accounting programme, which is taught in four locations across a wide geographical area. The candidate has become more involved in leadership and administrative
issues, attempting to introduce and propagate a research culture where there was very little. Success in this endeavour led to an extension of the original contract by a further 13 months and a period of study leave in 2004. Research and publication has continued with further work on classifying the social and environmental accounting literature and attempts to produce normative models to assist in the debate about the shape of accounting in the future (this includes macro-social disclosures and accounting for externalities) and adapting accounting education to prepare students for this ‘new accounting’. The future direction for the candidate after retirement at the end of July 2005 is problematic. Offers of adjunct appointments have been received from several universities within Australia and New Zealand with research students to supervise, the candidate would also like to have opportunities to visit universities in the UK.

2.1 Summary:
The candidate has had an eclectic academic experience with scholarship divided between non-mainstream accounting research and the study of education including publication in accounting education journals. There have been a number of defining experiences as related in this overview and many have coloured the candidates’ view of the world. Thus far this overview has not made clear that the socially conservative world-view of the candidate does not always sit well with the most radical of the ideas in social and environmental accounting and marks out boundaries that the candidate does not wish to cross. For example, some social accountants (for example Tinker 1985) have argued that accounting as a discipline and accountants as practitioners and professionals are responsible for maintaining the status-quo in society and that this conservatism is responsible for a range of undesirable consequences including the continuation of the capitalist system. The candidate does not share this view and is not overly disturbed by the maintenance of the status-quo in society.

However, although not a radical in one sense the candidate does have ideas that are considered radical by others. The candidate supports a social-contract approach to the corporate world and has argued that corporations should fully disclose their impact on society both positive and negative whether through a Triple Bottom Line (Elkington, 1997) or Mega-Accounting approach (Mathews, 1997b, 2002) to discharge the social contract. However, this is a very different view from those who are opposed to capitalism per se. The candidate also believes that his role is to work for the development of accounting which could take one
of three forms; enhancing the accuracy of financial identities that are already disclosed; arguing for the extension of accounting to include financial matters that are not already included; and finally the extension of reporting to include the social and environmental dimensions.

As a graduate student the candidate was influenced by what was later called the General Normative Theory Period (1955-1970) (Henderson and Peirson, 1983) and has sought to widen the boundaries of the discipline by producing normative-deductive models. It has been argued by some that the candidate has a lack of passion in his approach such as that which is found in the writings of Marxists or ‘deep-green’ environmental activists and the candidate has been criticised as a supporter of the status-quo. The candidate is on record as supporting evolution rather than revolution. This is still the perspective that is taken, nevertheless a significant contribution can be shown in the following discussion of the themes relating to the development of normative models, classifications and analytical frameworks, and educational programmes to assist those intending to work in this area of research. The candidate has always been concerned with achieving an outcome, changes to the way accounting is used rather than simply academic theorising.

The candidate has been in academia since 1975, a Professor since 1985, and is currently Professor of Accounting, Head of School and Sub-Dean for Accounting at Charles Sturt University, a multi-campus university in Australia.

The candidate has published 49 refereed articles and has others in progress towards publication. In addition, as a successful author he has been, or is currently, involved as a referee and member of the editorial teams associated with the following international journals:

*British Accounting Review* (past)
*Accounting Forum* (current)
*Accounting Education: an International Journal* (current)
*Accounting Auditing and Accountability Journal* (current)
*Qualitative Research in Accounting and Management* (current)
*The Australian Journal of Accounting Education* (current)
*The Asia Pacific Centre for Environmental Accounting Journal* (current)
*Social and Environmental Accounting* (current)
The candidate has acted as examiner for 25 Masters and Doctoral theses including many by candidates who have now made significant contributions to the SEA area.

His standing in the SEA area generally was recognised recently through an appointment as CSEAR-ACCA Fellow for 2004 at the CSEAR (Centre for Social and Environmental Accounting Research) annual workshop in September 2004. The candidate was also recognised in 2005 by the award of a Lifetime Service Award at the annual conference of the British Accounting Association Education Special Interest Group in Aberdeen. Since most of the writings and service to accounting education have involved accounting theory and SEA education in some form, the award is relevant to this discussion.

3.0 Introduction to the three themes:
My interest in social (and later environmental) accounting has continued since my first experience as a graduate student in 1975. Since then 35 refereed articles have been published in the social and environmental (SEA) area (approximately 70% of the total output in this genre). In particular, research and publication interests in SEA have been concerned with three themes; the development of normative models of disclosure, the classification of the SEA literature, and changes to curricula to foster the development of SEA within educational institutions and the profession. Each area is addressed in turn below.

4.0 Theme 1: The Development of Normative Models:
Models have been developed to encourage the extension of accounting and reporting into the new area of providing social and environmental information. Six articles have been selected from those published in this area. A number have been frequently cited in the literature. The publications listed below are numbered to fit with my attached detailed CV. In addition to the published articles a number of aspects of model building were discussed in my book Socially Responsible Accounting (1993). Apart from the first paper in 1984, only the more recent papers have been included herein.

The journals in which these items appeared included:


This is a paper that has been cited and is viewed by some as almost a seminal work.


These two papers (3.33 and 12.17) are related. The author puts forward the view that for social and environmental accounting to be accepted proponents need to develop a conceptual framework, a set of standards and a system of audit thus building upon the strengths of the post-1970s movement in financial accounting and reporting. The themes and arguments have been used with approval within a new textbook by Henderson, Peirson and Harris (2004). The authors consider that the mega-accounting concept is equivalent to the better known triple bottom line approach (Elkington, 1997). (1) Paper 3.33 has been cited frequently (refer Table 1).


3.36 is a philosophical paper written with a US co-author who is a committed environmentalist. The paper argues inter alia that the accounting profession could lose its claims to legitimacy if it continues to ignore societies’ demands for additional disclosures about the impact of organisations on society. The candidate contributed equally in the authorship of this paper.


Papers 3.35 and 3.44 are attempts to propose extensions of existing accounting and reporting. The issue of macro-social accounting was discussed in the 1984 paper and the 1993 book. However, by 2000 very little had been proposed and the issue was largely ‘dead’ probably because it was not seen as an accounting and reporting issue or as ‘too hard’ for progress to be made. In order to stimulate debate this paper was prepared. The main supporter was I understand Professor David Owen (Nottingham Business School) who saw it as making
contribution to the debate. Paper 3.44 deals with the identification, measurement and reporting of externalities which were also discussed in the 1984 paper and the 1993 book but which did not achieve traction in the literature. This paper was based on Canadian sources and proposed a model for use by industry and commerce. The editor of AAP had two conflicting reports the positive report coming from Professor Craig Deegan (RMIT University) who heard the paper presented at a conference and supported it very strongly, the negative comments were associated as usual with concern that the accounting for externalities was part of accounting.

The papers are associated, and make a contribution, through multiple attempts to influence others to extend the boundaries of accounting and reporting to include social and environmental disclosures, externalities, and macro-social interrelationships between the public and private sectors.

As noted in the overview, the influence of normative-deductive writers and theoreticians (for example Chambers and Gambling in particular) was strong. The candidate is not persuaded that the discipline can move forward without clear statements of what should be attempted, even if these statements have to be subjected to the watering down effects of 'small p' political negotiations in order to be implemented. There has been relatively little interest in papers dealing with externalities regardless of the authorship, the exceptions are writers on environmental management accounting (refer Schaltegger et al., 1996; Schaltegger and Burritt, 2000).

4.1 Contribution to Knowledge: Through the development of normative models

The normative paradigm is not one that is currently favoured by mainstream accounting researchers although the period 1955-1970 has been described as the general normative accounting theory period. However, there is a need for this debate and despite current research favouring different methods in the newer areas it may be argued that there is clearly a place for debate and attempts to lay out the field to be addressed by researchers and practitioners. The works listed above have made a significant contribution to a rich field, which has included authors such as Jan Bebbington, Ralph Estes, Rob Gray, James Guthrie, Lee Parker, and David Owen, to name just a few. Many of their writings have also been normative in nature because of the newness of the discipline and the need to encourage others. The candidate was one of the first authors to research in this area, which has now
become more mainstream and popular. SEA has now entered practical debate, which it could not have done were it not for this early academic work of which my work was a key component. My work has been acknowledged as having made a useful contribution. Work is still continuing in the area of model building attempting to develop the paper 3.33 on mega-accounting. Citations of this paper are shown in Table 1.

5.0 Theme 2; The development of classification and analytical frameworks

The overview indicated that the candidate had developed an early interest in assisting inexperienced researchers in their attempt to understand the very extensive social and environmental accounting research literature. The papers listed overleaf are not conventional literature reviews as required to introduce readers to an academic paper, but extensive pieces of work in themselves which attempt to cover a wide field. The genesis of this theme of research is to assist beginning researchers and graduate students in their attempts to begin work/careers in the SEA area. A significant contribution has been made and acknowledged (see Festschrift entry below).

The developments reported here are aimed at enabling a better appreciation of the social and environmental accounting literature. The increasing size of the social and environmental accounting literature in the period after 1970 appeared to need a structure to organise, classify and analyse the various contributions. It was thought that such a structure would assist researchers, especially graduate students and beginning researchers, as well as interested practitioners, to come to an appreciation of the depth and breadth of contributions in this new area.

Eight papers have been published in this area between 1990 and the present time, and work is continuing in this area. The papers are all connected since they represent increasingly sophisticated attempts to link and relate larger volumes of literature. The papers are located in the following journals:

This paper was an early review of the relevant literature in Australia. It was an important contribution and has been widely cited, especially since a high proportion of the early literature on social accounting and reporting came from Australia.


This paper was presented at the Annual Convention of the American Accounting Association in 1989 after which the authors were invited to submit the paper for review. The content attempted to relate the Hofstede cultural variables and the extent of social accounting disclosures across several countries. The paper has received a number of citations and may have been the first in a series of contributions by various authors to the comparative literature on social disclosures.


This paper was written when the candidate was the book review editor for *Accounting Auditing and Accountability Journal* and the journal produced a special number showcasing the new developments in social and environmental accounting. The paper has been cited, usually in conjunction with paper 3.32.


Papers 3.27 and 3.30 were written because the changes in the field were moving even more rapidly and a number of graduate students were losing track of where the discipline had reached. Both papers surveyed recent developments but from different points of view. The first was a straightforward attempt to incorporate further, more recent, publications whereas the second attempted to discuss how social and environmental accounting may or may not demonstrate an ethical stance on the part of the preparers. It concluded that not all such disclosures could be said to be motivated by an ethical concern because of other factors such as a wish to influence capital markets or other markets. Paper 3.30 has been cited a number of times.

Paper 3.32 is one of the most frequently cited of the candidates contributions. It began life as an invited opening address at a ‘Workshop on environmental accounting held in Canberra in 1996’. From there it grew into a large-scale review of the literature of the period divided by decade and also by type (i.e. empirical, philosophical, normative etc.). The paper was encouraged by the editors of AAAJ and was awarded a research citation by AMBAR as an outstanding contribution for the year 1997.


Paper 3.45 is the latest in this attempt to classify the literature. It is the result of two strands of thought. Firstly the system used in paper 3.32 and secondly a later development which attempted to identify the motivation underlying the work under consideration, for example social contract, organisational legitimacy, or the business case. When put together these ideas provided a matrix with the motivations on the X axis and the different types of research listed on the Y axis. It is suggested that this matrix approach could be used by newcomers to research in this area. One newcomer, a PhD student supervised by the candidate, has adapted this approach to include time and national origin as a third dimension and produced a cube or three dimensional model. This paper is currently under review.

Item 3.32 has been widely cited and received an Ambar Award as an outstanding paper, 3.18 and 3.30 have also been cited regularly. Research is continuing into refining ways of presenting the wide range of contributions to the SEA literature.

5.1 Contribution to knowledge: Through the development of classification and analytical frameworks

The explosion in information about social and environmental accounting from 1970 onwards has provided opportunities for the type of contribution described above. The classification, review and analytical work undertaken in these articles led to extensive citations. Consequently, I have made a contribution as an academic commentator, redefining the field and providing theoretical frameworks for researchers to use. The extent of the citation of
paper 3.32, which was given an AMBAR Award, shows that the intention of providing support to beginning researchers has been amply demonstrated. Work is continuing in this area now with the assistance of several research students who are making use of the content themselves.

6.0 Theme 3; Educational programmes to assist the development of social and environmental accounting

One of the problems encountered by those attempting to propagate the development of social and environmental accounting is the lack of an adequate educational preparation by both students and practitioners alike. The characteristics of the debate surrounding the extension of accounting and reporting into the SEA area are such that accountants and accounting students are often ill-equipped on the whole to consider philosophical/normative positions and arguments for added disclosures. It is not reasonable to expect a student with a second year education in procedural company accounting (i.e. focusing on what is contained in accounting standards?) to appreciate either a broadly based accounting theory subject or a specialised SEA elective in their final year. As a result, the opportunity to widen the horizon of graduate accounting students to include SEA is often avoided. Four papers have been published in this area in these journals:


The candidate has been interested in social and environmental accounting education and accounting theory for some time. The earliest contribution was a paper presented to the Annual Convention of the American Accounting Association in New York in 1986. The interest was first recorded in a refereed journal as a comment on a paper by Lewis et al. (1994). This paper has had a number of citations (refer table 1).


The candidate later developed and taught a postgraduate subject in societal accounting at Massey University and included the subject matter in the textbook *Accounting Theory and Development* (with M.H.B. Perera, 1991, 1993, 1996), which was used to teach accounting theory to undergraduate students. After taking early retirement, and in the US, the candidate made further contributions as a result of collaboration in teaching a course in environmental accounting with Professor J.A Lockhart at Western Washington University. The paper has been cited in articles dealing with the development and design of such courses. The paper had a very long gestation period in part because any course of study outside of the tried and true is subjected to intense scrutiny in the US. The candidate made a contribution to this paper of about 40%.

These four papers are related. The BAR paper outlines the arguments for extending educational offerings to address the problems of restrictive thinking by existing practitioners. The paper with J.A. Lockhart argues the case for developing a programme and then describes a course taught by Professor Lockhart with some input from the candidate. The two accounting education papers were part of a special collection of papers published as part of a forum. My lead paper canvassed aspects of education for SEA. This paper was then subject to critical appraisal by six internationally regarded figures in the area, after which I had the opportunity to write a rejoinder. The editor (Professor R.M.S Wilson) described the sequence as being highly successful and the 'best forum yet'; and paper 3.42 has been cited often enough to confirm this judgement.

6.1 Contribution to knowledge: Related to educational programmes and social and environmental accounting

The earliest contribution in this area was a conference paper presented to the American Accounting Association annual meeting in 1986, which is still cited for its general message that in order to effect change in accounting it is necessary to influence the views of the next generation of graduates and entrants to the profession. That message is still relevant today.

The work in this area has the potential to combine with the normative frameworks and the classification of the SEA literature to make a difference to the education of future generations.
of accountants and therefore to society as a whole. It is argued that this work is of lasting and overall benefit in the development of academic accounting because of the need to advance the educational curriculum and break away from the mechanistic approach of the past and present. This limited approach to accounting education has had negative effects on the image of accounting, and restricted the ability of accounting graduates to see clearly the direction in which the profession could, and perhaps should, proceed.

7.0 Concluding Statement:
The total of forty-nine refereed publications which the candidate has published since 1984 includes 35 in the SEA area many of which have been grouped together in three themes. Firstly, those of a normative nature advocating extensions to existing coverage in accounting and reporting, including the development of models of accounting for the future; secondly, papers which attempt to provide a structure within the new extensive SEA literature for the benefit of early researchers, and thirdly, papers attempting to provide arguments for a broader educational base that would allow students (in particular) to gain the sort of preparation that would enable them to appreciate the need for the development of SEA.

The work has been often cited, and some has been incorporated in full into the work of others (with attribution). Almost all of the work has been sole authored. Two books, Accounting Theory and Development (with M.H.B. Perera) and Socially Responsible Accounting also provided vehicles through which many of these ideas have been propagated. These books have also been cited widely.

This submission has attempted to establish the grounds upon which the University is being asked to confer the degree of Doctor of Philosophy by publication upon the candidate. It begins with an overview of the personal and scholarly development of the candidate from humble beginnings to his current status as a senior academic with an established standing in the areas of social and environmental accounting and accounting education. The candidate’s achievements in obtaining a large number of degrees and diplomas in the fields of accounting and education are detailed together with mention of refereeing, editorial and examining roles the details about which are contained in the accompanying CV. The overview indicates a number of turning or defining points in the candidate’s progression and acknowledges influences and limitations. A conservative world-view could be seen as a limitation for an
academic attempting to work in the social and environmental accounting area; however, the candidate has a strong social-contract perspective which supports a radical view of accounting (but not the same radical view as critical theory or deep green environmentalism). The social contract perspective supports the normative-deductive attempts by the candidate to advocate the extension of accounting to encompass macro-social accounting and accounting for externalities as well as more conventional Triple Bottom Line/Mega Accounting based disclosures. The three themes stated above include advocacy (of normative-deductive model building to advance the disclosure of additional information to society as a whole), development (of classifications and methods of analysing the research literature in this area, partly to assist newcomers and graduate student in their early attempts to understand an extensive literature which continues to grow at an exponential rate, and finally concentration on providing an educational background to students in an attempt to introduce undergraduates to an area which the candidate considers to be crucial to the future of accounting as a discipline. Advocacy, development and focus are evidence of a commitment to the development of an accounting which has a more inclusive world-view that may be continually expanded, to keep pace with changes to society. Consequently the potential problems associated with a loss of legitimacy should be avoidable if the discipline embraces SEA and reporting, provided that such developments are not seen as cosmetic and arranged on behalf of traditional preparers of accounts. It is for that reason that the conceptual framework, standards and audits referred to by the candidate in mega-accounting theory are needed for true progress to be made.

There is growing evidence that the publications listed for consideration have been cited by other scholars in a widely distributed set of journals and some books. When taken together the personal development of the candidate as a scholar and the scholarly output put forward form a coherent whole, as shown in Table 1, which may indeed be described as the work of a radical non-radical.

The candidate believes that the conditions for the award of the degree of Doctor of Philosophy by publication have been met.
Table 1
A Summary of the contributing Literature

<table>
<thead>
<tr>
<th>Theme</th>
<th>Key Papers</th>
<th>Summary Contribution to Knowledge</th>
<th>Citations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3.8</td>
<td>Normative models intended to stimulate the development of alternative models of accounting and reporting. Mega-accounting</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>3.33</td>
<td>an alternative view to Triple Bottom Line</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>12.17</td>
<td>Macro-social accounting</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>3.35</td>
<td>a philosophical exposition on why accountants should be concerned with social and environmental accounting</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>3.36</td>
<td>a recent paper relating to externalities</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>3.11</td>
<td>Classification frameworks to assist other researchers to map the literature: Australia</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>3.18</td>
<td>social accounting: international</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>3.21</td>
<td>Classifications of the literature</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3.27</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>3.30</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>3.32</td>
<td></td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>3.45</td>
<td>A matrix approach to classification</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>3.26</td>
<td>Programmes to teach about social and environmental accounting issues</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>3.37</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>3.42</td>
<td>Thoughts on Social and environmental accounting education</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>3.43</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>
References


8.0 Appendices

8.1 Publications included in the final list for consideration:

Theme 1: Development of normative models


Theme 2: The development of classification and analytical frameworks


Theme 3: Educational programmes to assist the development of social and environmental accounting


8.2 Publication List: All Refereed Publications


This article received a citation of excellence from Anbar Electronic Intelligence.


8.3 Development of a Citation Record:

A search of ProQuest Smart Search, Wiley InterScience, and Google Advanced Scholar data bases has revealed a large number of citations of the candidates work. Cross referencing to the list above discloses the following frequencies of citation:

<table>
<thead>
<tr>
<th>REFERENCE NUMBER</th>
<th>TIMES CITED</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.4</td>
<td>24</td>
</tr>
<tr>
<td>2.6</td>
<td>2</td>
</tr>
<tr>
<td>2.8</td>
<td>52</td>
</tr>
<tr>
<td>2.9</td>
<td>2</td>
</tr>
<tr>
<td>2.10</td>
<td>3</td>
</tr>
<tr>
<td>3.7</td>
<td>1</td>
</tr>
<tr>
<td>3.8</td>
<td>8</td>
</tr>
<tr>
<td>3.10</td>
<td>1</td>
</tr>
<tr>
<td>3.11</td>
<td>21</td>
</tr>
<tr>
<td>3.12</td>
<td>1</td>
</tr>
<tr>
<td>3.13</td>
<td>3</td>
</tr>
<tr>
<td>3.18</td>
<td>12</td>
</tr>
<tr>
<td>3.21</td>
<td>2</td>
</tr>
<tr>
<td>3.26</td>
<td>5</td>
</tr>
<tr>
<td>3.27</td>
<td>3</td>
</tr>
<tr>
<td>3.29</td>
<td>2</td>
</tr>
<tr>
<td>3.30</td>
<td>10</td>
</tr>
<tr>
<td>3.32</td>
<td>41</td>
</tr>
<tr>
<td>3.33</td>
<td>15</td>
</tr>
<tr>
<td>3.35</td>
<td>8</td>
</tr>
<tr>
<td>3.36</td>
<td>4</td>
</tr>
<tr>
<td>3.37</td>
<td>6</td>
</tr>
<tr>
<td>3.42</td>
<td>10</td>
</tr>
<tr>
<td>3.43</td>
<td>1</td>
</tr>
<tr>
<td>12.17</td>
<td>3</td>
</tr>
</tbody>
</table>

Clearly there is a lot more work needed to obtain a measure of the extent to which this work has been cited although clearly a number of papers and books have been widely referred to.
8.4 Some of the Journals in which the Work has been Cited:

Journal of American Academy of Business  
Accounting Auditing and Accountability Journal  
Journal of Intellectual Capital  
Review of Accounting and Finance  
Managerial Finance  
Agriculture and Human Values  
Teaching Business and Economics  
Journal of Education for Business  
Pacific Accounting Review  
Corporate Communications  
Managerial Auditing Journal  
Australian Accountant  
Issues in Accounting Education  
Journal of Business Ethics  
Business Strategy and the Environment  
Eco Management and Auditing  
Non-Profit Management and Leadership  
Sustainable Development

There does not appear to be an accurate and more acceptable way to determine which papers have been referred to in particular journals.

8.5 Citations in Accounting Texts

The mega-accounting theory paper (3.33) was cited in Henderson et al. (2004):


Paper 3.8 has been used in part by Riahi-Belkaoui in his text entitled Accounting Theory and the same entry appears in the Australian adaptation of the book by Riahi-Belkaoui and Stuart Jones.

8.6 Other Evidence of Support

In addition to evidence of support from the academic community in the form of journal and book citations as stated in section 9.5, another level of support is described in this section.

Firstly, a letter of support for the candidate (9.61) has been provided by Professor L.D. Parker, an internationally regarded academic currently at The University of Adelaide and co-editor of Accounting Auditing and Accountability Journal (AAAJ).

Secondly, a letter from Professors Parker and Guthrie Joint-Editors of AAAJ asking the candidate to continue refereeing for the journal after retirement (9.62). The candidate has been given the title of Board Member Emeritus by the editors of AAAJ.

Thirdly, a communication from Professor Rob Gray (9.63), with details of a 'proposed Festschrift in honour of M.R. Mathews' entitled Social Accounting, Mega-Accounting and beyond. The proposed publication includes 12 publications from those authored by the candidate, those numbered 3.8, 3.11, 3.18, 3.30, 3.32, 3.33, 3.42, 3.44, and 3.45; and nine further papers by ten international scholars, details are provided in the attached document. This list may change between now and the date of publication of the book. The authors featured are those that the candidate has worked with and in many instances published with.

8.61 Text of an email message from Professor L.D. Parker to Professor D.N. Marriott dated 26/10/04.

Dear Professor Marriott

I am writing as a referee regarding the potential submission by Professor M.R. Mathews of a selected body of his published research for the possible award of a doctorate by publication at your university.

I have known Professor Mathews as a university educator and research colleague for almost 30 years and have shared many conference podiums with him in that time. Indeed he is a longstanding and highly valued editorial board member of Accounting, Auditing and Accountability Journal (AAAJ) of which I am founding co-editor. You will also note his list of international research journals for whom he is board member or reviewer. For assessing research in the social and environmental accounting (SEA) field, editors will certainly turn to him for advice as one of the leading fathers of the field.

Professor Mathews is one of the longest standing SEA researchers in the international accounting research community and is well cited in the SEA research and professional literature. In addition he has established a very prominent and regular presence at scholarly conferences around the globe these past 20 years, and has maintained a commendably consistent stream of published writing to this present day. You are presented with a veritable pioneer in our SEA field, and it is a privilege to have the opportunity to support his application to your university.

The three thematic areas in which he has selected his publications are a judicious representation of his key contributions and impacts. He has bravely trod where others have abrogated the territory – namely the normative policy making in SEA which as an emerging
discipline has sorely needed such attention. Professor Mathews’ pioneering work in this dimension has opened valuable doors for others to pass through. I particularly prize his contributions to SEA classification, analytical framework development and critique. Again, in an emerging field over recent decades, this work has been essential in providing us with frameworks and locating emerging issues and related research. Indeed as the now leading publisher of SEA research worldwide, AAAJ has published two of Professor Mathews’ most significant contributions in this area in 1991 and 1997. Professor Mathews’ attention to SEA education has been absolutely pathbreaking, with very few scholars addressing this area. To the best of my knowledge, he has been almost a lone pioneer in this respect, publishing his work in the leading specialist education research journals.

Professor Mathews has published his research across books and journals in the UK, USA, Australia and New Zealand in a wide range of both specialist and generalist research journals. I commend his application to your university in the strongest terms. The University of Glamorgan is fortunate indeed to have attracted Professor Mathews’ interest in this respect, and an awarding of its doctorate in recognition of his lifetime’s contribution to our published literature will allow it the opportunity to associate itself with his significant international profile. I look forward to hearing news of the ultimate success of this doctoral application.

Warm regards,

Professor L.D. Parker,
Associate Head Research,
School of Commerce,
The University of Adelaide.

8.62 Text of a letter received from Professors Parker and Guthrie, editors of Accounting, Auditing and Accountability Journal dated sometime 2004.

Dear Reg,

I am writing to you on behalf of James Guthrie and myself to first express our sincere thanks for all the support you have so willingly given in service to the editorial board of AAAJ. It may sound like a truism, but the longevity and international success of AAAJ owes a very great deal to the service that you have consistently delivered over a considerable period of time. If there is one thing that James and I are particular, it is remembering and acknowledging those who have been our great supporters in the development of the journal.

We want to continue to rely on your involvement in and support for AAAJ, and while recognising that you will soon no longer be in a full-time academic teaching and research role, we hope that you will be prepared to continue your membership of the AAAJ editorial advisory board and to be available for reviewing of submitted papers!

James and I would like to retain you on the AAAJ editorial advisory board in a category of editorial board membership we are creating – namely “Emeritus Advisory Board” member. As an emeritus member, you will have exactly the same status, role and responsibilities as Editorial Advisory Board Members.
We hope that you will accept this invitation in the spirit intended. We have created this category of editorial board members to recognise senior editorial experience, contribution to AAAJ and international standing. We would like to recognise you in this way and to maintain your continuing role in AAAJ.

Please email me on lee.parker@adelaide.edu.au as soon as possible to confirm your acceptance of this invitation.

Warm regards,

Lee and James.

8.63 Selected passages from a communication from Professor R.H. Gray regarding a proposed Festschrift. This attachment was circulated to a number of potential contributors 17/06/2005.

PROFESSOR M R MATHEWS
A Festschrift in Honour of M.R. Mathews
Edited by Rob Gray and James Guthrie and with contributions from . .

Preamble
Reg Mathews will be retiring in 2005. He is such an influential figure in social accounting and has been there since early on in the field’s development that we have decided that it might be nice to commemorate his retirement and his contribution – to accounting generally and social accounting in particular – in a tangible way. Consequently it is proposed that we will produce a Festschrift in Reg’s honour. This Festschrift will, it is hoped, comprise: reproductions of a number of Reg’s key contributions, a series of short essays from colleagues; and an overview essay from the editors. The resultant book will be published, in a limited edition, by CSEAR and presented to Reg at either an Australasian CSEAR or APIRA event in 2006 or 2007 depending on all the usual constraints.

Tentative Outline of Proposed Contents:

INTRODUCTION
- Editorial Essay (reflecting, in part, other contributions)
- Detailed Bibliography of M.R. Mathews

A SELECTION OF KEY PUBLICATIONS
(Selection from the following subject to approval and release by journals)


(Further suggestions will be gratefully received).

ESSAYS IN REFLECTION OF REG MATHEWS
(Tentative list … essays to be in region of 3,000 words – see ‘Advice below).

Craig Deegan: “Social accounting research: an Australasian perspective”

Irene Gordon: “North America versus the Rest of the World in social accounting and education”

Glen Lehman: “Ethics, communitarians and social accounting”

Julie Lockhart: “Developments in (social) accounting education”

Markus Milne: Radicalism, natural ecology and social and environmental accounting”

Dave Owen: “Social accounting – celebrating a silver jubilee of engagement and community”

Lee Parker: “The role of committed editorial board membership in journal and scholarship development”
Hector Perera: The international and cultural aspects of social accounting”

Lin Tozer and Maryann Reynolds: “The development of environmental accounting, auditing and management”

Further suggestions or offers of essays will be gratefully received and considered.

Other contributions such as poems inspired by Professor Mathews will be gratefully received and considered.

The communication then goes on to provide advice to authors about content, submission and the printing of the book. This detail is not appropriate here and has been omitted.
Detailed CV

CURRICULUM VITAE

PROFESSOR M.R. MATHEWS
October 5 2005
SUMMARY

Professor M.R. Mathews is an experienced senior academic with an extensive record of teaching, research, publication and administration extending over 20 years, including sixteen years as Professor, seven years as Associate Dean, and one year as Acting Dean at Massey University in New Zealand, and four years as Head of School and Sub-Dean Accounting at Charles Sturt University in Australia. He has an extensive record as a visiting professor to universities in Australia, the United Kingdom and the United States.

He has qualifications in the areas of accounting and education from seven different institutions in four countries; his Doctorate is in Educational Administration from The University of Montana, USA. His academic work in the areas of social and environmental accounting, accounting theory and accounting education, has been presented at conferences in more than ten countries, and in over fifty journal articles. He has also published a number of books, including one of the best selling accounting theory text books in Australasia, Accounting Theory and Development (with M.H.B. Perera), and Socially Responsible Accounting which has been well received in the UK and elsewhere.

Professor Mathews has been active as a reviewer of articles and conference papers, and has served on the editorial boards of a number of journals. Currently these include Accounting Auditing and Accountability Journal, Accounting Forum, International Journal of Accounting and Accounting Education.

Professor Mathews has taught accounting in four countries, Australia, New Zealand, the United Kingdom and the United States, and has acted as an external examiner for several theses. He has assisted in the development of a number of younger academics now making their own contributions to the discipline. Until his appointment as Associate Dean in 1989, Professor Mathews was active in the management of the Department of Accountancy at Massey University.

As an academic manager Professor Mathews served as an Associate Dean in the largest Business Faculty in New Zealand with almost 5,000 Equivalent Full Time Students (approximately 30% of the university total) and over 200 academic staff. He has had responsibility for credit and cross credit into the programmes of the Faculty, the management of the Graduate programme (which had 16-20% of all Faculty EFTS), and acted as Deputy to a previous Dean on several outside committees as well as acting as an alternate to the Dean on a number of internal committees, and in the everyday administration of the Faculty.

From January 1 to December 31 1996 Professor Mathews served as the Acting Dean of the Faculty of Business Studies. Following the appointment of the new Dean in January 1997 and the disestablishment of the role of Associate Dean, Professor Mathews resumed his former position as a tenured Professor of Accountancy.
On 1 July 2001 Professor Mathews took up the position of Professor of Accounting and Head of the School of Accounting, and Sub-Dean Accounting for the Faculty of Commerce, at Charles Sturt University, Bathurst, NSW.

After a period of four years and one month at Charles Sturt University, Professor Mathews left Bathurst at the end of July 2005 to return to New Zealand and seek other opportunities in the field of educational consulting/management as a prelude to retirement.

**PERSONAL DETAILS**

**NAME:** Martin Reginald MATTHEWS

**PERMANENT ADDRESS:** 8 Roore Street, Foxton Beach, New Zealand

**TELEPHONE:** Home: (06)363-5746

**E-mail** M.R.Mathews@csu.edu.au or rmathews@xtra.co.nz

**AGE:** 65 Years

**DATE OF BIRTH:** 21 July 1940

**PLACE OF BIRTH:** London, England

**NATIONALITY:** British Subject - Citizen of the United Kingdom and Northern Ireland. Citizen of New Zealand.

**PERIODS OF RESIDENCE:**

- United Kingdom 1940-1963
- Australia 1963-1974, 2001-2005
- New Zealand 1979-2001

**FAMILY:** Wife and three adult children.

The applicant does not have any major disabilities and is in normal physical health for his age.

**Hobbies:** gardening, house decorating.
EDUCATION

(i) Ashford Grammar School, Kent, England 1951-56
(ii) Various technical colleges at Canterbury, Maidstone, Cinderford, Melbourne, Perth 1956-71
(iii) Footscray Institute of Technology (now part of Victoria University of Technology) 1971-73
(iv) Swinburne College of Technology (now Swinburne University of Technology) 1974
(v) State College of Victoria at Hawthorn 1974
(vi) University of Birmingham, UK 1975-77
(vii) University of Nottingham, UK 1978-79
(viii) Massey University, NZ 1980-83
(ix) The University of Montana, USA 1991-93

QUALIFICATIONS

Academic

(iii) Master of Philosophy (Education), Massey University, NZ, 1984. By coursework.
(vi) Bachelor of Business (Accounting and Economics), Swinburne College of Technology, Australia, 1974. (now the Swinburne University of Technology)
(vii) Diploma of Business Studies (Accounting & Economics), Footscray Institute of Technology, Australia, 1973. (now part of the Victoria University of Technology)

Professional

(i) Fellow of the Australian Society of Certified Practising Accountants (FCPA).
(ii) Fellow of the Institute of Chartered Accountants of New Zealand (FCA).
(iii) Member of the Cost and Management Accounting Division of the New Zealand Society of Accountants (CMA).
(iv) The applicant is currently or has been a member of the American Accounting Association, the Accounting and Finance Association of Australia and New Zealand, the Canadian Academic Accounting Association, the British Accounting Association and the European Accounting Association.

LAST POSITION

Prior to his retirement on July 31 2005 Professor Mathews was Professor of Accounting and Head of the School of Accounting at Charles Sturt University, Bathurst, NSW, and
Sub-Dean for Accounting in the Faculty of Commerce. Duties include the management of the School including the development of the personnel within the School and an overall role as Sub-Dean for the progress of the discipline of Accountancy which is taught across four campuses in NSW.

After four years and one month in these roles, Professor Mathews left Bathurst to return to New Zealand and seek alternative activities as an educational consultant/manager. He remains an Adjunct Professor of CSU and supervisor of a number of research students spread across several campuses of the University.

**DETAILS OF PREVIOUS POSITION**

Before relocating to Australia on a temporary basis in 2001, Professor Mathews held one of three chairs in the School of Accountancy at Massey University from January 1985. Professor Mathews was employed by Massey University from October 1979 until July 2001, and held the positions of Senior Lecturer (1979-1984) and Reader (1984) in the Department of Accounting and Finance, and after 1987 in the Department/Division of Accountancy, the Department of Accountancy and Business Law and the School of Accountancy.

From January 1 1989 Professor Mathews took up a position as Associate Dean within the Faculty of Business Studies in addition to his departmental position, and from October 1993 to March 1997 was also Director of the Office of Graduate Studies.

In January 1996, Professor Mathews was appointed Acting Dean of the Faculty of Business Studies. Following the appointment of a new Dean in January 1997, Professor Mathews resumed his tenured Chair in the newly combined Department of Accountancy and Business Law, which became the School of Accountancy on July 1 2000.

**RESEARCH SUPERVISION**

The applicant has supervised a number of Research Reports and theses in the areas of:

1. Human resource accounting
2. Failure prediction models
3. Social responsibility accounting
4. Evaluation of public projects in new technology
5. Management evaluation of small business
6. Lease disclosure and ratio analysis.
7. Value added statements.
8. Transfer pricing by multinational corporations.
10. Definition of shareholder groups.
11. Evaluation of the contribution made by voluntary service groups.
12. Employee reports.
15. Valuation and disclosure of brands.
17. The environmental audit "industry" in New Zealand.
19. A survey of academics on ethical behaviour in academia.
22. An investigation into the attitudes of Australasian accounting academics towards ethical issues.
23. An investigation of the values of accountants with regard to the environment.

RESEARCH

Research has been undertaken in the following areas:
(i) Disclosure of leases in the accounts of lessees.
(ii) Disclosure of executory contracts.
(iii) The use of non-monetary measurements in accounting.
(iv) Management accounting and small businesses.
(v) Social accounting; attempts to classify the literature in this field; and an examination of arguments justifying newer forms of accounting.
(vi) Continuing education and professionalism in accounting.
(vii) Attitudes of accountants to new ideas in accounting.
(viii) Failure prediction models in New Zealand.
(ix) Philosophical bases underlying social accounting.
(x) Teaching programmes for social accounting.
(xi) Cultural differences and social accounting.
(xii) Curriculum development in accounting.
(xiii) Accounting curriculum design and implementation.
(xiv) The work of the US Accounting Education Change Commission.
(xv) The use of ranges of values for fixed assets within balance sheets.
(xvi) Curriculum theory applied to the AECC grants awards.
(xvii) The development of mega-accounting models.
(xviii) An examination of the potentially dysfunctional consequences of adopting IAS 38 in Australasia.
(xix) The way forward in models for social and environmental accounting.
(xx) A review of externalities and the development of an environmental equity account.

Currently research is being undertaken in the areas of social and environmental accounting and accounting curriculum design and implementation. Professor Mathews also has interests in Human Resource Accounting, Accounting for Brands and the whole issue of intangible assets and undisclosed liabilities.
Professor Mathews has published and presented papers in Australia, Belgium, Canada, Hong Kong, Indonesia, Japan, New Zealand, Singapore, the United Kingdom, and the United States. A detailed publication list is included below.

While on leave at The University of Montana (1991-1992) research was carried out on the Accounting Education Change Commission, various curriculum related matters, and a book on Socially Responsible Accounting was completed.

Professor Mathews was Joint Editor of the *Social Accounting Monitor* from 1982 to 1992, Book Review Editor of the *Accounting, Auditing and Accountability Journal* 1990-1992, a member of the Editorial Board of the *British Accounting Review* for several years and recently completed three years on the review board of the *International Journal of Accounting* from January 1 1998. He is currently a member of the Editorial Boards of *Accounting Forum, Accounting, Auditing and Accountability Journal, Social and Environmental Accounting, Accounting Education*, the APCEA Journal and Qualitative Research in Accounting and Management.

Professor Mathews has acted as a reviewer for the *British Accounting Review, the Pacific Accounting Review, Accounting and Finance, the Accounting, Auditing and Accountability Journal, Accounting Education, Accounting Forum, and the International Journal of Accounting*. Reviewing of conference papers has been undertaken for the AAANZ, AAA and CAAA meetings.

**OVERSEAS ACADEMIC EXPERIENCE**

Many periods of leave have been taken since 1982 in order to attend conferences and workshops, to make guest lecture appearances and to present papers. Visits have been made to Australia, Belgium, Canada, Hong Kong, Indonesia, Japan, Macau, Singapore, the United Kingdom and the United States.

Professor Mathews has participated in a large number of international conferences and consequently is known to many participants from Australia, Canada, the United States and the Far East. In particular to academics in the Public Interest and International Accounting Sections of the American Accounting Association, and has served on four committees of the International Section of the American Accounting Association; Culture and Accounting Research (1988-89) and Outstanding Educators Award (1989-90); and in 1992 was a member of the Organising Committee for the International Accounting Section sessions at the annual convention in Washington DC in August 1992, and a member of the 1995 organising committee for the International Accounting Section papers for the AAA meeting in Orlando, Florida, as well as the publications committee of the same section for both 1995 and 1996.

Professor Mathews was a visiting Associate Professor during January 1983 at Pacific Lutheran University, Tacoma, Washington, and an academic consulting visitor at the Hong Kong Polytechnic in 1988.
Professor Mathews was named as the Victorian Employers Federation Visiting Fellow at the Swinburne Institute of Technology (now the Swinburne University of Technology), Melbourne, from September - November 1989.

Professor Mathews was a Visiting Professor at the School of Business Administration, The University of Montana from September 1991 to August 1992, at La Trobe University in Melbourne July-August 1997 and again in October 1998, and Western Washington University, Bellingham, September to December 1997, and March to June 1999, and March to August 2000, and at Aston Business School, UK, from October to December 2000 and April to June 2001.

During a recent period of study leave Professor Mathews was a visiting Professor at Glamorgan University in Wales and Warwick University in England.

**PROFESSIONAL SERVICE**

Professor Mathews has served the New Zealand Society of Accountants as a member of the accreditation team for the Technical Correspondence Institute (now the Open Polytechnic of New Zealand), Wellington, and as reviewer of the 1989 Advanced Financial Accounting courses at all Universities and Polytechnics in New Zealand.

**AWARDS RECEIVED**

Professor Mathews received the first Lifetime Service Award given by the British Accounting Association Education Special Interest Group for service to accounting education at the annual conference held in Aberdeen 25-27 May 2005.

**EXTERNAL EXAMINATIONS**


**PUBLICATIONS & PRESENTATIONS**

1.0 **Dissertation & Theses**


2.0 **Books**


3.0 Refereed Journal Articles


This article received a citation of excellence from Anbar Electronic Intelligence.


4.0 Non-Refereed Journal Articles


5.0 **Book Reviews**


6.0 **Occasional Papers (cf Monographs).**


7.0 **Discussion/Working Papers**


8.0 Conference/Workshop Papers Presented


8.81 Mathews, M.R. (1996). Twenty-Five Years of Environmental Accounting: Do we have much to Celebrate? A Paper Presented to a Symposium on Environmental Accountability organised by the Australian National University, Canberra, February 16-17, 1996.


9.0 Discussant/Commentaries on Papers Presented at Conferences


9.6 Mathews, M.R. (1994). Discussant of a paper by Eko Ganis Sukoharsono, "Accounting, Colonial Capitalists and Liberal Order: The Case of Accounting History in Indonesia During the Dutch Colonial Period of the Mid to End of the


10.0 Seminars


10.4 Mathews, M.R. (1983). The development of social accounting. A seminar given to staff and graduate students at the University of Washington, Seattle, WA.


10.21 Mathews, M.R. (1988). Social accounting models - potential applications of reformist proposals. A presentation made to members of the Faculty of Administration, University of Regina, Saskatchewan, Canada.


10.28 Mathews, M.R. (1989). Research on the motivation for managers to authorise the production of non-traditional socially oriented information in annual reports. A seminar presented to staff of the School of Commerce, Charles Stuart University - Riverina, Wagga Wagga, N.S.W.


10.31 Mathews, M.R. (1989). Developing the research mission. A seminar presented to staff of the School of Business and Public Administration, Charles Sturt University - Mitchell, Bathurst, N.S.W.


undergraduate students at the College of Business and Economics, University of Delaware, 23 March, 1992.


10.70 Mathews, M.R. (1998). Experiences with Distance Education with Particular Reference to Graduate Students. Presentation to business studies staff at La Trobe University Albury-Wodonga, October 7 1998.


Mathews, M.R. (2002). A Brief Description and Preliminary Analysis of Recent Social and Environmental Research Literature. A seminar given to the staff of the School of Accounting, Charles Sturt University, Bathurst, April 4.


Mathews, M.R. (2002). Accounting Curricula: Does Professional Accreditation Lead to Uniformity? A seminar presented to the staff of the School of Accounting, Charles Sturt University, Bathurst, October 17.


Mathews, M.R. (2003). Accounting Theory: An Examination of Subjects within Accredited Undergraduate Accounting Degrees in Australia. A seminar presented to the staff of the School of Accounting, Charles Sturt University, Bathurst, March 20.


10.112 Mathews, M.R. (2003). Ethical Accounting to Measure, Manage and Enhance Performance: An attempt to relate underlying philosophies/motivations and models/operating systems. A seminar presented to staff of the School of Accounting, Charles Sturt University, Bathurst, July 17.


10.117 Mathews, M.R. (2004). Publish or Perish: Is This Really a Viable Set of Options? A seminar given to the School of Accounting, Charles Sturt University, Bathurst, 19 May.


Editorial

As joint editor of the Social Accounting Monitor since 1982, Professor Mathews was jointly responsible for the production of 22 Newsletters; each of about 30 pages single-spaced. This activity ceased when the newsletter moved to the Centre for Social and Environmental Accounting Research at the University of Dundee, however, he is a member of the Editorial Board of the new version, Social and Environmental Accounting.

Professor M.R. Mathews has been appointed as a joint guest-editor for a special issue of Accounting Education: An international journal on assessment issues to be published in 2006.

Contributions to Books/Collections of Readings


A Suggested Classification for Social Accounting Research

M. R. Mathews

Introduction

The first part of this article attempts to overcome confusion about what constitutes social accounting and a discussion of measurement problems. Later sections deal with the component parts into which the author has divided the field in order to permit easier examination—the suggested organization for social accounting research. The philosophical justification for this field of study is set into the context in which it most frequently appears, the consideration of externalities.

McDonald (1972) has classified accounting theories as descriptive (theories of accounting) and normative (theories for accounting). He associates these two alternatives with the different methods of arriving at alternative policies put forward by Lindblom (1959) and shown as Table 1.

The rational-comprehensive approach is associated with a normative view leading to a theory for accounting. The successive limited comparisons approach corresponds more with the evolution of accounting. Goals are required in both cases. However, they are arrived at in different ways. In the descriptive approach goals are deduced from observing actions, decisions and policies whilst in the normative approach

... goals are stated a priori, and decisions, actions, and policies are evaluated or judged in terms of the established goals. Thus, goals, their nature and scope, must be of concern in any discussion of accounting or any other discipline. McDonald (1972, pp. 15-16)

This article is concerned with normative accounting and has the goal of explicating the confused area of research often referred to as social accounting.

References to social accounting, in its various forms, may be found in company reports, press releases, the news media, and, occasionally, political
Table 1. Alternative Approaches to Policy Formation Adopted from Lindblom (1959, p. 81)

<table>
<thead>
<tr>
<th>Rational-Comprehensive (root)</th>
<th>Successive Limited Comparisons (branch)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1a. Clarification of values or objectives distinct from and usually prerequisite to empirical analysis of alternative policies.</td>
<td>1b. Selection of value goals and empirical analysis of the needed action are not distinct from one another but are closely intertwined.</td>
</tr>
<tr>
<td>2a. Policy-formulation is therefore approached through means-ends analysis: first the ends are isolated, then the means to achieve them are sought.</td>
<td>2b. Since means and ends are not distinct, means-ends analysis is often inappropriate or limited.</td>
</tr>
<tr>
<td>3a. The test of a &quot;good&quot; policy is that it can be shown to be the most appropriate means to desired ends.</td>
<td>3b. The test of a &quot;good&quot; policy is typically that various analysts find themselves directly agreeing on a policy (without their agreeing that it is the most appropriate means to an agreed objective).</td>
</tr>
<tr>
<td>4a. Analysis is comprehensive; every important relevant factor is taken into account.</td>
<td>4b. Analysis is drastically limited: i. Important possible outcomes are neglected.</td>
</tr>
<tr>
<td>5a. Theory is often heavily relied upon.</td>
<td>5b. A succession of comparisons greatly reduces or eliminates reliance on theory.</td>
</tr>
</tbody>
</table>

speeches. The frequency of these references would suggest that social accounting might become increasingly important in the future, as the discipline of accounting is extended to include a variety of items not presently disclosed. However, the extension of social accounting measurements and disclosures is affected by confusion, measurement problems and disagreements about the legitimacy of accounting activity in this field. The confusion arises because the term social accounting is used in different ways by different groups of people and the measurement difficulties are always present in any new area; indeed, they are what accounting is all about. The disagreements about how far accountants should go in their measurement and reporting activities can be traced to fundamental differences in philosophies about disclosure and reporting.
attempt to do so. If necessary allocation techniques, so frequently used in other aspects of accounting, might be used to distribute the cost of repairing damage to the public domain. It is true that within accounting measurement techniques are not well developed, certainly at the financial level.

However, there is a strong argument for the use of non-financial measurement and disclosure such as parts per million of pollutant, particulates, pH of waste water etc. and for supplementing this information at a later date as techniques improve. By contrast there is a section of the literature which rejects quantification even in non-financial terms (Maunders & Burritt, 1991, pp. 21-23; Hines, 1991). Other ‘deep ecologists’ would accept non-financial accounting measurements as a means of reducing the damage done to the environment (Robinson, 1993). The determination of non-market values for environmental resources has been developed within the economics literature, with at least one author attempting to make the translation into accounting (Milne, 1991). However, as noted previously this approach has not been widely adopted by accountants.

The difficulties caused by pollution crossing national boundaries can be readily appreciated. How would one account for Canadian maple trees being killed by pollution from US power station emissions, or acid rain in Scandinavia resulting from discharges from UK power stations, or the accumulation of pollutants in rivers as they pass national borders in Europe? There are also difficulties where considerable time separates the event and the result of that event. Examples might be the effect of Thalidomide on the foetus, and the effect of mining for coal (black lung, pneumoconiosis) or working with asbestos (asbestosis).

Summary

This section may be summarised as follows:

1. To get the total cost (private plus public) of operating an entity, it is necessary to value externalities, or to prevent them.

2. In the absence of valuation procedures it is necessary to begin by basing disclosures on non-financial quantification.

3. There are a number of positions taken up on the issue of valuation ranging from that of the deep ecologist (whatever is done will not be meaningful without attempts to control growth, resource usage and non-subsistence activities), through non-financial quantification to financial quantification, in the belief that disclosure will demonstrate that the conventional profit figure is quite misleading. These alternatives are also discussed at some length in Milne (1991) from a decision making perspective.

4. Some assistance with valuation outside the market mechanism may come from the environmental economics literature.
5. Another approach would be to use compliance with standards with heavy fines for breaches to force the internalisation of costs. Unfortunately this would not prevent the environmental degradation in the first place.

6. Market based mechanisms have been suggested, such as marketable pollution rights which would internalise costs and set a limit on total discharges.

There has been a change in approach to the matter of externalities between the early 1980s and the present. Attempts to value externalities on a macro scale appear to have been abandoned in favour of a micro approach based on prevention of the discharges which would produce externalities in the first place.

The valuation of externalities is not confined to problems of pollution although that is the issue which comes to mind most frequently. Other problems at the theoretical level include loss of value because of the deterioration of adjacent properties (or the reverse, a gain in value as the result of other property owners expenditure), or loss of value from having an attractive view built out. There are also value gains and losses resulting from local authority actions such as re-zoning or new road construction. Here it is capital values which are affected rather than ongoing production costs. To conclude, the valuation of externalities in financial terms is still some distance away, but some progress has been made in resolving philosophical and theoretical problems.

CONCLUDING COMMENTS

This paper has attempted to do two things, firstly to review developments in the field of social and environmental accounting since 1990, and secondly to examine the valuation of externalities.

A review of the literature since 1990 showed that the major interest by far has been in environmental and not social accounting, and furthermore that the major contributions have been concentrated in the hands of relatively few contributors. The work of Gray (1990, 1991, 1992, 1993) provides an obvious starting point for any study of the environmental accounting literature. This is supported by Owen (1992) and the contributors to a special green accounting edition of AAAJ.

Other major developments have been the interest in teaching about the social and environmental aspects of accounting, which was demonstrated at a special conference in Montreal in 1992, and the attention given by the professional accounting bodies in Canada and the UK. Finally, the setting up of the Centre for Social and Environmental Accounting Research (CSEAR) at the University of Dundee has assisted in networking and further research.

Research into the role and importance of social responsibility disclosures in annual reports and other media continues, although perhaps at a lower rate than previously. There are now more sophisticated attempts to find the motivation behind these disclosures, rather than simply whether they exist and their extent.
attempt to do so. If necessary allocation techniques, so frequently used in other aspects of accounting, might be used to distribute the cost of repairing damage to the public domain. It is true that within accounting measurement techniques are not well developed, certainly at the financial level.

However, there is a strong argument for the use of non-financial measurement and disclosure such as parts per million of pollutant, particulates, pH of waste water etc. and for supplementing this information at a later date as techniques improve. By contrast there is a section of the literature which rejects quantification even in non-financial terms (Maunders & Burritt, 1991, pp. 21-23; Hines, 1991). Other 'deep ecologists' would accept non-financial accounting measurements as a means of reducing the damage done to the environment (Robinson, 1993). The determination of non-market values for environmental resources has been developed within the economics literature, with at least one author attempting to make the translation into accounting (Milne, 1991). However, as noted previously this approach has not been widely adopted by accountants.

The difficulties caused by pollution crossing national boundaries can be readily appreciated. How would one account for Canadian maple trees being killed by pollution from US power station emissions, or acid rain in Scandinavia resulting from discharges from UK power stations, or the accumulation of pollutants in rivers as they pass national borders in Europe? There are also difficulties where considerable time separates the event and the result of that event. Examples might be the effect of Thalidomide on the foetus, and the effect of mining for coal (black lung, pneumoconiosis) or working with asbestos (asbestosis).

**Summary**

This section may be summarised as follows:

1. To get the total cost (private plus public) of operating an entity, it is necessary to value externalities, or to prevent them.

2. In the absence of valuation procedures it is necessary to begin by basing disclosures on non-financial quantification.

3. There are a number of positions taken up on the issue of valuation ranging from that of the deep ecologist (whatever is done will not be meaningful without attempts to control growth, resource usage and non-subsistence activities), through non-financial quantification to financial quantification, in the belief that disclosure will demonstrate that the conventional profit figure is quite misleading. These alternatives are also discussed at some length in Milne (1991) from a decision making perspective.

4. Some assistance with valuation outside the market mechanism may come from the environmental economics literature.
5. Another approach would be to use compliance with standards with heavy fines for breaches to force the internalisation of costs. Unfortunately this would not prevent the environmental degradation in the first place.

6. Market based mechanisms have been suggested, such as marketable pollution rights which would internalise costs and set a limit on total discharges.

There has been a change in approach to the matter of externalities between the early 1980s and the present. Attempts to value externalities on a macro scale appear to have been abandoned in favour of a micro approach based on prevention of the discharges which would produce externalities in the first place.

The valuation of externalities is not confined to problems of pollution although that is the issue which comes to mind most frequently. Other problems at the theoretical level include loss of value because of the deterioration of adjacent properties (or the reverse, a gain in value as the result of other property owners expenditure), or loss of value from having an attractive view built out. There are also value gains and losses resulting from local authority actions such as re-zoning or new road construction. Here it is capital values which are affected rather than ongoing production costs. To conclude, the valuation of externalities in financial terms is still some distance away, but some progress has been made in resolving philosophical and theoretical problems.

**CONCLUDING COMMENTS**

This paper has attempted to do two things, firstly to review developments in the field of social and environmental accounting since 1990, and secondly to examine the valuation of externalities.

A review of the literature since 1990 showed that the major interest by far has been in environmental and not social accounting, and furthermore that the major contributions have been concentrated in the hands of relatively few contributors. The work of Gray (1990, 1991, 1992, 1993) provides an obvious starting point for any study of the environmental accounting literature. This is supported by Owen (1992) and the contributors to a special green accounting edition of AAAJ.

Other major developments have been the interest in teaching about the social and environmental aspects of accounting, which was demonstrated at a special conference in Montreal in 1992, and the attention given by the professional accounting bodies in Canada and the UK. Finally, the setting up of the Centre for Social and Environmental Accounting Research (CSEAR) at the University of Dundee has assisted in networking and further research.

Research into the role and importance of social responsibility disclosures in annual reports and other media continues, although perhaps at a lower rate than previously. There are now more sophisticated attempts to find the motivation behind these disclosures, rather than simply whether they exist and their extent.
The reporting of social responsibility information and accountants support (or lack of support) must be viewed against the limited conceptual and operational framework available for guidance and evaluation. In the discussion that follows three examples will be briefly examined. They are the U.K. Government green paper on the future of corporate reports (HMSO 1977) suggestions by Cheng (1976) for a "statement of socioeconomic operations" and a social accounting framework developed by Ramanathan (1976).

The U.K. Government green paper, a consultative document without legislative force, refers to social accounting as

... a term which covers a range of ideas, many of which are at a very early stage of development. At its simplest it involves reporting, largely on an ad hoc basis, on individual items such as anti-pollution or health and safety measures which may be of greater importance for their social impact than for their financial effects on the company. (HMSO 1977, p. 16)

This statement provides a general indication of SRA content, when added to the suggested content of employee reports, which is given as a separate section.

Cheng has argued for a "Statement of Socio-Economic Operations," the purpose of which is expressed as follows:

The essential concept of the statement of socioeconomic operations is to include what a business organisation has given to or held back from society. The statement is a tabulation of these expenditures made voluntarily and involuntarily by a business aimed at improving the welfare of employees, or public safety of the product, or conditions of the environment. Offset against these expenditures would be negative charges for social action that is not taken but should have been taken. (Cheng 1976, pp. 290-291)

The Cheng statement of socioeconomic operations would be divided into three parts: Internal Activities in Domestic Operations; External Relations in Domestic Operations; and Socioethical Considerations of International Operations. The section on Internal Activities in Domestic Operations refers to work in areas like job training programs, employee safety and health improvements, improvements to working conditions and efforts to conserve energy. That on External Relations in Domestic Operations would include contributions to charity, the installation of pollution control devices, public-education programs, loans to students, recycling of material and measures of consumer satisfaction.

In his statement on Socioethical considerations of International Operations, Cheng would include the development of human resources, the provision of technological assistance, attempts to improve agricultural productivity and raise living standards in certain regions, and statements on corporate morality and realistic sales and profit goals. Many of the ideas contained in the Cheng framework can be used in SRA, although some would appear to be more appropriate to Total Impact Accounting because they involve the valuation of externalities.

Ramanathan (1976) provides a conceptual framework for the development of
social accounting. The framework consists of three objectives and six concepts. The third objective would appear to apply in the case of SRA. An objective of corporate social accounting is to make available in an optimal manner, to all social constituents, relevant information on a firm's goals, policies, programs, performance, and contributions to social goals. Relevant information is that which provides for public accountability and also facilitates public decision making regarding social choices and social resource allocation. Optimality implies a cost-benefit-effective reporting strategy that also optimally balances potential information conflicts among the various social constituents of a firm (Ramanathan 1976, p. 527). The six concepts define social transaction, social overheads, social income, social constituents, social equity and net social asset. The terminology applies equally to SRA and Total Impact Accounting (TIA), which involves the measurement of externalities. Ramanathan is concerned with all aspects of the social performance of an organisation. His framework is wider than the others included in this section because no separation is acknowledged between SRA and Total Impact Accounting. Objective 1 is clearly aimed at measuring the total impact of enterprise activities through the net social contribution. Objective 3 is closer to the normally accepted goal of SRA, that is, to provide relevant information about the firm which is appropriate for the needs of the different social constituents. The second objective may be related to either SRA or TIA.

The SRA concepts suggested by Cheng and Ramanathan indicate that some, or all, of the following topics might be included: employee related information, pollution and environmental protection data, product safety, energy usage, research and development activity, productivity statistics and community projects and relationships.

However, it must be recognized that disclosures under this heading would have to be full and frank, rather than biased towards only the "good news." Disclosure of social responsibility should be practiced fully, or not at all. Wiseman (1982) provides examples of reports which are not full disclosures and which may well be misleading. She concludes

The findings indicated that the voluntary environmental disclosures were incomplete, providing inadequate disclosure for most of the environmental performance items included in the index. Further, it was demonstrated that no relationship existed between the measured contents of the firms' environmental disclosures and the firms' environmental performance. (Wiseman 1982, p. 62)

There is clearly a role for a social auditor, despite the reluctance of accountants to become involved in this area.

A discussion of SRA would be incomplete without consideration of two areas that are frequently treated independently, although probably belonging under this general heading. These are employee reports and human resource accounting.
Employee Reports

Employee reports form part of the SRA field. However, the gain in popularity in Australia and the United Kingdom has led to a specialized literature for this subgroup. Despite an increase in popularity, employee reports are unregulated, unaudited, and voluntary; consequently quality varies and there is no uniformity of use within industries. Employee reports do not appear to have become popular in the United States, probably because U.S. corporations generally maintain better relations with employees than do similar organizations in these other countries.

Many of the items that Cheng includes in his first statement (internal activities in domestic operations) are to be found in employee reports or employment statements. The UK government green paper includes an employee statement section separate from the entry on social accounting. In the case of the employment statement,

What is proposed is that companies should publish an employment statement which sets out information about its workforce and employment policies which are relevant not only to employees themselves but to shareholders and others concerned with the company. The aim is to provide sufficient information about the workforce and about the way in which the employment resources are managed to give an indication of the effectiveness of management in this crucial area of the company’s activities ... (HMSO 1977, p.9)

Examples of suitable information include numbers of employees joining and leaving the organization, employment and training policies, matters relating to trade unions and participation in decision making, the number of man-days lost as a result of industrial disputes, pension and sick pay arrangements, and employment opportunities for the disabled.

The Green Paper does not distinguish between Employment Reports that are about employees, and a part of the annual report to shareholders, and Employee Reports that are made to employees. Both may be considered part of the SRA disclosures. Although much of the information would be common to both reports, they have different objectives. The employee report is usually designed to present employees with a variety of information not otherwise available to them. The employment report is a part of the annual report to shareholders and could be used. Employee reports are difficult to classify. Do they belong to the field of financial reporting, or to that of Social Responsibility Accounting, or both? There is usually a large financial component made up of a Value Added Statement and simplified financial statements. There is often a large nonfinancial component, including a diagrammatic representation of the financial material (division of the value added as a pie chart for example) and statistics about the organisation and work force. A quantity of qualitative material will be present such as "a message from the Chairman ..."

On balance the author believes that most employee reports should be treated
as potentially SRA disclosures. Employee reporting (or reporting to employees) is predominantly a Level I and II measurement exercise, excepting where financial data is reproduced from the regular annual accounts. The Level III measurements of employee activity have been separated off in the form of Human Resource Accounting. This is discussed in the next section.

**Human Resource Accounting**

Human Resource Accounting (HRA) was once an important area of theoretical discussion and may become topical again, although at the moment there is very little written about the area. HRA has not led to any modification of reporting practice and it is difficult to know exactly where HRA would fit into the framework of social accounting proposed herein. The valuation is a monetary amount, frequently derived from data that are not cost based (Flamholtz 1974). It must, therefore, be a Level III measurement (under the system proposed by the AAA) of the data produced as a general SRA disclosure or as part of an employee report.

Human Resource Accounting attempts to place a value on the human capital of management and other employees. Some advocate placing these values on the balance sheet, rather like a capitalized lease, others would be quite content that the capitalized figure be listed as part of an employee or other supplementary disclosure as part of social responsibility accounting. Human Resource Accounting could be regarded as Level III measurement of the data listed in the employee report, a valuation based on the number of each type of employee with the organization.

It is not suggested that the values placed on the human resource be part of traditional published accounts, as original proponents of human resource accounting would have argued. What is suggested is that these values fit comfortably into a set of employment data as part of social responsibility accounting.

**Summary**

This section has outlined a number of aspects of SRA. These include general disclosures, mainly of qualitative or nonfinancial information on a voluntary basis, by private sector organizations. The area has been divided between general disclosures and specific topics such as employee reports and human resource accounting.

Research is needed into a number of aspects of SRA. These include, but are not limited to, the following.

1. The extent of SRA disclosures, in the manner of Ernst and Ernst.
2. The relationship, if any, between volume and nature of disclosures and the size and type of industries.
3. The relationship between SRA and profitability, after Bowman and Haire (1975).
4. The area of social audit and the audit of SRA disclosures (see Wiseman 1982).
5. The relationship between SRA disclosures and market price of securities (after Stevens (1982), Shane and Spicer (1983)).
6. The views of management and accountants on the need for SRA disclosures.

**Total Impact Accounting (TIA)**

**Introduction**

In this section, Total Impact Accounting (TIA) is defined as follows:

The term Total Impact Accounting (TIA) refers to attempts at measuring, in monetary terms, the total cost of running an organisation in its existing form. The total cost of running an organization may be divided between private and public costs.

Private costs, also called internal costs, are already recorded and measured by the accounting system, as the individual costs of material, labor, and overheads. Public costs, also called external costs or externalities, occur as a result of the existence of an organization and must be borne by the community as a whole. If the social benefits resulting from the existence of an organization are greater than the public costs, then there is no net public cost and there may be a public gain. Net social benefits may result from the building of roads, railyards, or harbor facilities as part of a new economic development.

The classic examples of externalities, leading to public costs, are those of pollution by fumes, smell, noise, and waste discharge. Others are plant-induced traffic congestion or excessive demands on medical or social services.

**The Measurement of Public Costs**

Although the identification of many potential social costs is not difficult, measurement and valuation may not be easy. It is possible to see smoke or dust pollution leaving factory premises and to smell gaseous contaminants polluting the atmosphere, but how can a value be attached to the effects of these phenomena? In terms of the measurement hierarchy adapted for this paper the valuation of externalities would be Level III.

Level III measurements require that nonfinancial quantification can be converted to a financial estimate of costs and benefits. In the case of pollution, the cost of continued emission may be internalized as a private cost, through fines or even closure, or through damage awards to individuals. The cost to the community will possibly involve damage to buildings, increased maintenance costs and loss of amenities, poor community health, and so on. Estimates of the public cost may serve as the basis for fines and damage awards.
Two measurement difficulties that have not been addressed by the Level I–III organization are time and distance. How much time can be expected to elapse between the event (for example, the sulfur dioxide discharge) and the resulting effect (damage to something or someone)? Although a social cost undoubtedly exists, if discharges that were considered harmless are subsequently found to be cumulative and eventually harmful, it is difficult to see how the organization should be made to bear the cost. However, once the knowledge is made public, a different set of rules may be applied. Examples which come to mind are expectant mothers and thalidomide, miners and pneumoconiosis, and the effects of asbestos on a wide range of the general public. In the area of cumulative pollution, we can refer to cadmium poisoning of soil in Japan, and arsenic levels around plants processing this material in several locations.

When considering the physical distance from effluent discharge and the resulting effects, what geographic limits should be placed on the measurement of Social Costs? It has been shown that the improved local effects of passing sulfur dioxide into the atmosphere via tall chimneys in the United Kingdom has resulted in acid rainfall in Scandanavia.

How does TIA deal with time and distance problems? One approach would be to look at the costs and benefits of organizations over their entire life and get away from conventional accounting periods and short term matching principles. It is difficult to do this with changing knowledge and technology and there may still be costs that could not equitably be charged to an organization, because of new developments and knowledge, although some form of insurance policy might be developed.

In respect of distance, the matter is complicated by national boundaries. If an organization discharges material inside one country, it does not matter whether the effect is felt next door, or at the other end of the land, since one jurisdiction is involved. However, where international pollution is involved the jurisdiction is likely to be much more difficult to ascertain.

The attempt to value Pittsburgh smoke and dust pollution in 1913 is referred to by Estes (1973), indicating that interest in this area is not completely new. Another example of a major attempt at valuing pollution (by noise) is that of studies for a third London airport (Mishan 1972).

The Philosophical Problem
The major difficulty with the valuation of externalities is not in knowing that they exist, or even in their physical measurement, but in recognizing that there is a problem at all. The philosophical nature of the question of measuring and valuing externalities may be illustrated by reference to the work of Ramanathan and of Benston.

The conceptual framework for social accounting put forward in the 1976 Ramanathan paper appears to be designed solely for the private enterprise organisation. It was noted earlier that the framework is inclusive of Social
Responsibility Accounting and of Total Impact Accounting. Indeed the major import may well be on the valuation of externalities rather than general SRA disclosures.

A later paper (Ramanathan and Schreuder 1982) further develops the arguments in favor of the valuation of externalities, in the quest for a more realistic development of private sector costs.

The ultimate aim of CSAR is not to weaken the corporate and/or market system, as many opponents of its development seem to think, but to strengthen these systems by making them more inclusive. (Ramanathan and Schreuder 1982, p. 15)

This would be achieved by using a macro approach. Simply put this means that a large proportion of government expenditure, raised through general taxation, is devoted to neutralizing the externalities resulting from private sector activities. The private sector costs of the firms concerned are currently lower than they should be because of the public costs created through externalities. There is a large difference in some cases between enterprise cost and the total impact of the enterprise on society.

Ramanathan and Schreuder argue that a system of linked macro and micro indicators could result in the cost to society (government costs) of neutralizing externalities being allocated to the firms responsible for the externalities in the first place. There would be a number of effects. General taxation could be lowered as a result of specific recoveries, the use of specific charges or taxes would force the organisation to internalise costs though the regular accounting system and the cost structure would then be comparable to that of an organization that did not cause externalities. In some industries there would be a general rise in the cost structure, leading to higher prices and reduced demand. The viability of some industries might be reduced and that of others increased.

The weakness in this structure lies in the operational phase—getting macro and micro indicators that may be linked together to provide a framework for specific charges or taxes. This is admitted by the authors:

Finally, we may point toward one area of agreement between proponents and opponents of CSAR, namely the finding that the current state-of-the-art has not yet moved sufficiently from the phase of initial individual experiments to the stage of operationalisation and testing of more general frameworks. We feel the social indicators approach which integrates micro and macro perspectives is a promising avenue of research to pursue for this purpose, and we shall direct our future research efforts accordingly. (Ramanathan and Schreuder 1982, p. 29)

Benston takes a very different philosophical view of social accounting, social responsibility issues, and the valuation of externalities. He argues that management is responsible to shareholders, who are able to maintain pressure through an efficient market and ensure that managers do not misuse shareholder resources. It is implied that social responsibility actions could be misuse of funds.
The above leads Benston (1982) to argue that although some social responsibility disclosures may benefit shareholders most would not do so.

The principal implication of the analysis for corporate social responsibility is that if concern for shareholders is the motivating factor behind this accounting, there is no reason to require its inclusion in public reports. To do so would impose costs on shareholders for the benefit of those who contract with it (e.g. employees) or would support the values of some group in society (e.g. advocates of programs that they say are socially responsible) over others (shareholders, customers and employees). (Benston 1982, p. 93)

This approach ignores the possibility that shareholders may benefit from a reasonable involvement with social responsibility disclosures (Bowman and Haire 1975).

Externalities are considered next. These are examined on a net basis (i.e., positive externalities and negative externalities must be offset). This approach may lead to an apparently inflexible and mechanistic view of externalities as indicated in the following passage in relation to pollution costs:

Thus if all of the area residents are associated with the factory (say as employees or suppliers), the disability from breathing polluted air is a cost of dealing with the factory and will be reflected in the wages or prices for goods paid by the factory owners. Therefore, there is no externality. (Benston 1982, p. 94)

This view ignores the whole issue of corporations and morality (Donaldson 1982).

Benston concedes that negative externalities such as pollution will not be self-controlled, so that, by implication, regulation may be necessary. He further argues that the measurement of externalities is so difficult that social responsibility reports will not contribute very much to the determination of these costs. Lesser systems are then examined based upon social indicators and supplementary reports. They are found wanting because

... it benefits anyone, including the owners of corporations, to impose negative externalities on non-contracting parties and to report on social matters only when the result is likely to be beneficial to the owners. (Benston 1982, p. 98)

Benston concludes that social responsibility accounting (by which he means both the reporting of voluntary nonfinancial and financial data as well as attempts to value externalities) is not a viable proposition. In taking a classical free-market position Benston is ignoring trends towards greater questioning of organizational legitimacy by the public (Lindblom 1982; Tinker and Lowe 1980; Heard and Bolce 1981; Donaldson 1982). Furthermore, by rejecting organizational attempts at social responsibility, Benston may be encouraging the conditions by which eventual legislation is to the ultimate disadvantage of the shareholders whose interests he seeks to protect.

The purpose of presenting the Ramanathan and Benston views was to establish the contrast, which highlights the difficulties imposed by the philosophical underpinning of arguments about the measurement of externalities.
Summary
It is clear from the difficulties detailed above that the TIA process has some way to go before it could be a part of a general evaluation of organization performance. The conventional accounting system within the organization will not recognize externalities or public costs, unless they are converted into a private cost, by means of fines or charges for release or discharge of material. Such a charge does not, of course, remove the nuisance. However, given a reasonably efficient market, the increased cost of production should bring about either a reduction in sales (and hence output) as a result of a rise in price, or draw the attention of management to worthwhile investment in efficient pollution abatement equipment.

The ultimate aim of Total Impact Accounting is to evaluate private organizational activities in terms of public cost. In order to do so, TIA must identify actions that are likely to produce social costs or externalities and then produce both financial and nonfinancial measures of these externalities.

It is evident that research into TIA disclosures is different from an examination of SRA although the former may build upon the latter. Fundamental work on externalities carried out by economists needs to be examined for usefulness in accounting for externalities. Other avenues for research may be

1. The macro-micro indicators approach put forward by Ramanathan and Schreuder.
2. The examination of positive and negative externalities associated with areas dominated by large companies (as in Dilley 1972; Dilley and Weygandt 1973).

Socioeconomic Accounting (SEA)

Introduction
Socioeconomic Accounting is concerned with a micro approach to the problems of project selection, operation, control, and evaluation in the public sector.

The term Socioeconomic Accounting has been defined by Linowes as follows:

Socio-Economic Accounting is intended here to mean the application of accounting in the field of social sciences. These include sociology, political science and economics. (Linowes 1968, p. 37)

Linowes has been supported by Mobley (1970) in the development of socioeconomic accounting. However, Francis (1973) argues persuasively that many accountants do not have training or background to deal with complex statistical tools in the social science area. Birnberg and Gandhi (1976) have useful observations on the role of accountants in the social program.

It is clear that traditional government budgetary control models do not address resource allocation and decision-making problems in a fully satisfactory manner. Two systems that are claimed to be improvements on traditional government
accounting systems are Cost Benefit Analysis (Prest and Turvey 1965, p. 682) and Planned Programmed Budgeting Systems (Dennison 1979).

It is probably sufficient for our present purpose to suggest that even if these systems were more widely accepted, they would not address the issues which proponents of SEA are attempting to address.

It is argued that improved measurement techniques are needed because of limited resources and apparently unlimited demands, together with increased social pressures for greater government involvement. Difficult choices need to be made and some programmes must be favoured ahead of others. Although political expediency will always be present, improved quality of information, both in the planning and control stages, may eventually lead to better decisions.

The Need for Models

Unfortunately, the advocates of SEA have not followed up the early work with concrete examples of evaluation models. Models of the social audit process have been produced (Corson and Steiner 1974) but these are not exclusively designed for use in SEA. Attempts to use models taken from the literature of educational administration have not met with much success (Mathews 1983), although the related area of Institutional Performance Evaluation is discussed below. Socioeconomic accounting models will be necessarily complex since they will be called upon to facilitate decisions about the effectiveness and efficiency of publicly funded activities in the absence of market prices for outputs. Inputs may be valued in financial and nonfinancial terms but outputs will often be limited to nonfinancial values—the number of employable school dropouts, reformed prisoners, and so on.

Institutional Performance Evaluation

Socioeconomic accounting is further exemplified by the literature dealing with Institutional Performance Evaluation, which is the use of financial and nonfinancial, qualitative and quantitative measures, to measure the attributes of an educational institution. The specific area discussed here is that of higher education, generally the university sector, which is suffering from reduced funding, often larger student inflows and a call for more accountability by Government. This area of research is quite compatible with the others in this section because nontraditional measurement methods are employed, in a public sector activity. The outcome sought is a reference to a given subject institution on measures of efficiency or effectiveness.

Sizer notes the importance of measures of effectiveness as well as efficiency:

"Is an institution of higher education effective if it achieves objectives which are appropriate to the economic, socio-political, technological, ecological, and educational environment in which it operates? Should its objectives be congruent with the long-term needs of society? (Sizer 1980, p. 5)"
To agree on notions of effectiveness implies acceptance of a common set of objectives, at least at the institutional level. This would enable planning and evaluation by nonprofit indicators to be undertaken. This has not been generally possible and, consequently, the popularity of PPBS and CBA has declined. Sizer has developed partial performance indicators for institutions of higher education, based upon the characteristics for performance indicators developed by Sorenson and Grove (1977). These are availability, awareness, accessibility, extensiveness, appropriateness, efficiency, effectiveness, outcomes/benefits/impacts, and acceptability.

Progress measures of performance are not confined to the evaluation of efficiency but are aimed at institutional effectiveness. An alternative set of process performance indicators, directed towards measuring institutional efficiency, have been produced by Elstermann and Lorenz (1980). These measures of performance in institutions of higher education may well conform to the standards of relevance, verifiability, freedom from bias, and quantifiability, as set down by the Statement of Basic Accounting Theory (AAA, 1966). This is an important question, not only for higher education performance measures (both progress and process types) but for all measures that may be included in SEA. An interesting development in this field has been the Tennessee program of performance incentives for state colleges (Bogue and Brown 1982).

Summary
This section has discussed the notion of adapting accounting techniques to the evaluation of publicly funded programs. The advantages of a successful evaluation system are fairly evident—the difficulties appear to lie in a dearth of models to incorporate both financial and nonfinancial quantification as well as qualitative data. The closest operational approaches would appear to be those of institutional performance measurement.

The writer sees the area of government-funded programs as a fertile ground for evaluation models, using both financial and nonfinancial measurements and criteria aimed at promoting efficiency and effectiveness. The importance of an earlier reference to partial performance indicators should not be underestimated. To a large extent all measurements result in partial indicators of performance. This applies to financial accounting reports as well as less traditional forms of reporting. The socioeconomic accounting discussed in this section is an attempt to convert unreported performance to a partial reporting of performance by publicly funded organizations.

Social Indicators Accounting

Introduction
This section is concerned with a brief review of a further division of the total social accounting field. The approach advocated by the proponents of
socioeconomic accounting (namely the use of accountants and accounting
techniques to improve project selection, operation and control, and output
evaluation in the public sector) is on a micro level. The corresponding macro
approach is sometimes referred to as social indicators accounting (SIA).

Consequently, where the stated objectives of a social system (via the political
process) are to have a healthier and better educated population, to be achieved by
a series of public programs (each perhaps influenced by socioeconomic
accounting), progress towards these objectives ought to be capable of measure­
ment. These measurements may be of varying scope and time scale as outlined
below; in particular there may be a distinction between national, regional, and
local measures.

Social indicators research is generally traced back to the work of Bauer (1966)
and has generated a substantial volume of published material, only a small part
of which may be regarded as properly belonging to the accounting area. Glatzer
(1981) provides an overview of the development of social indicators that is too
comprehensive for review in this paper. Parke and Peterson (1981) discuss the
development of social indicators in the United States.

The Development of Change Indicators

Parke and Peterson (1981) note that the term "social indicators" became
widespread after the work of Bauer and that a frequently used definition is that of
the U.S. Department of Health, Education and Welfare. There is a major
difference of approach between researchers of social indicators, who would
confine their attention to direct measures as far as possible, and users of
indicators. The users would accept data obtained indirectly and by inference, if
unable to obtain them directly. SIA is usually concerned with direct measures of
social activity.

The Parke and Peterson paper is divided into three sections—social
measurement, social accounting, and social reporting. In the area of social
measurement, at a macro social indicators level, researchers are attempting to
develop a series of quantitative measures of social change, since it is only in this
way that empirically based statements can be sustained. Although data collection
is proceeding in some areas the authors feel the need to comment that

Impressive as these data collection efforts are, they do not by themselves produce
the indicators that are needed. For this, we need improvement of instrumentation,
improvement of access to data, and assessment of the value of the data as a
measure of phenomena of interest. (Parke and Peterson 1981, p. 238)

Parke and Peterson conclude that careful measurement is needed, supported by
appropriate instruments and processing, together with suitable reporting.

It is evident, from an examination of this and other survey articles, that only a
small part of the literature of social indicators research is relevant to a study of
social indicators accounting as the term is used here. Furthermore, a lengthy
time period for measurement may be involved together with a regional or
dimensional scale. All of these factors contribute towards making this an area that is, apparently, of less interest to accounting researchers than those considered in the earlier sections.

Goal Indicators and Data Deficiency

In several important papers Terleckyj (1970, 1975, 1978) has addressed the problem of measuring social change in the direction of specific goals. Terleckyj (1970) begins with a series of national goals that are hypothesized for a 10-year period. In order to achieve these goals a number of activities must be undertaken and in turn monitored. It is the monitoring process, as well as the goal performance, with which SIA is concerned.

The scheme provided includes national goals determined by the political process (called Areas of Goals Concern) and a number of indicators that would assist in measuring progress towards these goals (these are referred to as Principal Indicators of Goals Output). The computation of the indicators is dependent on the availability of data of the appropriate quality and type. The process of SIA would appear to extend to the design of the data collection and support systems needed to produce the indicators.

Linking Macro and Micro Indicators

The two areas of social responsibility accounting and social indicators accounting are normally quite separate, in that SRA refers to short-term private sector disclosures and SIA to long-term goals and supporting social measurements of a macro, public nature. Ramanathan and Schreuder (1982) have attempted to link the two areas. Their basic thesis is that if the indicators used at both macro and micro level were the same, a relationship between the two could be determined. A suitable example might be pollution of the atmosphere by industrial activity. If the total amount of pollution were measurable in physical terms, together with the estimated public cost of dealing with the problems caused by discharges, then the degree of responsibility could be determined. This responsibility could be that of an individual organization, an entire industry or the industrial sector as a whole. The individual costs would be determined by the relationship between micro indicators and macro indicators for the same phenomenon.

... the objective of CSAR from a macro-perspective is to develop shadow (transfer) prices to charge the private sector for costs incurred in the public sector to manage and resolve private sector externalities. (Ramanathan and Schreuder, 1982, p. 19).

The determination of transfer costs and shadow prices is obviously difficult, involving identification and measurement problems, as well as a series of assumptions about the role of government, the rationality of government action, the desirability of complete abolition of discharges to be obtained by regulation.
and the time lags involved between the identification of externalities and their reduction/elimination. It is doubtful that this is a complete listing of difficulties.

Summary

It is evident that SIA means many things to many people, possibly to a greater extent than the other categories or divisions of social accounting with which we have been concerned. The literature of social indicators does not belong primarily or even mainly to social accounting but to sociology and welfare economics.

The work of Terleckyj illustrates clearly both the promise and the problems of social indicators accounting. The need for better data collection and processing systems is universal, but the paucity of nonfinancial information needed as a basis for some of the indicators that government agencies might want to use is seen as a serious problem.

Ramanathan and Schreuder have set out a very interesting relationship between macro and micro social indicators in their paper, which is designed to overcome the problems of externalities. However, the issues they have raised need elaboration before any operational format can be developed. One of the problems of implementation may be the unresolved conflict between the innovative development of SRA and the use of standards to ensure uniformity among micro social indicators.

Opportunities for further research fall into at least three categories, improving the data basis from which indicators may be calculated, using the indicators to measure the attainment of goals and innovative links with other dimensions.

Conclusion

The basic objective of this article has been to provide a framework that might assist researchers in the area of social accounting.

The approach to policy formation set out by McDonald (1972) indicates that normative frameworks require a clarification of values, a means–ends analysis and the incorporation of all relevant data. The division of "social accounting" into Social Responsibility Accounting, Total Impact Accounting, Socioeconomic Accounting, and Social Indicators Accounting assists in the identification of ends, and consequently of means.

Social Responsibility Accounting is the area most widely researched and practiced. SRA research exhibits many of the characteristics of descriptive (theories of) accounting. This may be a productive approach given the amount of data available. However, it is suggested that further research should concentrate on the extent of disclosure, relationships between the size and type of industry and SRA disclosures, the audit of disclosures, disclosures and security market prices, and the views of the participants.

In dealing with Total Impact Accounting we must face up to the philosophical debate over whether shareholders are being required to pay for social responsibility or, on the other hand, the general public is entitled to protection
A Classification for Social Accounting

119

from externalities. Identifying the ends (in this case the valuation of externalities to convert public costs to private costs) does not immediately indicate the means to be employed. Although data on general externalities may be available, the isolation and valuation of specific enterprise related externalities is more problematic. Research into this area may begin by looking at the externalities attached to single enterprise communities. An alternative approach, suggested by Ramanathan and Schreuder, is to link macro and micro indicators. However, the issue of the valuation of externalities must still be addressed.

The end to be addressed by SEA is the evaluation of publicly funded programs by techniques other than those used at present. The main problem (of means) is an almost complete lack of accounting models that will enable the analyst to deal with financial, nonfinancial and qualitative inputs and outputs. Research in this area must begin with the development of the models themselves. Some assistance may be obtained from other areas such as institutional performance indicators referred to previously.

Social Indicators Accounting has, as an "end," the production of data from which the progress towards socially agreed goals may be determined. The area appropriate to accounting involvement must be delineated, and the goals identified. The goals indicators may then be developed. The processing of the indicators will be dependent on the availability of the underlying data. Research is needed into both of these "means," that is, the data to develop the indicators and the indicators themselves. A further area is suggested by Ramanathan and Schreuder, where macro indicators are associated with micro indicators to serve a specific purpose.

The form of organization provided by the structure outlined in this article may be applied to the research and teaching of social accounting. The structure has been outlined and explained in the hope that researchers interested in "Social Accounting" will recognize areas to which they can contribute. Although SRA is currently the most "populated" area, the other areas are deserving of support, because therein lie some of the most important challenges for academic accountants.

The author wishes to thank Professor C. T. Heazlewood and two anonymous reviewers for their comments on an earlier draft of this paper.

References


Benston, G. J. 1982. Accounting and corporate accountability. Accounting Organisations and Society. 7(2)77-105.


A Classification for Social Accounting


Towards a Mega-Theory of Accounting

M. R. Mathews*

Introduction

Since the end of the General Normative Theory Period about 1970 (Henderson and Peirson, 1983) normative theorising about accounting has been regarded as unfashionable and almost unacceptable, excepting in the areas of Social and Environmental Accounting, Critical Theory, and perhaps aspects of Accounting Education. Although empirical research has played an important part in the activities of those interested in the field of Social and Environmental Accounting, researchers in this area have also been willing to generate normative theories for debate (refer Mathews, 1997, forthcoming), although these models date from the 1970s, with little of this work in recent times.

It may be argued that the development of accounting, as we currently know it, may follow one or more of three paths; (a) improvement of currently disclosed elements of financial statements; (b) the addition of further elements of a traditional (financial) dimension; or (c) the inclusion of elements which may include a non-financial as well as a non-traditional dimension. Examples of the first might be accounting for price-level changes; the second path may be exemplified by the inclusion of executory contracts, internally generated goodwill or human resource accounting. The non-financial/non-traditional dimension would include disclosures of a social or environmental nature.

The intention of this preliminary paper is to bring together the threads of a broader normative theory of accounting and reporting, in both financial and non-financial terms, which encompasses economic, social, and environmental performance. This is clearly a mega (or perhaps megalomania!) theory of accounting and reporting which would require considerable debate and development. These developments are seen by the author as evolutionary, and not revolutionary. There is no suggestion of a paradigmatic shift (Kuhn, 1970), but of a realignment of existing accounting practices to fit within changed societal

* Professor of Accountancy, Massey University, Palmerston North, New Zealand.

expectations, so that the process remains legitimate (Shocker and Sethi, 1974, p. 67). Although not Kuhnian in nature, there is now a sufficiently large group of social and environmental accounting researchers to be regarded as a research programme in the Lakatosian sense (Lakatos, 1974).

The remainder of the paper proceeds as follows. First, the current position of partial accounting theories is examined, then consideration is given to the components of a more encompassing theory which would address the needs of a wider stakeholder body. These include the potential users of the information, the objectives of reporting, the types of information which might be reported, the verification of the information, and the characteristics of the information to be supplied.

Financial reporting, as currently practised, provides a partial view of the status of the enterprise at a point in time, and a partial (i.e. incomplete) picture of the financial performance over a period of time. This partiality (or incomplete state) is an inbuilt feature of current financial accounting (as all previous systems have been even more incomplete) because the conceptual framework (and standards setting mechanism) is itself incomplete. The source of this condition is at least twofold. First, the data which is included in the calculations and presentation of statements (i.e. assets, liabilities, revenues and expenses) are themselves incomplete expressions of reality, and second, there are identities which are not included at all. Examples of the first type include accounting for price level changes, about which there is still controversy if not confusion; the position of purchased goodwill and other intangible assets, and the detailed mechanisms whereby periodic charges are made to write off changes in values (amortisation, capitalisation, depreciation). Examples of the second type include all financial items which are currently excluded, such as executory contracts, operating leases, and estimates of internally generated goodwill.

It is not the intention of this paper to review in any detail the remedies that may be available to deal with the deficiencies of conventional financial accounting, however, it must be clear that as the nature of commerce changes, so must the information that is provided to meet the needs of stewardship, decision usefulness and accountability (Mathews and Perera, 1995, pp. 83–84).

The Partial Nature of Financial Accounting: Some Reasons

Financial accounting is partial because the driving forces behind current structures are themselves incomplete, having developed out of the 19th Century neo-classical
economical period, when the major concerns were to recognise private property rights, the valuation of the market place and the concept of profit maximisation through marginal cost and marginal revenue concepts. The use of “free goods” (as they were regarded at the time) such as air and water for the disposal of waste products, and the recognition of all labour as a cost and never an asset, are features of modern accounting which bear testimony to 19th century origins. Although the nature of these “free goods” is now better understood, and they are regarded as “common goods”, this has not prevented environmental degradation.

The conceptual frameworks commonly used to underpin modern financial accounting make little reference to any system of measurement and disclosure other than through the medium of financial data, and assume the reduction of all meaningful information to a financial form, which is then presented by means of a single point determination. The general implication is given that if the data is not in a financial form, it is not accounting data; and furthermore that unless the data is presented as a single value, it lacks objectivity and utility. For example, the range of values which might be given to a building by registered valuers must be condensed into one single point value for use in the annual report.

Until recently the stakeholders with an interest in the annual report were limited to shareholders and creditors (AICPA, 1973; SFAC, 1978). Although the Corporate Report (ASSC, 1975) generated controversy with a list of users having “rights to information”, the need for corporate reports using multiple formats to satisfy the needs of users, and the public accountability required of significant economic entities regardless of legal status, took quite some time before there was any change, and this has been marginal. The relatively recent Australian conceptual framework (AARF, 1990) accepts a widening of the stakeholder group, but does nothing to formally include non-financial quantification in annual reports.

It may be concluded that current financial statements are partial because they do not include all of the possible identities to be included, and provide incomplete or problematic values for many of the items which are included. Furthermore, there are other limitations such as the use of single point values, where ranges may be more appropriate, and a concern with the objectivity which comes from looking backwards to what has passed, and not forward in any prospective way. Although the stakeholder group has been widened in recent years, the shareholder/investor group is still the dominant user group for most preparers. Some significant economic entities are able to avoid disclosures because of their legal status, which determines disclosure requirements.

The restrictive manner in which accounting is being defined (Hines, 1989) determines what is regarded as legitimate accounting, and this excludes a wide
range of social and environmental data, which may be necessary for the proper appreciation of the impact of the reporting entity upon society as a whole. This area is reviewed in the next section.

Social and Environmental Accounting

Alternatives and additions to financial accounting, in order to accommodate the social and environmental dimensions of reporting, have been discussed for more than 25 years (Mathews, 1997, forthcoming), and in the 1970s a number of proposals were made for integrating newer forms of accounting with existing structures (refer Mathews, 1993; Gray et al., 1996, for descriptions and critiques of these models). Social accounting has been described and defined in a number of different ways:

1. Social accounting... attempts to broaden the scope of the discipline by addressing the issues and audiences which have been neglected by mainstream accounting developments. The issues addressed include employee and product related matters and externalities (market failures) and the environment; the audiences include employees, consumers and the general public (Mathews, 1993, p. viii).

2. At the very least, social accounting means an extension of disclosure into non-traditional areas such as providing information about employees, products, community service and the prevention or reduction of pollution (Mathews and Perera, 1995, p. 364).

3. Social accounting is about some combination of: (a) accounting for different things (i.e. other than accounting strictly for economic events); (b) accounting in different media (i.e. other than accounting in strictly financial terms); (c) accounting to different individuals or groups (i.e. not necessarily only accounting to the providers of finance) and (d) accounting for different purposes (i.e. not necessarily accounting only to enable the making of decisions whose success would be judged in financial or even only cash flow terms) (Gray, Owen and Adams, 1996, pp. 3, 11).

Regardless of the source, the common features of social accounting can be regarded as reporting to a wider audience on a range of subjects not currently included in mainstream accounting. The Corporate Report (ASSC, 1975) did not specifically recommend social accounting (further examination of the issue was recommended) but advocated additional reports for a wider group of stakeholders, including employee reports and Value Added Statements, both of which were popular for a brief period during the late 1970s and early 1980s, but have now disappeared from most annual reports (Burchell, Clubb and Hopwood, 1985). One
reason for the disappearance of this form of social accounting may have been the lack of authoritative backing in the form of conceptual frameworks, accounting standards or other legal requirements.

Despite the unwillingness of many accountants, both academic and professional, to give serious consideration to social accounting, there has been a consistent and considerable increase in disclosure of this material in Annual Reports, although still limited in most cases to qualitative statements. It would appear that it many instances management regards social disclosures as useful, although we do not know whether the motivation comes from capital market, organisational legitimacy, social contract, or some other source of justification (Mathews, 1993, Chapter 2). What is clear is that in many cases the preparation of social accounting disclosures is not being done by accountants, despite the location of the data in the annual report, and the material is often not audited. Both factors should give accountants and auditors cause for some concern.

During the last decade, interest in social accounting has been replaced by a concern for environmental accounting. Environmental accounting was once regarded as a part of social accounting, but in recent years has achieved recognition as a separate activity; one which has made significant advances. The driving force appears to be the recognition that past and present financial accounting and disclosure mechanisms have failed to include important externalities, which now threaten our planet. For example, the US legislative drive to identify and remediate toxic waste sites, the Comprehensive Environmental Response Compensation and Liability Act (CERCLA, 1980) and follow-up legislation (SARA, 1986), has resulted in an estimate of 33,000 sites which will require some $750 billion to remediate, and this is a conservative figure which will probably increase over time (Fekrat et al., 1997). Some polluted sites date from the 1880s (Lawrence and Khurana, 1997), but the majority are no older than 50 years; well after the start of the modern period in accounting history. In some instances the probable cleanup cost must be shown in the financial reports as a contingent liability, but this is not the case where the likely cost cannot be ascertained, or the reporting party has not been formally identified as a party to the cleanup cost recovery. It should be noted that this discussion refers to historical bad practice, and not to the need for adjustment to current and future processes, or the growing concern for economic activity to be sustainable.

In Europe the problems of a polluted environment were identified several decades ago, as exemplified by the following quotation:

Not only is the air we breathe saturated with pollutants from our economic development; our water is also contaminated. Germany’s celebrated Rhine
transports 24 million tons of poisons and pollutants to the Dutch frontier yearly. Daily, this represents about 3 tons of arsenic, 450Kg of mercury, 33,000 tons of sodium chloride ions, 16,000 tons of sulfates, 2,200 tons of nitrates, and over 100 tons of phosphates. (Siebert and Antal, 1979, p. 11).

Not only is there a pollution problem, but how long can such a waste of resources continue?

Since this statement was made, there has been a drive to improve corporate behaviour through both government action and voluntary policies (Gray et al., 1996, pp. 167–170; Schaltegger et al., 1996). The most recent government activity is based upon the European Commission’s Fifth Action Programme on the Environment (European Commission, 1992, Vol. II, p. 67) which is entitled Towards Sustainability, and calls for enterprises to:

• disclose in their annual reports details of their environmental policy and activities, and the effects thereof;
• detail in their accounts the expenses on environmental programmes (this requires a clear definition of such expenses);
• make provision in their accounts for environmental risks and future environmental expenses. (quoted in Gray et al., 1996, p. 168).

The same programme suggested that product pricing be based on a full-cost approach, including the use and consumption of environmental resources, in a manner suggested by Mathews (1984, 1993) under the title of Total Impact Accounting.

The European Union developed an Environmental Management and Audit Scheme (EMAS) in 1993, to encourage voluntary improvement in environmental performance. This was to be achieved through the entitlement to use an eco-logo provided that organisations were registered, and complied with the requirements, which included the audit of their procedures. Gray et al. (1996) are optimistic about the inevitability of company financial reporting, despite the relative lack of interest by most accounting professionals, and the indifference of corporate management; however, the EMAS system is a start, and details are provided at p. 169. Other similar schemes include BS 7750 and ISO 14001. The emphasis of BS 7750 (British Standards Institute Management Standard 7750 (1992) is similar to that of EMAS; to develop the conditions under which environmental management systems will be generated. BS 7750 stresses the need for companies to have a coherent environmental policy to be implemented by senior personnel. Policies should include establishing fully developed environmental management systems designed to achieve objectives and targets and a regular audit of both systems and policy (Gray et al., 1996, p. 219).
ISO 14001 is a third form of corporate assessment programme which is similar to EMAS. To receive certification under ISO 14001, an international standard applicable to organisations in the USA, Japan, South-east Asia, and Switzerland as well as EU countries, companies must show that they have an environmental policy, an environmental accounting or monitoring system, implementation plans, plans for correction and an effective and efficient organisation (Schaltegger et al., 1996, p. 248).

In addition to EMAS, BS 7750 and ISO 14001, other means of certifying activities (other than sites or systems) include the certification of products such as timber from managed forests (Dauvergne, 1997). The costs of environmental damage are clearly potentially threatening to the organisation, leading to attempts to insure against the consequences of the organisation damaging the environment. Schaltegger et al. (1996, pp. 114–115) note that recent developments in insurance for environmental work include risk transfer and risk management combined with risk transfer. Risk transfer means a transfer to the insurance company to cover the costs associated with physical injuries, property damage and losses from the insured site. Organisations may also take out risk management risk transfer coverage to cover the cost of cleanup and third party liabilities in the event of environmental damage.

Professional accounting bodies have shown a mixed response to the environmental accounting issue. The UK bodies have sponsored research and awards for leading reports, some European bodies are interested but have little authority in terms of setting disclosure requirements. In the US the CERCLA/SARA legislation is directed at financial disclosure issues, and there appears to be little professional interest outside of this area. However, the Canadian Institute of Chartered Accountants has been a leading light producing handbooks on both environmental accounting and auditing, (CICA, 1993a, 1993b). The professional bodies in Australia and New Zealand have made little impact in the area of environmental accounting. Recent surveys on the extent of environmental auditing have shown little interest in employing the skills of accountants in conducting environmental audits (Tozer and Mathews, 1994; Mathews, Tozer and Mathews, 1995). Even where professional bodies give awards and other encouragement the observation made by Gray et al., (1996, p. 170) is appropriate; "None of this ...[is] a substitute for firm, intelligent accounting standards and disclosure requirements within company law".

Despite all of the encouraging developments in the area of environmental accounting, in most instances it remains a voluntary activity, outside of the mainstream of corporate financial reporting, and usually presented in an unaudited
Towards a Mega-Accounting Theory

Given the current state of partiality in financial accounting reports, and the progress which has been made towards the development of both social and environmental accounting, it is pertinent to ask: where do we go from here? And has the association of financial social and environmental accounting been previously advocated or discussed in the literature? However, before addressing that issue it is appropriate to examine the impediments which exist to the development of each area and to identify any which would make the voluntary evolution of a mega-accounting theory unlikely.

Impediments to the Development of Financial Accounting

As noted earlier, financial accounting is currently limited by definitional bases which lead to the primary purpose being defined as the production of financial information directed at investors for whom it is intended to be decision-useful. Other purposes are secondary. There are subsidiary limitations such as the predominant concern of many to satisfy reporting requirements at a minimum level, an emphasis on short term results, the manipulation of data to produce the result desired by management, and a failure or refusal to accept that corporations have to maintain the right to continue to exist in society (see Donaldson, 1982; for a discussion of the social contract of business with society).

Leaving aside for the moment these major issues, the two approaches identified previously, that of improving the quality of disclosures currently made, and the incorporation of new disclosures, have different costs and benefits and other risks attached to them. Improving current disclosures by making more inclusive or relevant statements is probably less expensive than incorporating new material; is less risky, but has lower levels of information content, since the material is already included, but with a less appropriate valuation. Incorporating new material and values is a more risky venture, but one with the potential for making annual reports more useful to readers (whoever they might be).

In the opinion of the author, greater attention should be given to the recognition, valuation and disclosure of identities which are not already disclosed. However, this would not avoid the major limitations of financial accounting identified previously, which would require an amended conceptual framework.
Research to support this view is not currently available, and is not likely to be obtained from the current dominant paradigm of Positive Accounting Theory and Agency Theory. Support may be obtained on a normative-deductive basis, built up from the premises outlined in the mega-accounting theory.

**Impediments to the Development of Social Accounting**

The development of social accounting in the 1970s led to a number of elaborate proposals for the integration of social and financial accounting, which will be outlined in a later section. These attempts failed for a variety of reasons, including the failure to appreciate the fundamental problems of attributing financial values to social events. Since that time, a number of further objections have been made in the critical theorist literature (for example Tinker, 1985). Their position has been that conventional accounting is not value free and supports capital against labour in the service of the capitalistic system. Therefore, any attempt to evolve the existing system by incorporating a social dimension would simply assist in shoring up the existing system and should not be done. The social audits carried out by organisations such as Social Audit Ltd are examples of attempts to evaluate organisational performance on social grounds. In a number of instances these audits were seen by the auditee as opposing the existence of capitalism (Gray et al., 1996, chapter 9).

From the opposite perspective, social accounting is seen as a subjective, atheoretical collection of techniques which cannot be associated with “objective, value-free” financial reports, but which may be used when appropriate in the annual report to publicise (for example) the high proportion of value added going to labour as part of a Value Added Statement.

Furthermore, the accounting profession has not been prepared to support social accounting with positive references in conceptual frameworks or accounting standards for the disclosure of non-financial information in annual reports, or support for the audit of all disclosures in the annual report regardless of type. However, it is not too late to learn from past experiences, and provide encouragement and support for social disclosures which are part of the overall communication system. The proportion of a separate report (similar to those produced by some organisations) with appropriate legislative or other regulated content, preferably audited, would clearly be possible.

**Impediments to the Development of Environmental Accounting**

The remarkably rapid development of environmental accounting has not been of uniform quality or even pointing in the same direction. Apart from the management
literature, which is usually about policy making and strategic planning, or descriptive accounts of "how we do X", the environmental accounting literature contains a number of contradictions depending upon the "degree of greenness" of the author(s), and their views on regulation vs voluntary action. In some cases writers have changed positions on the latter dimension. The "green dimension" is added to the ideological dimension found in social accounting.

Those who favour ecocentric positions (deep green) do not believe that it is appropriate to value the environment, and would tend to oppose environmental accounting and auditing (Maunders and Burritt, 1991). The issue of disclosure and reporting information is generally a non-issue for these people, although if pressed they would probably favour regulations and legislatively backed standards over voluntary codes which could be avoided. This group has moved on from environmental accounting to sustainability in general.

At the other end of the scale (the "light green") there is an acceptance of the capitalistic system, of an anthropocentric view of the world, and probably a preference for using voluntary disclosure and reporting if possible. Thus voluntary codes such as EMAS, and the use of the market mechanism (pollution taxes, sale of pollution permits) rather than legal restrictions and prohibitions would be favoured.

There are, of course, many shades of green in between the two extremes, and therefore a wide variety of views on the action which is needed to ensure an appropriate level of reporting. There does not appear to be any support for a composite financial/environmental report in which the impact on the environment is expressed in financial terms and combined with other financial values, but the literature contains a number of models expressed in non-financial terms (Schaltegger, 1996).

The weight of support appears to be in favour of using sections within the annual report, or a separate environmental report, rather than attempting to determine environmental costs and putting them into the financial section. To do so would result, in the opinion of many environmental accountants, in large losses thereafter, such is the effect of some organisations on the environment through the generation of externalities.

### Developing a Mega-Accounting Theory

In this section mega-accounting models are approached via a discussion of attempts to integrate social accounting with financial accounting in the 1970s. Secondly, recent suggestions for combined/multiple reports are considered, and finally, the mega-accounting model is put forward for discussion.
Models From the 1970s

The first flowering of the social accounting movement in the 1970s generated a number of models which attempted to combine the existing financial accounting practices with mainly financial estimates of social impacts (Linowes, 1972; Dilley and Weygandt, 1973; Ullman, 1976; Estes, 1976, 1977; and Dirkes and Preston, 1977). With the exception of Dirkes and Preston who used a mixed measurement, all other models attempted to force the data into a financial format, which in many instances was the undoing of the model. The social and environmental data may use financial measurements, but most likely would be expressed in non-financial terms such as physical measurements for pollutants or raw data for social phenomena such as workplace accidents. Reviews of the earlier models may be found in Mathews (1993, chapter 6) or in Gray et al. (1996).

Recent Discussion of Alternative Structures for Annual Reports

In their concluding chapter, Gray et al. (1996) make a number of suggestions for furthering the progress of Corporate Social Responsibility in the face of a less than ideal world. They accept (reluctantly) that for the foreseeable future financial statements:

"are likely to remain the dominant form of organisational accountability ... and therefore any proposals for CSR need to be differentiated between recommendations that amend current conventional accounting practice and those which are for additional statements" (p. 295).

They appear, therefore, to be unwilling to indicate directions in which the financial accounting and reporting part of information distribution should go, accepting that the whole should be an accountability model involving compliance-with-statute reporting.

The first steps in the development of a systematic social and environmental reporting system would be to identify the purpose and focus of the report, and then to specify the way in which the organisation is conceptualised so as to satisfy the information characteristic of completeness. The purpose stated is to discharge accountability and the focus is societal, with the organisation a sub-system within the wider society. Whilst it is accepted that the completeness criteria can never be satisfied, the authors argue that statements designed to show a social balance and an eco-balance for each organisation, would enable the reader to form a view of the overall performance of the organisation. There would be a need to specify the rights to information of stakeholder groups, which Gray et al. see as being incorporated in policy statements issued by the reporting entities.
Sustainability is the end goal incorporating notions of eco-justice and eco-efficiency. It is argued that the current financial accounting system could provide some assistance with disclosures affecting intra-generational equity and inter-generational equity. Finally, recoding of the data contained within the accounting system might shed light on the distribution of costs to reveal more accurately those costs related to:

"employment, use of energy, packaging or waste disposal costs, expenditure on replaceable and finite raw materials, forms of transport costs, environmental liabilities and expenditures, revenues from developing nations, legal fines and related costs, and so on" (p.298).

The agenda set out above is clearly an advanced one which will require a great deal of development. Many of the important components are only outlined, or examined very briefly. The mega-accounting theory outlined in the next section is not intended to be competitive with this model, but rather should be viewed as arising out of a consideration of some of the issues raised by Gray et al.

**A Tentative Mega-Accounting Theory**

The mega-accounting theory put forward in this section is clearly a tentative model which will be modified as a result of further thought and critical comment. The exposition is divided into two parts. First, the underlying principles (scope) is outlined, and second, the specific components of the different information forms are discussed.

**Underlying Principles**

In order to successfully encompass economic (financial), social and environmental information in any general report, it will be necessary to give equal status to the different forms of information, which means the redefinition of accounting to be the discipline concerned with providing audited information about the entity, regardless of whether or not this involves measurement in financial terms.

In view of the current preoccupation with providing investors with financial information for decision making purposes, removing the "financial only" aspect would be a first step in broadening the stakeholder group to include all the other members of society. This would be an appropriate step, and compatible with the philosophical argument that the social contract of business with society does not only include investors. In which case, the decision usefulness criterion must be only one function of the annual report of the entity, and others such as stewardship
and accountability must be accorded equal status. The notion of "rights to information" implies both the widening of the stakeholder group and the provision of multi-faceted information. The use to which this information is put then becomes the choice of the individual stakeholder.

The success of legally backed accounting standards based upon an agreed conceptual framework, suggests that a similar system might be adopted for use with a more encompassing information system as proposed here. However, although the ideal might be a fully integrated system, showing one result or one overall state (financial, social and environmental), this is not considered feasible at this point, and a conceptual framework and standard system would be required to underpin each of the three performance statements. The provisions for audit and legal backing for standards would, therefore, apply to all three areas. Some means of deciding those entities required to report, probably related to size, economic importance and legal construction would need to be developed.

The important differences from the present basis of reporting would be:

- An enlarged information system with financial, social and environmental data having equal status.
- All stakeholders having rights to information, and able to take whatever message they wish to take from the data provided. No primacy given to any one form of data or any specific use to which the data is put.
- Conceptual frameworks, legally backed standards and audit status for all information.

The underlying principles are set out in figure 1 below.

**Figure 1**

The Basic Underlying Principles of the Model

<table>
<thead>
<tr>
<th>Principle</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Information provided to all parties in recognition of the SOCIAL CONTRACT OF BUSINESS WITH SOCIETY</td>
</tr>
<tr>
<td>2. The annual report as a COMPREHENSIVE INFORMATION SYSTEM including separately reported economic, social and environmental aspects</td>
</tr>
<tr>
<td>3. STAKEHOLDERS are defined as all members of society who have RIGHTS TO INFORMATION about those entities which are deemed to be significant and liable to publicly report</td>
</tr>
<tr>
<td>4. A CONCEPTUAL FRAMEWORK would be required for each area until integration is possible (if ever)</td>
</tr>
</tbody>
</table>
5. LEGALLY BACKED STANDARDS would be for each area until integration is possible (if ever).

6. Statement components would have equal status in terms of AUDIT

7. Leading to the production of three individual reports which together make up the report of the entity, to the other parts of the social and economic system in which they are situated.

8. Each report would contain appropriate financial data, plus non-financial data would be used in the social and environmental accounting reports. Furthermore, raw data could be available as advocated by Wallman (1997, p. 108) under the rubric of "access accounting" and thus avoid the problems associated with too great a degree of aggregation.

9. Any transfer of financial information from one report to another would be made outside of the three sections, for example, if the impact of the organisation on the social structure of the area or the environment could be reliably determined in financial terms, then this could be shown as an offset to the income earned and vice versa.

Suggested Contents

The financial data provided would be similar to that reported at the present time, although over the longer term this would be extended to include not only refinements of presently included material, but also that which is not currently recognised and included. The overall position of responding to the social contract, recognising a wider stakeholder body with rights to information, which may not be aimed at decision making, may, over time, affect the basis on which financial information is provided.

The social report could probably provide data related to employees, products, community service, and relations with government to name obvious areas. In an unsophisticated form this information might consist of raw data. For example, employee data (numbers employed, gross earnings, Trade Union information, training programmes, scholarships, lost time accidents, proportion of value added going to labour) and eventually develop into more sophisticated measures, such as Human Asset Accounting. Both financial and non-financial data would be required to produce meaningful information about many aspects of the social information category. Long term developments could lead to the net social contribution which the entity contributes to the local area, which would include recognition of the inputs received from central and local government (including the cost of providing the infrastructure needed to operate the entity). The net social contribution is the
basis for the social balance advocated by Gray et al.: "A social balance would similarly identify the human, community and social outputs of the organisational system" (p.296). However, until that level of sophistication is reached, it will be important to specify the basic data which should be reported.

The production of information about environmental performance has been discussed at a number of levels. Gray et al. (1996, p.296) drawing upon extensive European experience in advocating environmental reports, refer to the need for completeness in reporting via:

...the use of the eco-balance supported by life-cycle assessment (LCA). This analysis provides an overview of an organisation showing all its physical inputs, its pollutions, leakages and wastes plus a specification for all its inputs. LCA then tracks each of these inputs and outputs to their source. It is thus a systems-perspective of the organisation which permits the reader to gain an overall conception of the organisation’s interactions with its physical environment. (Gray et al., 1996, p.296; Gray et al., 1993).

This seems to be some distance in the future for the majority of organisations which do not yet make any meaningful disclosures in the environmental area. Consequently, at the start raw data concerning inputs of materials and energy, and outputs of product, waste and by-products, and discharges to air and water would appear to be a considerable advance on the present position. It should be remembered that much of this data is already supplied to government agencies, but not included in the annual report.

**Concluding Comments**

This exploratory paper has considered the problems associated with the format of current financial accounting. Alternative disclosure of social and environmental accounting was also introduced, together with a number of ideas for associating these different forms under one mega-accounting theory.

The general idea of associating financial, social and environmental accounting forms is not new, having given rise to a number of alternative models during the 1970s. These earlier models failed to attract long-standing attention, partly because the social dimension was forced into a quasi financial accounting format.

More recently, at least one other suggestion for combining social and environmental accounting together as a joint disclosure with financial accounting has been made by Gray et al. (1996). This approach has a different focus from the mega-accounting theory developed in this paper. The arguments used are similar,
and the two views have the same overall objectives, but the current paper is more tolerant of existing social and economic systems. It is more evolutionary and less radical in design, and accepts financial reporting on an equal basis with social and environmental reports.

The tentative mega-accounting theory put forward in this paper would, if applied, lead to financial, social and environmental performance being reported separately but as part of the same overall report, and subject to the same standards of preparation and audit.

References

Canadian Institute of Chartered Accountants (1993a). *Environmental Stewardship: Management Accountability and the Role of Chartered Accountants*, Toronto: CICA.


ACCOUNTING IN THE NEW MILLENNIUM:
TOWARDS A MEGA-ACCOUNTING MODEL

M. R. MATHEWS
Department of Accountancy and Business Law
Massey University,
Palmerson North, (New Zealand)
E-Mail: M.R.Matthews@massey.ac.nz

ABSTRACT
Current financial accounting practices have an overriding concern with providing limited financial information to a restricted stakeholder group to assist with decision making. To satisfy the legitimate information needs of the wider society, it is necessary to remove these restrictions. If the objective of accounting reports is to supply both financial and non-financial information to a broader stakeholder grouping, then a different form of accounting is needed. To fulfil this wider objective, a comprehensive report addressing financial, social and environmental aspects, each based upon a conceptual framework, appropriate standards and a systematic audit, is proposed.

1.0 Introduction

Since the end of the time described as the General Normative Theory Period about 1970 (Henderson and Peirson, 1983), normative-deductive theorising about accounting has been regarded as an inappropriate and almost unacceptable methodology, excepting in the areas of Social and Environmental Accounting, Critical Theory, and perhaps aspects of Accounting Education. Although empirical research has played an important part in the activities of those interested in the field of Social and Environmental Accounting, researchers in this area have also been willing to generate normative-deductive theories for debate (Mathews, 1997a). However, the majority of these models date from the 1970s, with relatively little of this work in recent times. This situation led Mathews (1997a) to recommend:

... reactivating the normative/philosophical research which led to the model building attempts of the first period; it is now time to reactivate this type of research, particularly since there are now more journals to publish this type of work (Mathews, 1997a, p.504).

This paper is an attempt at putting this recommendation into practice. The development of accounting may follow one or more of three paths; (a) the improvement of currently disclosed elements of financial statements; (b) the addition of further elements of a traditional (financial) dimension; or (c) the inclusion of elements which may include a non-financial as well as a non-traditional dimension. Examples of the first might be accounting for price-level changes; the second path may be exemplified by the inclusion of executory contracts, internally generated goodwill or human resource
accounting within external financial reporting; and the inclusion of non-financial/non-traditional information would include disclosures of a social or environmental nature (Mathews 1997b).

The intention of this paper is to bring together the threads of a broader normative theory of accounting and reporting, in both financial and non-financial terms, which encompasses economic, social, and environmental performance. This is clearly a mega (or overarching) theory of accounting and reporting, which would require considerable debate and development before it would be widely accepted for implementation. It may be expected to generate opposition, from both managers and accountants, because it implies increased structuration, cost, and disclosure compared to the present level of reporting. These developments are seen by the author as evolutionary and not revolutionary. There is no suggestion of a paradigmatic shift (Kuhn, 1970), but of a realignment of existing accounting practices to fit within changed societal expectations so that the accounting process remains legitimate:

*Any social institution...operates in society via a social contract, expressed or implied, whereby its survival and growth are based on:*

1. the delivery of some socially desirable ends to society in general and,
2. the distribution of economic, social, or political benefits to groups from which it derives its power.

In a dynamic society, neither the sources of institutional power nor the needs for its services are permanent. Therefore, an institution must constantly meet the twin tests of legitimacy and relevance by demonstrating that society requires its services and that the groups benefiting from its rewards have society's approval (Shocker and Sethi, 1974, p.67).

Although not Kuhnian in nature, there is now a sufficiently large group of social and environmental accounting researchers to be regarded as belonging to at least one Lakatosian research programme (Lakatos, 1974). There could well be more research programmes if the Centre for Social and Environmental Accounting Research (CSEAR) at the University of Dundee, the Australian/New Zealand initiative (Asia-Pacific Centre for Environmental Responsibility; APCEA) based on the Australian National University, and the group of critical theorists associated with the journal *Critical Perspectives on Accounting* are regarded as separate streams of endeavour.

The remainder of the paper proceeds as follows. First, the current position of partial accounting disclosures is examined, and then consideration is given to the components of a more encompassing theory, which would address the needs of a wider stakeholder body. These components include the potential users of the information, the objectives of reporting, the types of information which should be reported, the verification of the information, and the characteristics of the information to be supplied.

### 2.0 The Partial Nature of Financial Accounting

Financial reporting, as currently practised, provides a partial view of the status of the enterprise at a point in time, and a partial (i.e. incomplete) picture of financial performance over a period of time. This partiality (or incomplete state) is an inherent feature of current financial accounting and reporting (just as all previous systems have been even more incomplete) because the conceptual framework and standards setting
mechanisms are themselves incomplete. The source of this condition is at least twofold. First, the data included in the calculations and presented in statements (i.e. assets, liabilities, revenues and expenses) are themselves incomplete expressions of reality, and second, there are many accounting components/elements which are not included in current financial accounting and reporting. Examples of the first type include accounting for price level changes, about which there is still controversy if not confusion; the position of purchased goodwill, Brands, and other intangible assets, and the detailed mechanisms whereby periodic charges are made to write off changes in values (amortisation, capitalisation, and depreciation for example). Examples of the second type include all financial items which are currently excluded, such as executory contracts, operating leases, estimates of internally generated goodwill, and valuations of the human resources invested in organisational activities.

It is not the intention of this paper to review in any detail the remedies that may be available to deal with the deficiencies of conventional financial accounting and reporting, however, it must be clear that as the nature of commerce changes, so must the information that is provided to meet the needs of stewardship, decision usefulness and accountability (Mathews and Perera, 1995, pp. 83-84). It is argued that the greatest deficiency of current annual reports is the absence of a regulated and audited accounting system for social and environmental information, and therefore this is the area where reformers should be focusing their attention.

Financial accounting and reporting, as it is currently practised, presents a partial or incomplete picture of the economic activities and impact of the enterprise, because the driving forces behind current structures are themselves incomplete, having developed out of the 19th Century neo-classical economic period, when the major concerns of business were to recognise private property rights, employ the valuation mechanism of the market place, and the concept of profit maximisation through the relationship of marginal cost and marginal revenue concepts. The use of 'free goods' (as they were regarded at the time) such as air and water for the disposal of waste products, and the recognition of all labour as a cost and never as an asset, are features of modern accounting which bear testimony to those 19th century origins. Although the nature of these 'free goods' is now better understood, and they are now regarded as 'common goods', this has not prevented the problem of environmental degradation, and more recently attempts to allocate clean-up costs and prevent the problem from reoccurring.

The conceptual frameworks commonly used to underpin modern external financial reporting (FASB, 1978; AARF, 1990; NZSA, 1993) make little or no reference to any system of measurement and disclosure other than through the medium of financial data, and assume the reduction of all meaningful information to a financial form, which is then presented by means of a single point determination. Thus, balance sheets purport to provide single values for specific assets and liabilities, which may be aggregated into complex values; and the income figure is presented as 'correct' even though it is the result of many individual judgements. The general implication given is that if the data is not in a financial form, it is not accounting data; and furthermore that unless the data is presented as a single value, it lacks objectivity and utility. For example, the range of values which might be given to a building by registered valuers must be condensed into one single point value for use in the annual report, thus losing a great deal of the information content in the aggregation process. Purchased goodwill may be capitalised
and amortised over the economic life of the asset, or in some countries, written off against reserves; but no attention is given to internally generated goodwill. Inconsistencies of this type abound, but are ignored.

Until recently the only stakeholders considered to have an interest in the annual report were perceived as being limited to shareholders and creditors (AICPA, 1973; FASB, 1978; AARF, 1990; NZSA, 1993). Although the Corporate Report (ASSC, 1975) generated a measure of controversy, by including a list of users having "rights to information", the need to have corporate reports using multiple formats to satisfy the various needs of users, and the need for public accountability by significant economic entities regardless of legal status, it took quite some time before there was any change, and to date these have been marginal. The relatively recent Australian conceptual framework (AARF, 1990) accepts a widening of the stakeholder group, but does nothing to formally include non-financial quantification in annual reports. The International Accounting Standards Committee (IASC) has issued a conceptual statement in which "users include investors, employees, lenders, suppliers and other trade creditors, governments and their agencies and the public" (Mathews and Perera, 1995, p.99). The New Zealand Statement of Concepts (1993) refers to:

... examples of users who may be dependent on an entity's general purpose financial reports:

(a) providers of resources to such entities; for example, suppliers, lenders, investors, tax payers or donors;
(b) representatives of groups such as voters or shareholders whether the representatives be elected or appointed;
(c) analysts and members of the media concerned with analysing and reporting the performance of entities (NZSA, 1993, pp.1a 3-3).

A recent edition of the FASB Statement of Financial Concepts (1995) has a broader view of reporting responsibilities than the 1978 version:
Among the potential users are owners, lenders, suppliers, potential investors and creditors, employees, management, directors, customers, financial analysts and advisors, brokers, underwriters, stock exchanges, lawyers, economists, taxing authorities, regulatory authorities, legislators, financial press and reporting agencies, labor unions, trade associations, business researchers, teachers and the public (FASB, 1995, p.12).

How many of these groups are seriously considered by preparers of annual reports cannot be known. However, although the later conceptual frameworks are a little more liberal in terms of whom stakeholders may be, there is certainly an implied condition that, for the most part, they should be connected in some fairly direct way to the reporting entity. Non-financial data is not given much attention, excepting that in the New Zealand case, where reference is made to accountability being addressed by financial reports that show the extent that identified objectives and targets have been met, noting that such objectives and targets may be financial or non-financial (NZSA, 1993, p.1a 5).

It may be concluded that current financial statements are partial because they do not include all of the possible components to be included, and also because they provide incomplete or problematic values for many of the items which are included. Furthermore, there are other limitations such as the use of single point values, where ranges may be more appropriate, and a concern with the perspective which comes from looking
ACCOUNTING IN THE NEW MILLENNIUM

backwards to what has already taken place, and not forward in any prospective way. Although, as discussed above, the overall stakeholder group has been widened in recent years, in at least some of the 'official' literature, the shareholder/investor group is still the dominant user group for most preparers, standards setters and educators. Furthermore, some significant economic entities are able to avoid disclosures because of their unincorporated legal status, which currently determines disclosure requirements.

The focus of both conceptual frameworks and professional accounting standards are supported by the concept of professionalism which is discussed in the next section.

2.1 A concept of professionalism

Accounting as a discipline has been able to claim the benefits of professional status since the 19th Century. Professional groups share a number of common characteristics and traits (Millerson, 1964; Kultgen,1988), which may be summarised as:

- A profession involves skill based on theoretical knowledge.
- The skill requires extensive and intensive training and education.
- The professional must demonstrate competence by passing a test.
- The profession is organised and it is represented by associations of distinctive character.
- Integrity is maintained by adherence to a code of conduct.
- Professional service is altruistic.
- The professional assumes responsibility for the affairs of others.
- Professional service is indispensable for the public good.
- Professionals are licensed, so their work is sanctioned by the community.
- Professionals are independent practitioners, serving individual clients.
- Professionals have a fiduciary relationship towards their clients.
- Professionals do their best to serve their clients impartially without regards to any special relationship.
- Professionals are compensated by fee or fixed charge.

(Summarised in Kultgen, 1988, p.60).

Society grants the professions an exclusive licence to practice, thus acknowledging their important role. In return the professions acknowledge their role and responsibility, by establishing codes of practice. Readers will note that although these characteristics of professions and professionals are well known and accepted by many, there is an 'old-fashioned ring' to a number of those on the list, as though they are a relic of an economic and social system before many/most accountants worked for large corporations as employees/managers. Zeff has argued (1987, p.67) that the status of professionals is diluted by rule dominated practices. It may also be argued that the failure of the accounting profession to respond to the challenges of social and environmental accounting and reporting endangers their professional status.

Professions must be concerned about maintaining their organisational legitimacy (Dowling and Pfeffer, 1975). This is a dynamic concept:

Organisations seek to establish congruence between the social values associated with or implied by their activities and the norms of acceptable behavior in the larger social system of which they are a part. Insofar as these two value systems are congruent we can
speak of organizational legitimacy. When an actual or potential disparity exists between the two value systems, there will exist a threat to organizational legitimacy (Dowling and Pfeffer, 1975, p. 122).

Thus the hard won status of the professional accountant could disappear over time if the public expects a change of perspective which is not forthcoming. In other words, continuing to do what has been done for a long time may not be sufficient to maintain legitimacy, even if the performance related to that activity is maintained or even improved. Legitimacy is a moving target. If society expects accountants to become more concerned about accounting for social and environmental factors, and the professional body and its members do not meet this expectation, then legitimacy will be lost even if the traditional roles are still upheld. The problem may lie in a lack of appreciation of the dynamic nature of the professional/societal relationship and the need to maintain organisational legitimacy as well as the customary individual professional/client relationship. A greater understanding of ethical and environmental theories, and the values which underlie them, might also assist in the much needed reorganisation of professionalism in the face of social and environmental accounting issues.

2.2 An Introduction to the Discussion of Values

It is clear that neither accounting nor science are value-free activities (Tinker, 1985; Feyerabend, 1975), since the act of reporting means that attention is directed at the information which is reported, and future decisions may be affected (Hines, 1989). Given the powerful effect which the accounting and reporting process can have upon society, it is appropriate that accountants are well grounded in ethical theory, so that their professional judgements are informed by more than simply a professional code and somewhat old fashioned descriptions of what constitutes a professional body. A better appreciation of the potential role of the accounting discipline and the accounting profession may be gained through an appropriate ethical framework for social and environmental accounting and reporting.

Traditional classifications of ethical theory are deontology, teleology and virtue. Deontology is defined as the theory or study of moral obligation. Deontologists argue that the rightness of an action takes precedence over the goodness of the act, or the consideration of the outcome or consequence. This line of reasoning is exemplified by the writings of Kant and more recently John Rawls (1971). Teleology is defined as acts exhibiting or relating to design or purpose leading to an end. The end defines the 'goodness' of the action. Those advocating a teleological view are referred to as rule or act utilitarians who follow Aristotle, Mills and Bentham. Utilitarians look for the greatest good for the greatest number; the 'amount' of goodness takes precedence over the 'rightness' itself. Virtue is defined as particular moral excellence, or a beneficial quality or power of something. Virtue focuses on character or quality rather than acts, and assumes that right or good acts will emerge from good character. Thus 'being' takes precedence over 'doing', which becomes an emergent quality and consequences follow from doing.

The theory of justice put forward by Rawls (1971) provides an ethical theory in the deontological tradition, which is useful for examining social and environmental accounting issues (Miller, 1991). The theory of justice may be introduced into the
decision making activities of the accounting profession, since accounting reports and statements are used by corporations and governments to argue in favour of certain courses of action and against others. Accounting is, therefore, part of a moral discourse and accountants need to consider the rights of the various parties affected by this discourse, when determining their moral behaviour.

The Rawlsian approach to decision making involving moral behaviour, is to invoke the 'original position'. This is a 'thought experiment' which requires decision makers to think through all of the consequences of the decision to be made, including the potential effects on each party to the decision, without knowing which position he/she will occupy, and therefore, how the outcome of the decision will affects him or her. Rawls theory of justice forces consideration of the least advantaged members of society, which is congruent with the professional characteristics listed earlier. It is also congruent with the position that the accountant owes the highest ethical responsibility to the constituent with the least access to information (Harris and Reynolds, 1993). The thought experiment approach indicated above has the result of minimising the maximum loss of the least advantaged groups. This would force accounting professionals to take seriously the diversity of individual rights of those groups affected by organisational and government activities. Thus the needs of groups that require information about the effects of the entity on the social structure and the environment, would be respected through the inclusion of such information in accounting reports.

The restrictive manner in which accounting is frequently being defined, both generally (Hines, 1988) and specifically in conceptual frameworks for external financial reporting, determines what is to be regarded as legitimate accounting, and this excludes a wide range of social and environmental data, which may be necessary for the proper appreciation of the impact of the reporting entity upon society as a whole. Normative theories about social and environmental reporting can provide the basis for a more extensive theory of external financial reporting. This area is reviewed in section 3.0. The next section introduces the concept of the social contract.

2.3 The Social Contract of Business with Society

The current system of joint-stock companies with limited liability for shareholders has been in existence for about 150 years. Corporations are now an accepted and powerful (even essential?) part of our society, however, in some cases they may be considered to be too powerful and in need of legal restraint. Indeed, the increasingly complex system of regulation would suggest that society does want to keep corporations functioning within socially agreed constraints, many of which are concerned with relationships between corporations and parties with whom they have no formal contractual relationships. What may be argued to exist is a social contract between business and society (Donaldson, 1982).

Donaldson noted (1982, pp.54-55) that if a social contract does exist it would conflict with the position held by Friedman (1962) that business should avoid any involvement in social responsibility issues. Within the accounting literature Benston (1982a, 1982b, 1984) has offered the same arguments. It is this restrictive view of the role of business (and accounting) which appears to drive the current conceptual frameworks and standard setting structures, and the resistance to the mandatory inclusion
of social and environmental information content in annual reports. The reverse position must be that if the arguments for a social contract of business with society are accepted, then the annual report would need to encompass the information needs of parties other than the traditional shareholder and creditor stakeholder groups.

There is a moral dimension to the existence and performance of the corporation: *We have seen that the productive organization cannot be viewed as an isolated moral entity unconstrained by the demands of society, for its very reason for existing lies with its capacity to satisfy certain social interests…. When an organization manufactures a product that is inherently dangerous, or when it pushes its employees beyond reasonable limits, it deserves moral condemnation: the organization has failed to live up to a hypothetical contract - a contract between itself and society (Donaldson, 1982, p.57).*

Surely then there must be a moral dimension to the structure of the annual report produced by such an organisation? In which case the additional information to be supplied will need to address the interests of the other stakeholder groups, and is likely to have a social/environmental orientation.

### 3.0 Social and Environmental Accounting

Alternatives and additions to external financial accounting and reporting, which would be needed in order to accommodate the social and environmental dimensions of reporting, have been discussed for more than 25 years (Mathews, 1997), and in the 1970s a number of proposals were made for integrating newer forms of accounting into existing structures (refer to Mathews, 1993; Gray et al., 1996, for descriptions and critiques of these models). The following sections review some of the current positions on social and environmental accounting.

#### 3.1 Social Accounting

Social accounting has been described and defined in a number of different ways: *Social accounting...attempts to broaden the scope of the discipline by addressing the issues and audiences which have been neglected by mainstream accounting developments. The issues addressed include employee and product related matters and externalities (market failures) and the environment; the audiences include employees, consumers and the general public (Mathews, 1993, p.viii). At the very least, social accounting means an extension of disclosure into non-traditional areas such as providing information about employees, products, community service and the prevention or reduction of pollution (Mathews and Perera, 1995, p.364).*

More specifically, social accounting is about some combination of: (a) accounting for different things (i.e. other than accounting strictly for economic events); (b) accounting in different media (i.e. other than accounting in strictly financial terms); or (c) accounting to different individuals or groups (i.e. not necessarily only accounting to the providers of finance) and (d), accounting for different purposes (i.e. not necessarily accounting only to enable the making of decisions whose success would be judged in financial or even only cash flow terms) (Gray, Owen and Adams, 1996, pp 3, 11).

The common elements of the 'standard' definitions of social accounting can be regarded as reporting to a wider audience on a range of subjects not currently included
under mainstream financial accounting. The Corporate Report (ASSC, 1975) did not specifically recommend social accounting (further examination of the issue was recommended) but advocated additional reports for a wider group of stakeholders, including employee reports and Value Added Statements. Both were popular for a brief period during the late 1970s and early 1980s, but have now disappeared from most annual reports (Burchell, Clubb and Hopwood, 1985). One reason for the disappearance of this form of social accounting may have been the lack of authoritative backing from the professional accounting bodies in the form of conceptual frameworks, accounting standards or other legal requirements. Other possible reasons include an unwillingness to continue disclosing information when the proportion of Value Added going to Labour began to decline, or a perceived lack of usefulness of the data. However, there is no evidence on usefulness or lack of usefulness of this information other than the general increase in socially related disclosures in annual reports over the past 25 years.

Despite the unwillingness of many accountants, both academic and professional, to give serious consideration to social accounting, there has been a consistent and considerable increase in disclosure of this material in Annual Reports, although this is still limited in most cases to qualitative statements (Roberts, 1991; Gray, Kouhy and Lavers, 1995; Gibson and Guthrie, 1995). It would appear that in many instances management regards social disclosures as useful, although it is not known whether the motivation for the disclosure decision comes from attempts to influence the capital market, maintain organisational legitimacy, recognise the social contract, or some other source of justification (Mathews, 1993, Chapter 2). What is clear is that in many cases the preparation of social accounting disclosures is not being done by accountants, despite the location of the data in the annual report, and the material is usually unaudited. Both factors should give accountants and auditors cause for some concern, because of the traditional control which the accounting profession has exercised over the content of the annual reports of corporations to shareholders, which must also be lodged with the appropriate supervising authority. The location of unaudited material prepared by non-accountants may be seen as a reduction in the authority of the accounting profession.

3.2 Environmental Accounting

During the last decade, interest in social accounting has been succeeded (or joined) by a concern for environmental accounting. Environmental accounting was once regarded as a part of social accounting, but in recent years has achieved recognition as a separate activity; one which has made significant advances. Recent definitions of environmental accounting include:

In this book which concentrates on the management of internal environmental costs by business, accounting is taken to mean the systematic collection, organization and communication of information on an organization's activities. Environmental accounting is an umbrella term that includes accounting at the national and company levels (Ditz, Ranganathan and Banks, 1995, p.4).

Environmental accounting can be defined as a sub-area of accounting that deals with activities, methods and systems for recording, analysing and reporting - used interchangeably with "disclosure" in this book - environmentally induced financial impacts of a defined economic system (e.g. a firm, plant, region, nation, etc.). In this
book, current issues and modern concepts of environmental accounting are discussed with a focus on firms and their environment (Schaltegger, Muller and Hindrichsen, 1996, p.5).

What do we mean by environmental accounting? This is open to interpretation. However, for the purposes of this book it can be taken as covering all areas of accounting that may be affected by the business response to environmental issues, including new areas of eco-accounting (Gray, Bebbington and Walters, 1993, p.4).

At a basic level, Environmental Accounting is a course (or a subject) that investigates how environmental issues affect traditional accounting sub-disciplines. Thus, in some grander sense it is a new and extremely powerful tool for the myriad of firms addressing measurement and valuation problems in the environmental area (Sefcik et al., 1997, p.131).

The driving force in all of these definitions appears to be the recognition that past and present financial accounting and reporting mechanisms, have failed to include important externalities which now threaten our planet. For example, the US legislative drive to identify and remediate toxic waste sites, the Comprehensive Environmental Response Compensation and Liability Act (CERCLA, 1980) and follow-up legislation (SARA, 1986), has resulted in an estimate of 33,000 sites (EPA (1992, p.12) cited in Lawrence and Khurana (1997, p.157) which will require some $750 billion to remediate, and this is probably a conservative figure which is likely to increase over time (Lavelle, 1992, cited in Fekrat et al., 1997, p.175). Some polluted sites date from the 1880s (Lawrence and Khurana, 1997, p.180), but the majority are no older than 50 years; which is well after the start of the modern period in accounting history.

In some instances the probable cleanup cost must be shown in the financial reports as a contingent liability, but this is not the case where the likely cost cannot be ascertained, or the reporting party has not been formally identified as a Potentially Responsible Party (PRP) in the cleanup cost recovery. It should be noted that this discussion refers to historical practices which are now shown to have been environmentally damaging, and not to the need for adjustment to current and future processes, or the growing concern for economic activity to be sustainable, which must also be addressed.

In Europe the problems of a polluted environment were identified several decades ago, as exemplified by the following quotation:

Not only is the air we breathe saturated with pollutants from our economic development; our water is also contaminated. Germany's celebrated Rhine transports 24 million tons of poisons and pollutants to the Dutch frontier yearly. Daily, this represents about 3 tons of arsenic, 450Kg of mercury, 33,000 tons of sodium chloride ions, 16,000 tons of sulfates, 2,200 tons of nitrates, and over 100 tons of phosphates. (Siebert and Antal, 1979, p.11).

Not only is there a pollution problem, but how long can such a waste of resources continue? Although the European experience may be the most widely documented, there are graphic examples in all the developed and densely populated areas of the globe. Since Siebert and Antal published this statement, there has been a drive to improve corporate behaviour through both government action and voluntary policies (Gray et al., 1996, pp.167-170; Schaltegger et al., 1996). The most recent government activity is based upon the European Commission's Fifth Action Programme on the Environment.
(European Commission, 1992, vol.II, p.67) which is entitled 'Towards Sustainability', and calls for enterprises to:

disclose in their annual reports details of their environmental policy and activities, and the effects thereof;

detail in their accounts the expenses on environmental programmes (this requires a clear definition of such expenses);

make provision in their accounts for environmental risks and future environmental expenses (quoted in Gray et al., 1996, p.168).

The same programme suggested that product pricing be based on a full-cost approach, including the use and consumption of environmental resources, in a manner previously advocated by Mathews (1984, 1993) under the title of Total Impact Accounting.

The European Union (now the European Community) developed an Environmental Management and Audit Scheme (EMAS) in 1993, to encourage voluntary improvement in environmental performance. This was to be achieved through the use of an eco-logo by organisations, provided that they were registered in the scheme, and complied with the requirements, which included an audit of their procedures. Gray et al. (1996) are optimistic about the inevitability of company environmental reports becoming more widespread, despite the relative lack of interest by most accounting professionals, and the indifference of corporate management; however, the EMAS system is a start. The principal features are reproduced below:

Companies are encouraged to:

set their own objectives for environmental performance and develop management systems which would achieve those objectives;

initiate a pattern of eco-auditing to assess their environmental performance and to provide the information needed to develop their environmental management systems;

show commitment to externally validated assessment of their progress in meeting these objectives; and make information available to the public in a "...concise, comprehensible form..." [article 5(2)].

As far as making information available to the public was concerned, the EMAS regulation required that the environmental statement should include, in particular:

a description of the company's activities at the site considered;

an assessment of all the significant environmental issues of relevance to the activities concerned;

a presentation of the company's environmental policy, programme and management system implemented at the site concerned;

the deadline set for submission of the next statement;

a summary of the figures on pollutant emissions, waste generation, consumption of raw material, energy, water, noise;

other significant environmental aspects as appropriate, as well as other factors regarding environmental performance; and the name of the accredited environmental verifier (Gray et al., 1996, p.169).

They were also required to draw attention to significant changes since the previous statement. All of this information had to be externally verified.
Other similar schemes include BS 7750 and ISO 14001. The emphasis of BS 7750 (British Standard Institute Environmental Management Standard 7750, 1992), is similar to that of EMAS; to develop the conditions under which environmental management systems will be generated. BS 7750 stresses the need for companies to have a coherent environmental policy to be implemented by senior personnel. Policies should include establishing fully developed environmental management systems designed to achieve objectives and targets, and a regular audit of both systems and policy (Gray et al., 1996, p.219).

Another form of corporate assessment programme is ISO 14001, which is similar to EMAS. To receive certification under ISO 14001, which is an international standard applying to the USA, Japan, south-east Asia, and Switzerland, as well as Europe, companies must show that they have; an environmental policy; an environmental accounting system (or monitoring system) implementation plans; plans for correction an effective and efficient organization. (Schaltegger et al., 1996, p.248).

External ecological reporting is not required for ISO14001 certification, as it is for EMAS. Both ISO 14001 and EMAS are site oriented. BS 7750, EMAS and ISO14001 define requirements for corporate environmental management systems (EMS). However, they do not specify how these requirements should be fulfilled. All standards emphasize the need for controlling tools for environmental management as well as the; "need for environmental, especially ecological, accounting as one important part of corporate environmental management" (Schaltegger et al., 1996, pp.249-250). In addition to EMAS, BS 7750 and ISO 14001, other means of certifying activities (rather than sites or systems) include the certification of products such as timber from managed forests (Dauvergne, 1997).

The costs of environmental damage are clearly potentially threatening to the organisation, leading to attempts to insure against the financial consequences of an organisation damaging the environment. Schaltegger et al. (1996, pp.114-115) note that recent developments in insurance for environmental work include risk transfer and risk management combined with risk transfer. The first means that there is a physical transfer of risk from the company to the insurance company covering physical injuries, property damage and losses from the insured site. Organisations may also take out risk-management risk transfer coverage to cover the cost of clean-up and third part liabilities in the event of environmental damage. Tools of this nature would assist in hedging risks of the type resulting from the Superfund legislation and according to Schaltegger et al.; these tools are not widely known, so that several Member States of the EU have passed legislation forcing companies to take out a liability insurance or obtain financial guarantees for environmentally dangerous activities (1996, p.115).

It can be expected that the cost of the insurance will generate pressures on organisations to implement environmental management, reporting and disclosure policies.

Professional accounting bodies have shown a mixed response to the environmental accounting issue. The UK bodies have sponsored research and awards for leading reports but not included environmental accounting in any conceptual framework or standard setting activity, and some European bodies are interested, but they have little authority in terms of setting disclosure requirements. In the US, the CERCLA/SARA legislation is directed at financial disclosure issues, and there appears to be little professional
accounting interest outside of this area. However, the Canadian Institute of Chartered Accountants has produced handbooks on both environmental accounting and auditing, (CICA, 1993a, 1993b).

The professional bodies in Australia and New Zealand have made little impact in the area of environmental accounting. Recent surveys on the extent of environmental auditing have shown little interest in employing the skills of accountants in conducting environmental audits (Tozer and Mathews, 1994; Mathews, Tozer and Mathews, 1995). Even where professional bodies give awards and other encouragement, the observation made by Gray et al., (1996, p.170) is appropriate; "None of this ...[is] a substitute for firm, intelligent accounting standards and disclosure requirements within company law". This observation is especially valid now that accounting standards have received legal backing in the main Anglo-American accounting jurisdictions, and accountants have become accustomed to the use of accounting standards to regulate disclosure practices.

Despite all of the encouraging developments in the area of environmental accounting, in most instances it remains a voluntary activity, outside of the mainstream of corporate financial reporting, and usually presented in an unaudited form. There has been, and continues to be, relatively little support by the major Anglo-American professional accounting bodies for the development of regulatory structures in this area.

4.0 One Way Forward: Towards a Mega-Accounting Model

Given the current state of partiality in financial accounting reports, and the progress which has been made towards the development of both social and environmental accounting, it is appropriate to ask; "where do we go from here?" and "has the formal association of financial, social and environmental accounting been previously advocated or discussed in the literature?" However, before addressing that issue it is necessary to consider the impediments which exist to the development of each area, and to identify any difficulties which would make the voluntary evolution of a mega-accounting model unlikely.

4.1 Impediments to the Development of Financial Accounting

As noted earlier, external financial accounting and reporting is currently limited by definitional bases which lead to the primary purpose being regarded as the production of financial information directed at investors and creditors for whom it is intended to be decision-useful. Other purposes are regarded as secondary. There may be other limitations such as the predominant concern of many preparers to satisfy reporting requirements at a minimum level, an emphasis on short term results, the possible manipulation of data to produce the result desired by management, and a failure or refusal to accept that corporations have to maintain the right to continue to exist in society (see Donaldson, 1982; for a more detailed discussion of the social contract of business with society).

Leaving these major issues on one side for the moment, the two approaches identified previously (pp.2-3), that of improving the quality of disclosures currently made, and the incorporation of new disclosures, have different costs and benefits and other risks attached to them. Improving current disclosures by making more inclusive or
relevant statements is probably less expensive than incorporating new material. This strategy is less risky, but has lower levels of information content, since the material is already included, but with a less appropriate or 'accurate' valuation. Incorporating new material and values is a more risky and expensive strategy, but one with the potential for making annual reports more useful to all groups of users.

In the opinion of the author, greater attention should be given to the recognition, valuation and disclosure of elements and components which are not already disclosed. However, this would not avoid the major limitations of financial accounting identified previously, which would require an amended conceptual framework, in particular the restricted view of stakeholders and the emphasis on financial quantification are the major limitations to the development of accounting reports.

Research to support this view is not currently available, and is not likely to be obtained from the current dominant paradigm of Positive Accounting Theory and Agency Theory. Support may be obtained on a normative-deductive basis, built up from the premises outlined in the following mega-accounting model, or from experimental or survey research directed towards potential users of annual reports. There appears to have been little research of this nature in recent years.

4.2 Impediments to the Development of Social Accounting

The development of social accounting in the 1970s led to a number of elaborate proposals for the integration of social and financial accounting, which will be outlined in section 5.1. These attempts failed to generate much support for a variety of reasons, including the failure to appreciate the fundamental problems of attributing financial values to social events. Since that time, a number of further objections have been made in the critical theorist literature (for example Tinker, 1985). The position of the critical theorists has been that conventional accounting is not value free and supports capital against labour in the service of the capitalistic system. Therefore, any attempt to evolve the existing system by incorporating a social dimension, would simply assist in shoring up the existing system and should not be done. The social audits carried out by organisations such as Social Audit Ltd are examples of attempts to evaluate organisational performance on social grounds. In a number of instances these audits were seen by the auditee as opposing the existence of capitalism (Gray et al., 1996, chapter 9).

From the opposite perspective, social accounting is seen as a subjective, atheoretical collection of techniques which cannot be associated with 'objective, value-free' financial reports, but which may be used when appropriate in the annual report to publicise (for example) the high proportion of value added going to labour as part of a Value Added Statement. Furthermore, the accounting profession has not been prepared to support social accounting with positive references in conceptual frameworks, or accounting standards for the disclosure of non-financial information in annual reports, or support for the audit of all disclosures in the annual report, regardless of whether or not they originate from the accounting function. However, it is not too late to learn from past experiences, and provide encouragement and support for social disclosures which are part of the overall communication/reporting system. The preparation of a separate report/position statement (similar to those already produced by some organisations) with appropriate legislative or other regulated content, preferably audited, would clearly be
possible. There is also an argument for the inclusion of details of interactions between private sector organisations and both central and local government.

4.3 Impediments to the Development of Environmental Accounting

The remarkably rapid development of environmental accounting has not led to statements of uniform quality, or even statements which are pointing in the same direction. Apart from the management literature, which usually relates to environmental issues in terms of policy making and strategic planning, or descriptive accounts of 'how we do X', the environmental accounting literature contains a number of contradictions depending upon the 'degree of greenness' of the author(s), and their views on regulation vs voluntary action. In some cases writers appear to have changed positions on the latter dimension. The 'green dimension' has to be added to the ideological dimension found in social accounting (i.e. ranging from critical theorist to evolutionary/reformist; refer to Gray et al., 1996, pp.56-62 for an expanded list of alternatives). The environmental accounting literature is generally informed by an ethical perspective although this may not be made explicit.

There are three basic approaches to thinking about the environment from an ethical perspective; the egocentric, homocentric and ecocentric models (Miller, 1991). The egocentric model places the focus on mankind, and privileges people over all other beings. The goal of this model is the maximisation of individual self-interest. Thus people dominate the Earth and may use all resources for their benefit in any way that they wish. Essential to this perspective is the belief that science and technology will provide solutions to all of the problems created by any misuse of the environment. Traditional economic theory is most closely aligned with the egocentric model. Conventional financial accounting, which grew out of neo-classical economic theory, has a short term perspective, and considers only the self-interest of those individuals who are the financial constituents of the entity. The effects of enterprise actions on those individuals who are not financial constituents are not incorporated into the realm of accounting responsibility. All the time that financial accounting is seen as the process of reporting only financial information, to a limited group of stakeholders, for their restricted decision making interests, accountants are going to be reluctant to embrace environmental accounting.

The homocentric approach recognises that humans are part of an interactive culture, and that individual humans must be guided by broader social needs. Thus, in this approach, ethical action must consider the need of other humans, now and also for future generations, and the consequences which our actions have for those individuals. Individuals need to have a sense of responsibility to themselves and to others: Utilitarianism is consistent with the homocentric theory. Attempts to include information about corporate social responsibility in accounting reports is an example of expanding relevant constituents to include society as a whole. Attempts to internalise externalities, and thus include them in the cost structure (and perhaps thereby reduce further externalities) would also be part of a more homocentric environmental theory.

The ecocentric model expands the environmental responsibility beyond human life to other forms of life and the ecosystem in general. Humans are seen as individuals
situated within an ecosystem, and therefore, the environment cannot logically be
exploited simply for human gain, since the exploiters would be damaging themselves.

It is necessary for individual accountants, and the accounting profession in
general, to reconsider their approach to the environment. Unless a move is made from
the currently dominant egocentric to at least a homocentric approach, accounting will
continue to be part of an unsustainable exploitative system (Gray et al., 1996). Critical
natural capital must be protected for future generations. Environmental accounting can
only come about through a change in philosophical approach to the environment.

Those who favour ecocentric positions ('deep green') do not believe that it is
appropriate to value the environment, and would tend to oppose the development of
environmental accounting and auditing (Maunder and Burritt, 1991) for use in annual
reports. The issue of disclosing and reporting information is generally a non-issue for
these people, although if pressed they would probably favour regulations and
legislatively backed standards over voluntary codes, which could be avoided by reporting
parties. This group has moved on from environmental accounting to sustainability in
general, which means that they believe that industrial/commercial activity as a whole
may need to be drastically scaled back to preserve inter-generational equity.

At the other end of the scale (the 'light green') there is an acceptance of the
capitalistic system, of an anthropocentric view of the world, and probably a preference
for using voluntary disclosure and reporting if possible instead of legal binding
regulation. Thus voluntary codes such as EMAS, and the use of the market mechanism
(pollution taxes, sale of pollution permits) rather than legal restrictions and prohibitions
would be favoured by this group.

There are, of course, many shades of green in between the two extremes of the
spectrum, and therefore a wide variety of views on the action which is needed to ensure
an appropriate level of reporting. There does not appear to be any support for a
composite financial/environmental report, in which the impact on the environment is
expressed in financial terms and combined with other non-financial values; but the
literature contains a number of models expressed in non-financial terms (Schaltegger et
al., 1996).

The weight of support from the preparers appears to be in favour of using sections
within the annual report, or a separate environmental report, rather than attempting to
determine environmental costs and putting them into the financial section (Mathews,
1993). To do so would result, in the opinion of many environmental accountants, in large
losses thereafter, such is the effect of some organisations on the environment through the
generation of externalities. For example Gray et al. (1996, p.74) express the issue with
clarity and feeling:

Taking this one step further it is quite a simple matter to demonstrate that
company 'income' contains a significant element of capital distribution - in this case
'environmental capital'. An essential tenet of accounting is that income must allow for
the maintenance of capital. Current organisational behaviour clearly does not maintain
environmental capital and so overstates earnings (see, for example, Gray 1990, Gray et
al. 1993). If diminution of environmental capital is factored into the income figure it
seems likely that no company in the western world has actually made any kind of a profit
for many years (see, for example, Gray, 1992; 1994; Gray et al., 1993; Bebbington and
Gray, 1993).
5.0 Developing a Mega-Accounting Model

In this section the history of comprehensive accounting models is approached, firstly via a discussion of attempts to integrate social accounting with financial accounting in the 1970s, and secondly, recent suggestions for combined/multiple reports are considered. Finally, a new mega-accounting model is put forward for consideration.

5.1 Early Attempts at Comprehensive Social/Environmental Reports

The first flowering of the social accounting movement in the 1970s generated a number of models which attempted to combine the extant financial accounting and reporting practices with mainly financial estimates of social impacts (Linowes, 1972; Dilley and Weygandt, 1973; Ullman, 1976; Estes, 1976 and 1977; and Dirkes and Preston, 1977). Linowes (1972) designed a “socio-economic operating statement” which included monetary measurements purporting to account for relations with people, the environment and products. Some of the measurements were straightforward, for example “contributions to educational institution” but others were problematic such as “postponed installing new safety devices on cutting machines” which was described as a “detriment” in the relations with people section. Similar problems were found with the other sections. The content was not consistent with the literature on the valuation of externalities.

Dilley and Weygandt (1973) developed a ‘Statement of Funds Flow for Socially Relevant Activities’. Measurements were reported in financial terms and confounded actual costs with incremental (i.e. partial) costs. For example, the statement included the actual cost of reimbursing employees for educational expenditures and charitable donations, but also the incremental cost of using low-sulphur coal. Although perhaps an improvement over Linowes (1972), this model was still deficient because it aggregated the social with the environmental, and forced both into a financial reporting mode.

Ullman (1976) was a major departure from the other models reviewed to this point. The Corporate Environmental Accounting System (CEAS), as put forward by Ullman employed non-monetary measurement and has been described as “partial non-monetary and output oriented”. A complex input-output relationship was developed based on equivalent factors leading to CEAS units and a CEAS Balance Sheet. Although involving non-financial quantification, which may be an advance on purely financial disclosure the CEAS balance sheet did not report anything which was recognisable in terms of externalities or social impacts.

Estes (1976, 1977) was an attempt to systematically model the impact of the organisation on the environment. A “Social Impact Statement” was advocated including social benefits and social costs. Some items were costs paid by the organisation, other identities were the assessed values of social and environmental impacts in financial terms. The main difficulties with the approach taken appeared to be the premature attempt to include financial values for both social and environmental impacts in the form of a quasi-financial accounting statement, at a time when the techniques for determining these values were not well known or accepted. There were also financial estimates for assumed events such as the “Social Cost of Discrimination”, which would probably not find acceptance by accountants, then or now. Perhaps the time will come when the composite “Social Impact Statement” offered by Estes (1976) will be re-examined and
refined. For the present, this author argues in favour of preparing separate social and environmental reports, and only attempting integration when robust techniques have been developed. Estes (1977) was an attempt to divide the social impact statement between various constituents, which led to the presentation becoming rather more complicated.

Dierkes and Preston (1977) is the only model of the five examined here, which did not attempt to bring all events to a common valuation. As the authors stated: *The framework outlined here does not suggest the use of a unique performance measurement unit and certainly not a monetary measurement for all areas of environmental impact. On the contrary, it uses a wide variety of measures appropriately developed for the various specific impact areas (Dierkes and Preston, 1977, p.14).*

The model used both input (commitment) measures and output (performance) measures, with the unit of measurement varying between the different items being measured. The result was a table of social cost figures not assembled in the form of a pseudo-accounting report.

There are a number of lessons to be learned from these early models, which later proponents, including the author of this paper, have attempted to apply. With the exception of Dierkes and Preston, who used a mixed measurement, and Ullman with the CEAS, all other models attempted to force the data into a financial format, which in many instances was the undoing of the model. The social and environmental data may use financial measurements, but most likely would be expressed in non-financial terms such as physical measurements for pollutants or raw data for social phenomena such as workplace accidents. Reviews of the earlier models may be found in Mathews (1993, chapter 6) or in Gray et al. (1996).

### 5.2 Recent Discussion of Alternative Structures for Annual Reports

In their concluding chapter, Gray et al. (1996) make a number of suggestions for furthering the progress of Corporate Social Responsibility (CSR) in the face of a less than ideal world. They accept (reluctantly perhaps?) that for the foreseeable future financial statements:

*are likely to remain the dominant form of organisational accountability ... and therefore any proposals for CSR need to be differentiated between recommendations that amend current conventional accounting practice and those which are for additional statements (p.295).*

They appear, therefore, to be unwilling to indicate directions in which the financial accounting and reporting part of information distribution should go, excepting that the whole should be an accountability model involving compliance-with-statute reporting. This could be seen as a limitation of their overall model, since if they accept the inevitability of financial reporting remaining important, why not attempt to modify that dimension?

The first steps in the development of a systematic social and environmental reporting system (as suggested by Gray et al., 1996) would be to identify the purpose and focus of the report, and then to specify the way in which the organisation is conceptualised so as to satisfy the information characteristic of completeness. The purpose of the annual report, as stated by Gray et al. (1996) is to discharge accountability and the focus is societal, with the organisation a sub-system within the wider society.
Whilst it is accepted that the completeness criteria can never be satisfied, the authors argue that statements designed to show a social balance and an eco-balance for each organisation, would enable the reader to form a view of the overall performance of the organisation. There would be a need to specify the rights to information of stakeholder groups, which Gray et al. (1996) see as being incorporated in policy statements issued by the reporting entities:

Sustainability is the end goal, incorporating notions of eco-justice and eco-efficiency. It is argued that the current financial accounting system could provide some assistance with disclosures affecting intra-generational equity and inter-generational equity. Finally, recoding of the data contained within the accounting system might shed light on the distribution of costs, to reveal more accurately those costs related to: employment, use of energy, packaging or waste disposal costs, expenditure on replaceable and finite raw materials, forms of transport costs, environmental liabilities and expenditures, revenues from developing nations, legal fines and related costs, and so on (Gray et al., 1996, p.298).

The agenda set out above is clearly an advanced one which will require a great deal of development. A first step suggested by Gray et al (1996, p.298) would be to bring together all currently disclosed social, environmental and employee information into a single social and environmental report within the existing conventional annual report. Many of the important components of the model are only outlined, or examined very briefly. The mega-accounting model outlined in the next section is not intended to be competitive with this model, but rather should be viewed as arising out of a consideration of some of the same issues as are raised by Gray et al. (1996). It is also an alternative to the attempt by Schaltegger et al. (1996) to produce a consolidated environmental accounting report.

Schaltegger et al. (1996) have advocated a new form of accounting for the environment which involves "ecological accounting", which is developed separately from conventional accounting, and then integrated into traditional accounting, both financial and managerial. Ecological Accounting is divided between internal (management) and external (financial) forms of accounting. The internal form includes the use of Life Cycle Assessment and "ecological investment appraisal". The external use of ecological accounting would need to address the same qualitative characteristics as financial accounting, as well as dealing with taxation and consolidation issues, but using physical units of measurement in many instances. When integrating ecological accounting into traditional accounting, the authors attempt to have both a financial and an environmental perspective, but in the end it is the financial measurement which dominates:

Internal ecological accounting supports management in investment decisions, whereas external and other ecological accounting systems help investors, creditors, regulators, environmentalists and the general public to take environmental and environmentally induced financial aspects into consideration. External ecological accounting can serve this function best if internationally accepted standards of ecological accounting are issued.

In addition to the adaptation (or differentiation) of traditional accounting and the development and introduction of ecological accounting, the integration of information created in both categories of accounting is vital for many managerial issues. Integration
of accounting information can be achieved with the Eco-Rational Path Method (EPM) creating indicators of eco-efficiency (Schaltegger et al., 1996, p.263).

The somewhat complex approach adopted by Schaltegger et al. (1996) differs from the mega-accounting model put forward below in the following ways; first, the existing financial accounting system is taken as a given, second, there is no concern for social accounting data collection and reporting, and third, the attempts to integrate ecological accounting with conventional accounting go further than the author believes appropriate for external financial reporting at this point, since it leads to the domination of the environmental by the financial, and raises many of the problems which led to the failure of earlier models. Schaltegger et al. (1996) are also concerned with management accounting which is not addressed in this paper.

5.3 A Tentative Mega-Accounting Model

The mega-accounting model put forward in this section is clearly tentative and will be modified as a result of further thought and critical comment. The exposition is divided into two parts. First, the underlying principles are outlined, and second, the specific components of the different information forms are discussed.

5.3.1 Underlying Principles

In order to successfully encompass economic (financial), social and environmental information in any general report produced by an organisation, it will be necessary to give equal status to the three different sources of information, which means the redefinition of accounting to be the discipline concerned with providing audited economic, social and environmental information about the entity, regardless of whether or not this involves measurement in financial or non-financial terms.

In view of the current pre-occupation with providing investors with financial information for decision making purposes, removing the “financial only” aspect would be a first step in broadening the stakeholder group to include many other groups within society. This would be an appropriate step, and compatible with the philosophical argument that the social contract of business with society does not only include investors. If this is accepted, then the decision usefulness criterion must be only one function of the annual report of the entity, and others such as stewardship and accountability must be accorded equal status; unless it is argued that accountability to all stakeholders is the broad concept and that this encompasses the others. The notion of “rights to information” (ASSC, 1975) implies both the widening of the stakeholder group and the provision of multi-faceted information. The use to which this information is put then becomes the choice of the individual stakeholder.

The success of legally backed accounting standards, based upon an agreed conceptual framework, suggests that a similar system might be adopted for use with an enlarged reporting information system as that proposed here. However, although the ideal might be a fully integrated system, showing one result or one overall state (financial, social and environmental), this is not considered feasible at this point, and a conceptual framework and standard system would be required to underpin each of the three performance statements. The provisions for audit reports and legal backing for standards would, therefore, apply to all three areas. Some means of deciding those
entities which would be required to report, probably related to size, economic importance and legal construction would need to be developed. The enlarged criteria for a reporting entity might mean that economically insignificant organisations which are socially or environmentally significant could be required to produce the enlarged annual reports.

The important differences from the present basis of reporting would be: (1) an enlarged reporting system with financial, social and environmental data having equal status; (2) all stakeholders having rights to information, and able to take whatever content they wish to take from the data provided; (3) no primacy given to any one form of data or any specific use to which the data is put; (4) Conceptual frameworks, legally backed standards and audit requirements for all information. The underlying principles are set out in Table 1 below.

**TABLE 1: The Basic Underlying Principles of the Model**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Information is made available to all stakeholders in recognition of the SOCIAL CONTRACT OF BUSINESS WITH SOCIETY. This implies a willingness to supply information to stakeholders who do not have a direct financial relationship with the preparer.</td>
</tr>
<tr>
<td>2.</td>
<td>The annual report is a COMPREHENSIVE INFORMATION SYSTEM including separately reported economic, social and environmental position statements.</td>
</tr>
<tr>
<td>3.</td>
<td>STAKEHOLDERS are defined as all members of society who have RIGHTS TO INFORMATION about those entities that are deemed to be significant and liable to publicly report on performance and condition.</td>
</tr>
<tr>
<td>4.</td>
<td>A CONCEPTUAL FRAMEWORK would be required for each area until integration is possible.</td>
</tr>
<tr>
<td>5.</td>
<td>LEGALLY BACKED STANDARDS would be mandated for each area until integration is possible.</td>
</tr>
<tr>
<td>6.</td>
<td>Statement components would have equal status in terms of AUDIT requirements</td>
</tr>
<tr>
<td>7.</td>
<td>THREE SEPARATE POSITION STATEMENTS together make up the ANNUAL REPORT of the entity to account to the other parts of the social and economic system in which the organisation is situated.</td>
</tr>
<tr>
<td>8.</td>
<td>Each report would contain appropriate financial data and non-financial data is used in the social and environmental accounting position statements. Furthermore, raw data could be available as advocated by Wallman (1997, p.108) under the rubric of “access accounting”, and thus avoid the problems associated with too great a degree of aggregation.</td>
</tr>
<tr>
<td>9.</td>
<td>Any transfer of financial information from one position statement to another would be made outside of the three individual statements; for example if the impact of the organisation on the social structure of the area or the environment could be reliably determined in financial terms this could be shown as an offset to the income earned, and vice versa.</td>
</tr>
</tbody>
</table>

5.3.2 Suggested Contents

Using the basic underlying principles set down in Table 1, this section will attempt to give some ideas about the content of the three position statements.
First, the financial data provided would be similar to that reported at the present time, although over the longer term this would be extended to include not only refinements of presently included material, but also to include components which are not currently recognised and included. As suggested earlier, refinements of currently reported information may include alternative valuations of assets and liabilities, using varying values around a single point. Information not currently included, but already the subject of study in the literature, includes executory contracts, Human Resource Accounting, internally generated goodwill and other intangible assets. The overall position of responding to the social contract, recognising a wider stakeholder body with rights to information, which may not be aimed at decision making, over time, may affect the basis on which financial information is provided. For example, the financial benefits of trading with developing countries (from the perspective of those countries) might be included (Gray et al., 1997).

The social report could probably provide data related to employees, products and services supplied, community service, and relations with government to name some obvious areas. In an unsophisticated form this information might consist of raw data. For example, employee data (numbers employed, gross earnings, Trade Union information, training programmes, scholarships, Lost-Time accidents, proportion of Value Added going to labour) and eventually develop into more sophisticated measures, such as Human Asset Accounting. Both financial and non-financial data would be required to produce meaningful information about many aspects of the social information category. Long term developments could lead to the calculation of the net social contribution which the entity contributes to the local area, which would include recognition of the inputs received from central and local government (including the cost of providing the infrastructure needed to operate the entity). The net social contribution is the basis for the social balance advocated by Gray et al. (1996): "A social balance would similarly identify the human, community and social outputs of the organisational system" (p.296). However, until that level of sophistication is reached, it will be important to specify the basic data that should be reported; the following are based upon Mathews (1993, p.87).

Employment related disclosures would be best approached via a statement of the current position in relation to employment matters including the following information: number of employee by geographical location and gender; total payments made for salaries, wages, and other employee benefits; details of Trade Union affiliations; details of training programmes and funded/subsidised study programmes; lost-time accidents involving serious injury; time lost through minor accidents, analysed by plant, division etc.; official disputes as a proportion of normal working time; unofficial disputes as a proportion of normal working time; use of agreed grievance procedures by employees; minority employment (where this is a concern), employment numbers at different levels within the organisation, and comparisons with previous employment records and those of other organisations; details of any legal issues involving employment.

Where community related disclosures are to be made a statement commenting on the current relationship between the organisation and the local community (however that should be defined) including reference to the following: sponsorship of local events, prizes, scholarships, etc.; funds distributed with local communities through employment, local purchasing of goods and services, and payments to local government; benefits received from local sources such as upkeep of roadways, ports etc.;
Voluntary social disclosures may include a statement about products including the following information: number of complaints from customers/clients; reactions from consumer bodies; reports from independent consultants; details of products withdrawn from the range; details of products added to the range; details of any legal issues related to products involving the organisation.

A statement about matters relating to efficiency, productivity and research and development, including the following details would give the reader a good basis for judging performance in this area: cost of energy used; specific measures of energy used in physical terms, for specific areas; cost of energy per unit of output; energy used related to output in specific plants and production centres; physical output in terms of process time or other relevant variable; physical output in terms of employee unit time; measures of research and development effort expended; details of numbers of products, patents, or projects moving through various stages; original research, applied research, development for pilot testing, pre-production etc.

There are probably other areas which could be included. The important criterion is that, like financial accounting measures, these micro-social accounting measures should be consistent, comparable and reliable.

Previous social accounting literature has been concerned with disclosures of micro-level information to stakeholders. That information has not included data about the relationship between the organisation and the various levels of government. Although relations with government was a category discussed at the time of the Corporate Report (ASSC, 1975) the proposal has not been developed or discussed in any detail.

Public funds are expended in at least four ways which assist in the running of private sector organisations; by commercial transaction; by the provision of the common infrastructure; by the provision of specific targeted activities, and by absorbing or eradicating externalities created by the organisation. Taking each of these in turn a picture of the potential for macro-level social accounting disclosures could be developed.

The production of information about environmental performance has been discussed at a number of levels, and detailed suggestions made by Gray et al, (1993). Gray et al. (1996, p.296), drawing upon extensive European experience in advocating environmental reports, refer to the need for completeness in reporting via:

...the use of the eco-balance supported by life-cycle assessment (LCA). This analysis provides an overview of an organisation showing all its physical inputs, its pollutions, leakages and wastes plus a specification for all its inputs. LCA then tracks each of these inputs and outputs to their source. It is thus a systems-perspective of the organisation which permits the reader to gain an overall conception of the organisation's interactions with its physical environment. (Gray et al., 1996, p.296; see also Gray et al., 1993)

This seems to be some distance in the future for the majority of organisations which do not yet make any meaningful disclosures in the environmental area. Consequently, at the start raw data concerning inputs of materials and energy, and outputs of product, waste and by-products, and discharges to air and water would appear to be a considerable advance on the present position. It should be remembered that much of this data is already required by government agencies, but is not included in the annual report. There can be little doubt that if there was a will to do it, this information could form the basis of the environmental position statement.
6.0 Concluding Comments

This paper has considered the problems associated with the current form of financial accounting; particularly, problems associated with the limitation of stakeholders and the financial measurement premise. Additional disclosures of social and environmental accounting were also introduced, together with a number of ideas for associating these three different forms under one mega-accounting model.

The general idea of associating financial, social and environmental accounting forms is not new, having given rise to a number of alternative models during the 1970s. These earlier models failed to attract long-lasting attention and support, partly because at that time the social dimension was forced into a quasi-financial accounting format.

More recently, at least two other suggestions for combining social and environmental accounting as a joint disclosure with financial accounting have been made by Gray et al. (1996) and Schaltegger et al. (1996). These approaches have different foci from the mega-accounting model developed in this paper. The arguments used by Gray et al. (1996) are similar, and the two models have the same overall objectives, but the current paper is probably more tolerant of existing financial accounting and reporting systems. It is more evolutionary and less radical in design, and accepts financial reporting on an equal basis with social and environmental reports. The approach taken by Schaltegger et al. (1996) is more complex than the mega-accounting model discussed in this paper, since it involves a full integration of ecological accounting with traditional accounting. There is also an implicit acceptance of the current status of financial accounting, and no concern about deficiencies is expressed. Furthermore, there is no concern about the social dimension of accounting, only the environmental is considered.

The tentative mega-accounting model put forward in this paper would, if developed, lead to financial, social and environmental performance being reported separately in position statements, but as part of the same overall annual report, and subject to the same standards of preparation and audit.

7.0 References

Accounting Standards Steering Committee (1975), The Corporate Report, ASSC: London.


Canadian Institute of Chartered Accountants (1993a), Environmental Stewardship: Management Accountability and the Role of Chartered Accountants, CICA: Toronto.

Canadian Institute of Chartered Accountants (1993b), Reporting on Environmental Performance, CICA: Toronto.


European Commission (1992), Fifth Action Plan, Towards Sustainability, Brussels: EC.


Accounting for macro-social impacts: a new research agenda

M.R. Mathews

Abstract

This paper reviews the current state of social accounting, noting that in the usual micro (firm level) form there was a need for a more structured approach, before considering a macro level social disclosure model. Macro level social accounting as advocated in this paper envisages disclosures by private sector organizations of their interactions with central and local government in terms of commercial dealing and the provision of services and infrastructure for the private sector by public funding. It is concluded that prima facie there is a case for further research into the concept of macro-social accounting disclosures.

Introduction

The purpose of this paper is to argue for a re-examination of social accounting and in particular to advocate the development of macro-social accounting disclosures. The specific intention of this innovation would be to make transparent the relationship between public and private sector organizations as they operate within our society.

Social accounting has been a sub-discipline on the fringes of mainstream accounting for many years (Mathews 1997a). At one time social accounting was the subject of enthusiastic discussion by a small group of academicians, leading to a large number of publications and attempts to define the area (Gray, Owen and Mauders 1987; Mathews 1984, 1985, 1993) and to produce models in an endeavour to bring the 'social' further into the mainstream of accounting (Linowes 1972; Dilley and Weygandt 1973; Ramanathan 1976; Estes 1976; and Dierkes and Preston 1977). This was only partially successful, since although annual reports sometimes produce large volumes of micro-social information about employees, products, community involvement, and relations with various parties, this information is unaudited, does not conform to any conceptual framework or standard generated by accounting bodies, and is frequently not the work of accountants. Furthermore, it is significant to note that the macro-social dimension has not been considered to the same extent within the accounting literature.

The proposal put forward in this paper is based on the reasonable
expectations which society should have of the reporting obligations of
the organizations which are permitted to develop within that society.
The existing corporate structure of separate legal existence and limited
liability for shareholders is a creature of the state (the body of all the
citizens) and the rationale for requiring financial reports on a periodic
basis, and subject to a variety of professional and legally mandated
accounting requirements. However, these financial reports are directed
at a limited part of society, usually shareholders and creditors, with
the intention of assisting these groups in their decision-making about
investing in and lending to the organization, now or in the future. The
financial reports are only incidentally for the use of other groups. There­
fore, it is argued, the time has come for other reports to be prepared
which would be of greater use to wider stakeholder groups, in combi­
nation with the existing financial reports. These additional reports
would be concerned with social and environmental performance (Gray

There is an added concern that corporations (particularly large corpora­
tions with political ‘clout’) may be in receipt of support from govern­
ment which is not transparent, or which has not been recognised as a
hidden subsidy. A negative report on this issue would still have infor­
mation content to the reader.

The paper proceeds as follows. After the introduction, section two con­
siders the macro-social dimensions of operating private sector organiza­
tions, and argues in favour of an attempt to quantify the support
received by private sector organizations from the public sector, and the
benefits which society as a whole receives from the existence of the
organization. The final section offers some concluding comments.

Macro-social accounting disclosures

The self-financing corporation is frequently held up as an ideal, generat­
ing employment, delivering goods and services through the market,
making profits, paying taxes, earning foreign exchange, and contribu­
ting to the multiplier effect within the economy. What is proposed is
an accounting of the interaction between the entity and society, in parti­
cular the extent to which the success of the self-financing corporation
is dependent upon the provision of public sector (central or local)
government funding, which could mean that, in extreme cases, the cor­
poration is not actually self-financing at all.

Previous social accounting literature has been mainly concerned with
disclosures of micro-level information to stakeholders. That informa­tion has not included data about the relationship between the organi­
ization and the various levels of government and government agencies.
Although relations with government was a category discussed at the time of the Corporate Report (ASSC, 1975) the proposal has not been developed or discussed in any detail since that time. The Corporate Report refers to a statement of money exchange with government, but does not establish this in any detail. The proposal may have been limited to the commercial transactions referred to in section 2.1 below, and there is no indication that a wider perspective was being advocated.

Wider, but indefinite, perspectives are to be found in Mattesich (1957) and Gambling (1974). The generation of information about macro-social impacts is not confined to either the private or the public sectors, but needs to be supplied by both to their respective stakeholders (these groups will overlap to some extent in any case) as an extension of accountability towards an integrated information system (Gambling 1974).

A number of social accounting writers have approached the issues highlighted in this paper. Estes (1976) introduced two items into his social impact statement which have some correspondence with the approach proposed herein. These were 'work related injuries and illness' and 'public services and facilities used' which are shown as social costs. However, this model did not generate much support for social accounting in general, partly because it was seen as too complicated and containing too many disparate elements.

What costs are imposed on the public to have the organization operating compared to the benefits derived? These costs are in the nature of externalities, the public cost of private operations, although the term is usually associated with the costs of pollution. Mathews (1984, 1993) has described these costs as Total Impact Accounting which is defined as:

The term total impact accounting (TIA) refers to attempts at measuring, in monetary terms, the total cost of running an organization in its existing form. The total cost of running an organization may be divided between private and public costs (Mathews 1993, p. 130).

Although the author subsequently treats externalities as mainly the public costs of pollution, there are references to other issues such as the costs of congestion, reduced property values and the value of public improvements (Mathews 1993). Gray et al (1996) have noted that if the unsustainable aspects of economic activity were added to the conventional private costs, then no corporations would make a profit (Gray et al 1996). In a different context, it could be argued that if the cost of publicly funded facilities were charged to economic organizations (where appropriate), at least some of them would be shown to be net receivers and therefore running at a loss.
The recent reduction of employment levels to increase the economic efficiency of capital has implications for governments at both central and local levels. Harte and Owen (1987) identified local authorities as an increasingly important user group of accounting information. In particular their paper examines social cost analysis performed by UK local authorities attempting to measure the social and economic impact of plant closure decisions on local communities. The costs of unemployment were shown to be widespread in terms of the impact on the wider society. However, the study is limited to this aspect of social costs, and does not attempt to include the costs of providing infrastructure to maintain the level of employment, excepting for the loss of commercial rates, rent and rates rebates and the cost of recovery packages, because Harte and Owen (1987) had an underlying concern with de-industrialization and not expansion.

The social audit movement include many factors in attempting to determine the impact of an organization on the community (Geddes 1992; Zadek and Evans 1993) but do not appear to set the cost of providing infrastructure against the economic performance of the organization. The majority of this literature is non-market and based on preventing job losses, damage to communities and amenities, and the privatization of public sector operations. The social accounting/social audit literature does have some degree of commonality with that of this paper, however, the overlap is limited. The most common feature is a view that accountability demand transparency in the reporting of organization activities.

Transparency in the dealings between Government agencies and other organizations within society is one of the principles of democratic government. Unlike commercial relationships between corporations, or between corporations and the general public, there is no specific regulatory framework per se which specifies the disclosure relationships between the public and private sector organizations. However, the interaction between government and private sector corporations is recognised as important to the operation of both, and in recent years many Western governments have divested the public sector of operations (in health, education, airports, port facilities etc.) which are now operated by the private sector, performing the same work as before but as arm's-length commercial transactions. Clearly these policies increase the number of public sector/private sector interactions and the need for appropriate accountability mechanisms.

The need for transparency, and the number and magnitude of these interactions provide powerful prima facie arguments for increased disclosures to inform both shareholders and citizens. Public funds are potentially involved in at least five ways which assist in the running of private sector organizations; by commercial transaction; by the pro-
vision of the common infrastructure; by the provision of specific targeted facilities, by absorbing or eradicating externalities created by the private sector organization, and by effects on the management of foreign exchange and financial flows. Taking each of these in turn a picture of the potential for macro-level social accounting disclosures can be developed.

**Commercial transactions between organization and government**

Arms-length commercial transactions between private-sector organizations and Government agencies direct funds to those organizations which supply goods and services judged to be necessary by those charged with making decisions on behalf of the population as a whole. Any surplus (profit) after the payment of all costs, will be retained by the organization, distributed to shareholders, or paid to the government as taxes. Second and subsequent order effects will move through society as further taxes are paid on earnings and profits, and through the reduction in any social costs of unemployment. An argument may be made for disclosures in a macro-social report of:

- the value of transactions between the organization and the several levels of government
- estimated taxation returns arising from this commercial activity, both directly and indirectly
- an estimate of the proportion of enterprise-government activity which is kept inside the domestic economy (in other words a means of determining leakage)
- a sectional value added statement representing commercial transactions with government.

Organizations should not be concerned at having to acknowledge their commercial relationships with Government, since they are providing something needed by society. Nevertheless, transparency will show which organizations are involved and the value of the transaction, keep all parties honest, and encourage appropriate competition between potential suppliers.

**Provision of a general infrastructure**

The basis of our collective society is that public funding provides for many goods and services which cannot be separated and allocated between individuals; defense and foreign diplomatic representation for example, exist for all regardless of need or financial contribution. Road-
ways are provided from communal funds, whether they are used for weekday commercial traffic or weekend private use, or any possible combination of the two. It is difficult to see how a commercial enterprise could be required to contribute to the cost of this general infrastructure, excepting through general taxation and contributions to the consolidated revenue, or where user charges are levied such as differential licensing charges for heavier vehicles, or customs inspection on imported goods.

The level of taxes paid by corporations is often the subject of adverse comments and the actual amount paid in various ways is not always recognized by readers of annual reports. Even when some organizations disclosed taxes paid in Value Added Statements there was little attempt to identify all of the taxes, charges, duties and other interactions between Government agencies and private sector organizations. Disclosures should perhaps include:

- actual taxes paid on income to the Consolidated Revenue
- duties paid
- charges levied against the organization for the use of the general infrastructure.

**Provision of specific infrastructure items**

There are occasions where public funding is used to provide specific items of infrastructure from scratch, or to modify and extend existing facilities, solely for the use of one or more private sector organizations. Although these practices are less common than they once were, we are concerned in this paper with the principles and not with specific examples of such actions. For example, the provision of port facilities, the extension of airport facilities or the construction of a spur rail line may be funded out of public funds to achieve specific goals. Presumably those goals might include furthering commercial relationships with one or more organizations, to create employment opportunities, either at the enterprise(s) which benefit directly, or there and elsewhere, so that the aggregate economic activity will lead to taxation revenue, foreign exchange earnings, or the reduction of social costs, which in total will be greater than the initial cost to the public purse. If that is not the case the public might be excused for wondering why the funds are provided in the first place.

The current difficulty (in terms of accounting and reporting) is that neither government, nor the private sector enterprise, appears to disclose information to enable the wisdom or otherwise of the investment to be judged. This would be the equivalent of the effectiveness audit in the public sector.
One way of bringing issues of this nature into open discussion would be for both public and private sector organizations to disclose:

- details of facilities provided by government funding, whether local or central
- contributions made either directly or indirectly by the organization to offset the investment. Examples might be taxation or other charges, increased employment or reduced social costs
- details of specific direct funding to keep the business operating (if any); together with estimates of the benefits to society of continued operation.

The reader would expect to find the corresponding data in the public accounts of the agency providing the facilities. Although bound to be contentious, this suggestion is really no more than common sense; private sector organizations should, over time, be expected to fund all of their activities. If they do not then the taxpayers are subsidising the returns to shareholders, a minority group in society, and issues of equity will become paramount.

**Absorption of externalities created by an organization**

Recent discussions about externalities have tended to be dominated by the problems of pollution. These issues are not covered by this paper, because it is assumed that any accounting regime which is willing to accept social accounting disclosures, will also have an environmental accounting statement as well. The externalities referred to here are those non-pollution events, which result from the organization operating where and how it operates. For example, added road traffic may increase the cost of maintaining highways; and industrial accidents should be a charge on the enterprise and not on the local community. It may be argued that local authority charges and taxation pay for these costs, however, there is little information provided to verify this and a great deal more transparency is needed, for example with disclosures of:

- contributions to the local government via taxes and charges
- the employment benefits conferred on the local area (which offsets the cost of externalities)
- estimated costs of externalities such as traffic congestion, road accidents and health related activities

The organization cannot be expected to be regarded as legitimate if it imposes externalities on the local community (or the wider community either although this may be less obvious). The cost of some externalities could, perhaps, exceed the payment of rates, local taxes etc., leaving
the community with a net loss; although the provision of employment and the multiplier effect of local spending will probably prevent this. However, without information any debate concerning the benefits of an organization to the local or central government is bound to be rather sterile and uninformed.

**Influence on foreign exchange**

In some situations the extent to which private sector organizations affect the flow of foreign exchange into and out of the country can be important in the management of the exchange rate, interest rate structures, overseas borrowings, and international credit agency ratings. The Corporate Report (Accounting Standards Steering Committee (ASSC), 1975) referred to the inclusion of trade related information, but like other reforms including a statement of relations with government, the issue was never developed. In a similar way to the creation of employment through investment, the creation or destruction of employment through overseas trade is a matter of concern to the general public. Specific disclosures, which might be included, are:

- net currency flow from normal trading activities
- flows resulting from capital investment
- flows resulting from the repatriation of profits.

**Concluding comments**

The intention of this paper was to draw attention to a possible new category of social accounting; accounting for macro-social impacts, in which the interaction between the public sector and private sector is illuminated through the disclosure of the costs of providing infrastructure and support, compared to the benefits in terms of taxes paid and employment created/provided.

The area of macro-social disclosures has not been considered in any detail before. How should private sector organizations disclose their relationships with different levels of government? There will be differences depending upon whether the interaction is commercial, or whether the organization is the beneficiary of public funding of infrastructural assets. Does the employment created, the foreign currency earned, or the taxation paid, meet the costs which are incurred to support the private sector activity (i.e. are there any hidden subsidies involved). Although overt government activity in support of business is less frequently the subject of current public discussion, nevertheless, some accounting is due to the taxpayers who fund these activities when they do occur. Some tentative suggestions about disclosures are made in the paper.
The proposals set down may appear to be anti-corporation, especially to those not familiar with the social contract of business with society (Donaldson, 1987), or those who cannot accept it (see for example Den Uyl, 1984). However, this is not intended to be the case. What has been suggested is that in order to meet the implied social contract between private sector organizations and society, these organizations should be much more open about their activities, in particular their relationships with employees, the community and governments. Additional disclosures would enable society as a whole to evaluate organizational performance in a much more comprehensive manner than is currently the case.

The present position appears to be that if an organization continues in existence, is apparently profitable, pays legal wages and taxes as appropriate; then it is doing all that can be expected of it. This may be true; equally it may not be true, if the organization generates externalities (whether social or environmental) which cost the public more than the taxes paid to enable some other part of society to deal with the problem, and/or the volume of employment is generated by means of hidden subsidies from taxpayers (which should be open to public debate).

It may be argued that the performance of a private sector entity can only be evaluated if financial, social and environmental reports are produced (Gray et al 1996; Mathews 1997b). Only then can a full evaluation of the contribution of the organization to society be made. Clearly there are many more aspects of this subject to be examined and it is important not to overlook the importance of the social dimension in any attempt to reform our accounting and reporting systems. The social dimension includes both a micro dimension which has been previously commented upon elsewhere (Mathews 1993), which affects some aspects of annual reports, and a macro dimension which has so far escaped attention.

The interactions between private sector organizations and central and local governments, which engage in commercial relations as well as providing both general and specific infrastructures, and in some cases have to deal with both externalities and exchange related issues, are the subjects of macro-social accounting. This paper advocates that consideration be given to further research to establish the composition and magnitude of these interactions.

References


© Blackwell Publishers Ltd. 2000


THE ENVIRONMENT AND THE ACCOUNTANT AS ETHICAL ACTOR

Mary Ann Reynolds and M. R. Mathews

ABSTRACT

Global concern for the environment places the accountant, as a professional, in a position of ethical responsibility. Accountants must understand their own ethical position, as well as their definition of the environment. This understanding can help them extend accounting practice to meet current social needs, and maintain professional legitimacy.

INTRODUCTION

The intention of this chapter is to review the ethical basis for the behavior of a group of professionals (accountants) in this new era of environmental consciousness. Accountants need to consider their roles as ethical actors, because the roles of all types of accountants (at least in the larger, more publicly exposed entities) are now much more influenced by societal views of social and environmental issues. Evidence for this view may be found in the expansion of stakeholders within conceptual frameworks to include the general public (FASB, 1995); the publication by management writers as well as accounting theoreticians of proposals for inclusive reporting models.
(Elkington, 1994, 1999; Mathews, 1997b; Gray et al., 1996); and the
publication by many corporations of comprehensive economic/social/environmental annual reports (Global Reporting Initiative website, 1999). Modern accounting is very different from that of only a few decades ago, and there is every likelihood of considerable changes in the future. Yet the philosophical underpinnings of the profession have changed relatively little, and may not be able to provide guidance to the next generation of accountants.

Accountants in a global economic society should begin to account for the dynamic natural world within which they practice, in order to maintain the established role of the accountant as the primary provider of reported information about corporate performance. Accounts, as they are currently constructed, are partial reports on the economic activity of a specific entity within the natural world in which we live (Mathews, 1997b). The entity itself is embedded in society, and bound by an implicit social contract (Donaldson, 1982). Society seeks to maintain itself, and will develop communication and control functions to do so (Parsons, 1977; Aberle et al., 1960). Accounting serves as one of these functions (Reynolds, 1989), and accountants report to society on those things that society holds to be of value. Accountants are empowered by society to make visible or render an accounting about the activities that are of importance to decision-makers. The accountant is expected to tell, to give voice (Elkington, 1999; Miller, 1998).

What is reported on by accountants is attended to, and the act of reporting focuses the attention, and therefore drives the decision outcome (Hines, 1988). The choice of what to measure and report then becomes a critical part of the responsibility of the accountant because, "a way of seeing is also a way of not seeing" (Poggi, 1965, cited in Hines, 1989, p. 55). The accountant thus becomes an ethical actor, with responsibilities to society. As an ethical actor, the accountant must be able to see the self, and the underlying assumptions that have been made before a fair report can be constructed. The accountant must see to report, however. What do we 'see' and how do we see it? We cannot expect to do this if our philosophical underpinnings render matters invisible. As the demands and requirements of society change, so must the accounting discipline change, and the practice of accounting must change also.

Society itself is embedded in the natural world. The firm as an institution within society uses natural resources to produce goods and services, which are then sold to others for consumption and disposal. Thus the firm is one of the places where society and nature intersect. Do accountants take this interaction into account? In reporting fully on these activities, accountants could have the potential to make the interaction between society and nature transparent, thus
visible to all (Mathews, 1993, 1997a, b; Gray et al., 1996). Some societal constituents may have apparent conflicts of interest; however, all these competing groups are embedded in society, as society is embedded in nature. Within this broad system, information is sought to inform action, to allocate resources, to guide decisions and to plan for best use. This planning requires complex and dynamic information gathering and reporting (Burke, 1984; Epstein, 1996a, b; Milne, 1996).

Although both the technical expertise and the information technologies to enable this reporting to be undertaken are present, current theoretical models do not give sufficient emphasis to it. Accountants have traditionally reported rule-based financial historical costs using double entry accounting in an attempt to portray a limited perspective of the underlying economic reality of the reporting entity. While this may have been thought to be adequate in the industrial era, it does not serve our present complex global information needs. Information needs increasingly reflect global issues, and have global implications. These implications include not only the use of increasingly scarce worldwide natural resources, but also the processes by which resources are used, and the impacts that these have on the global environment. Thus, an accounting and reporting model is needed to account for the natural environment, and the impact on the environment of socio-political economic policies. A theoretical framework is needed that includes those elements of interest in the environment, and which can provide accountants with an ethical frame for this discussion, and to guide their activities until the formal accounting model (conceptual framework and standards) is developed to guide them.

With the developing societal concern for the environment, a call for environmental accounting has emerged. This call comes from disparate sources (see for example Tinker, 1985; Hines, 1988; Gray, 1992; Mathews, 1993, 1997b; CICA, 1993a, b; Rubenstein, 1994; Epstein, 1996a, b; Gray et al., 1995a, b, 1996; ACCA, 1997). If the general solutions put forward by the environmental accounting literature were accepted, the new reporting system would need to follow a somewhat different model from that currently in use. Elliot (1992) discusses the need for a new accounting model that moves from the accounting model appropriate in a stable smokestack industrial model of organizations, to a reporting model useful for a dynamic networked organization that will include non-financial information. Milne (1996, p.135) furthers this discussion by suggesting the necessity for corporate accounting to include non-market activities, such as the “social costs of environmental pollution, of resource exhaustion, or of project impact on the cultural and ethical values.”
The present accounting reports were designed in a time when calculations were done by hand, and it was not feasible to report on non-financial resources. Improving technologies allow us to accurately report on a new range of information, from rates of resources transformation to stocks of sand and gravel on hand (Schneider, 1989). In such a technological environment it becomes feasible to attempt to report more clearly on the use of natural resources, and the impact on the environment of that use (Schaltegger et al., 1996).

Corporations are using tools such as lifecycle analysis in planning for both regulatory environmental compliance and competitive strategy (Reynolds & Warwick, 1997; Epstein, 1996a, b; Elkington, 1994). Industries, such as the forest products industry, plan for and participate in the replenishment of the resources that are used (Weyerhaeuser, 1996). Industrial ecology systems such as the one designed in Kalundborg, Denmark, develop interdependent industrial systems that effectively use one another's by-products as inputs, thereby eliminating waste (Shrivastava, 1995). Nations are attempting to negotiate allowable emissions. While the natural environment is effectively being taken into account in the planning process at these various levels, it is still not being reported or made visible to the constituents as a part of any formal generally accepted accounting principles (GAAP). Existing GAAP based reports are only aimed to inform a limited stakeholders group.

Some recent accounting literature reflects these growing environmental concerns (Barth & McNichols, 1994; Gamble et al., 1996; Walden & Schwartz, 1997). Contingent liability reporting provided a natural focus following the Exxon Valdez and Bhopal disasters, and the requirements of Superfund reporting and accountability have encouraged this narrow focus on remediation and associated costs. However, the wide impact of corporate activity on the environment demonstrates a need for additional information (Freedman, 1993). The corporation is the place where economic, social, and natural world interactions come together, and it has been widely argued that it is time to extend the information provided about these interactions.

As previously indicated, the subject of this chapter is the provision of an appropriate theoretical/philosophical basis to guide environmental reporting by accountants. The chapter proceeds as follows. The next section discusses the accountant and the concept of professionalism, and addresses the issues of professional responsibility in expanding global society, and how professionals can know what is expected of them. Section three considers ethical theory and environmental theory, including those specific theories which can inform our understanding and choice of ethical position, and how we might consider the environment from an ethical perspective. The final section offers some concluding comments.
The Environment and the Accountant as Ethical Actor

THE ACCOUNTANT AND THE CONCEPT OF PROFESSIONALISM

The accountant as a professional in society has the responsibility for providing information. What is that responsibility, and what are the information needs of society? What constitutes established accounting theory varies from period to period, in line with the socially constructed nature of accounting itself. At one time, accounting was defined as:

... the process of identifying, measuring, and communicating economic information to permit informed judgements and decisions by users of the information (AAA, 1966, p.1).

Moreover, the impact of accounting was described in the following terms;

... the impact of measurements on human actions. Man appears to be influenced by the type of information he is given and there is a great need to know how different accounting measurements will influence the thinking of decision-makers in society in general (AAA, 1966, p. 70).

Following the development of a conceptual framework (SFAC I, 1978), it may be argued that the decision usefulness focus in use limited the view of accountants to supply of financial information, solely for the use of shareholders and creditors. However, the breadth or otherwise is more in the reading and the interpretation, than necessarily in the construction of the framework itself. For example, although one of the highlights of SFAC I is given as, "Financial reporting should provide information that is useful to present and potential investors and creditors and other users in making rational investment, credit, and similar decisions" (FASB, 1995, p. 2), paragraph 7 of the full version states that:

Corporate annual reports, prospectuses, and annual reports filed with the Securities and Exchange Commission are common examples of reports that include financial statements, other financial information, and nonfinancial information. News releases, management's forecasts or other descriptions of its plans or expectations, and descriptions of an enterprise's social or environmental impact are examples of reports giving financial information other than financial statements or giving only non-financial information (FASB, 1995, p. 8, emphasis added).

Although the view is widely held by both accountants and others that the 'real' business of accounting is reporting to investors, the potential users listed by SFAC I (para 24) is as wide as could be envisaged including the general public. These groups are later referred to as external users, who rely upon general-purpose external financial reporting (para 28). In discussing management stewardship (para 50), the conceptual framework refers to:

... efficient and profitable use and for protecting them to the extent possible from unfavorable economic impacts of factors in the economy such as ... social changes. To the
extent that management offers securities of the enterprise to the public, it voluntarily accepts wider responsibilities for accountability to prospective investors and to the public in general. Society may also impose broad or specific responsibilities on enterprises and their managements (FASB, 1995, p. 22).

The general interpretation of the conceptual framework has been that accounting deals with financial data, and that information is provided for a limited group of users; mainly investors and creditors, but sometimes including managers, suppliers, customers, labor and government. This view is now expanding to include a global perspective, with enlarged stakeholder groups, and a close reading of SFAC 1 shows that this development is not entirely at variance with that document. For some time, corporations have provided large volumes of unaudited information on both social and environmental matters in their annual reports, which address, in a limited way, the information needs of shareholder groups (Ernst & Ernst, 1978; Ingram, 1978). Unfortunately, accountants generally and the leaders of the profession in particular, have not argued strongly enough that this additional information should be produced and audited by members of the profession, so that current annual reports contain information of varying quality and standing. There is an urgent need to address this problem. However, before accountants can respond to these challenges, they need to reconsider the extent to which their professional competence and underlying preparation prepare them for increasingly diverse types of accounting and reporting.

Accounting is not neutral (Samuals & Oliga, 1982; Tinker, 1985), and the changes which have been mooted by the recent environmental literature (see Birkin & Woodward, 1997; Gray et al., 1995; Lamberton, 1998; Lawrence & Cerf, 1995; Lehman, 1995, 1999; Miller, 1998; Neu et al., 1998; Rezaee et al., 1995; Wycherly, 1997) raise a number of questions, such as what is the responsibility of accountants in a dynamic global economy? As professionals who influence the direction of scarce resources, on which resources do we choose to report? Who are our constituents? How do we decide what to measure and disclose? Upon what basic theories can we draw to inform our responsible professional choice? Although all of these questions are important, it is the last of these questions that the body of this chapter will address.

The history of social and environmental accounting research extends back more than 25 years (Mathews, 1997a), and in isolated instances, further than that (Bowen, 1953; Hogner, 1982; Guthrie & Parker, 1989). Environmental accounting issues have been discussed for almost ten years (Gray, 1990), and a number of books and articles discuss what should be done, and what is being done to advance this particular subdisciplinary area (Mathews, 1984, 1993; Gray, Owen & Adams, 1996; Gary, Bebbington & Walter, 1993; Schaltegger et
al., 1996; Epstein, 1996; Barth & McNichols, 1994; Gamble et al., 1996; Rubenstein, 1994; Niskala & Pretes, 1995; Reynolds & Warwick, 1997; Walden & Schwartz, 1997).

In addition to the literature advocating the introduction of environmental accounting, or attempting to record those initiatives which have been taken, a number of contributions have argued in favor of the process of additional disclosures, using such arguments as the need to influence the capital markets, satisfying the need for organizational legitimacy or acknowledging the social contract of business with society (Mathews, 1993). Despite this attention, progress towards the adoption of environmental accounting (including conceptualization, standard setting and audit) has been slow and patchy, with more interest being shown in Europe, the U.K. and Canada than in the U.S. (Perera & Mathews, 1990). The lack of an appropriate theoretical/philosophical basis may be hindering the acceptance of environmental accounting, because professional accountants do not know how to relate the proposed developments to their prior preparation and experience.

The concept of the profession is embedded in social theory. As accounting practice exists in the context of society, it may appropriately be examined and analysed from a sociological perspective (Fogarty, 1995; Dirsmith, Covaleski & McAllister, 1980). Social theory itself presents some alternatives, such as functionalist, (Parsons, 1977), neo-Weberian, or Marxist approaches (Saks, 1988). The functionalist perspective has been seen to be useful for a discussion of the role of accounting (Dirsmith, Covaleski & McAllister, 1980). The functionalist approach to the development of professional groups has been further discussed by Moore (1970). From this perspective, professions are seen as emerging to serve the public good, and in return for the function performed, society accords them a particular status or privilege. The functionalist position is that society will organize to maintain itself, generating various functions to preserve the stability of the social system. Accounting can be viewed as both a communication and a control mechanism (Reynolds, 1989). Specifically, professional accountants, through their professional body, are recognized by the government as representative of society, to serve the needs of society concerning the flow of financial information.

Within social theory, the two basic approaches to understanding professions are power and exchange (Cullen, 1978). The power theory states that professions form to exercise power over others. The exchange theory states that society grants rights to professions in exchange for the performance of unique functions requiring special education. Thus, from the exchange perspective, the accountant as a professional has an ethical responsibility to serve the public good, in exchange for the exclusive right to practice which has been extended
by society. How is this responsibility realized by the professional and the individual within the profession? The answer normally given is via the characteristics of professions and the code of conduct, which the profession develops. Are there no perceived problems with the professionalism of accountants? Zeff (1987, p. 67) argued that their professionalism is "diluted by rule dominated practices." It may also be argued that the failure of the accounting profession and the accounting discipline to respond to the challenge of environmental accounting and reporting endangers their professional status in the medium to long term.

Professions must be concerned about maintaining organizational legitimacy (Dowling & Pfeffer, 1975; DiMaggio & Powell, 1983; Meyer, 1986) and the implied social contract, which subsists between professions and the society which supports them (Shocker & Sethi, 1974). The social contract concept has been well expressed as follows:

Any social institution . . . operates in society via a social contract, expressed or implied, whereby its survival and growth are based on

(a) the delivery of some socially desirable ends to society in general and,

(b) The distribution of economic, social, or political benefits to groups from which it derives its power.

In a dynamic society, neither the sources of institutional power nor the needs for its services are permanent. Therefore, an institution must constantly meet the twin tests of legitimacy and relevance by demonstrating that society requires its services and that the groups benefiting from its rewards have society's approval (Shocker & Sethi, 1974, p. 67).

The concept of organizational legitimacy, which is also a dynamic concept, has been described in the following terms:

Organizations seek to establish congruence between the social values associated with or implied by their activities, and the norms of acceptable behavior in the larger social system of which they are a part. Insofar as these two value systems are congruent, we can speak of organizational legitimacy. When an actual or potential disparity exists between the two value systems, there will exist a threat to organizational legitimacy (Dowling & Pfeffer, 1975, p. 122).

Thus to maintain their professional status, accountants should be responsive to emerging social values, and be seen to provide information which meets emerging needs. It is possible that a professional body could lose legitimacy if public expectation of changed performance was not forthcoming. One possible indicator of this in the international arena, is that the attestation and assurance functions required for International Standards Organization 14000 series certification are not necessarily performed by professional accountants, but rather by consultants and other types of experts. In the present dynamic environment, continuance of previous practices may not be sufficient to
maintain legitimacy, even if the performance related to that practice is maintained or even improved. Legitimacy is a moving target, and if society recognized a need for either different or additional information, then accountants as professionals are expected to provide the needed information.

The continuing public interest, evidence from the Earth Summits of 1992 and 1997, and the development and adoption of ISO 14000 on environmental management and auditing, reflects public concern about environmental degradation in the course of business. Disasters such as chemical and oil spills push the public (and therefore accountants) to become more aware of information needs in accounting for environmental damage (Freedman, 1993). If the professional body and its members do not meet this expectation, then legitimacy will be lost, even if the traditional roles of financial reporting are still upheld.

Internationally, some professional accounting bodies have recognized this problem. Some examples are; the Canadian Institute of Chartered Accountants (CICA, 1993); and the Association of Certified Chartered Accountants (ACCA (1997); and the ICAEW in the U.K. Denmark now requires environmental reports (Rikhardsson, 1996), and New Zealand has moved to a formal requirement in respect of resource consents (Resource Management Act, 1991). The auditing profession, both internal and external, is now aware of the need to include environmental issues in their general overview of enterprise management (Hilary, 1995; Maltby, 1995; Dittenhofer, 1995; Power, 1997; Raynard, 1998; Black, 1998; Tucker & Kasper, 1998). Unfortunately, other professional accounting bodies, including the American Institute of Certified Public Accountants (AICPA), have not yet shown much general support for environmental disclosures, excepting where contingent liabilities and remediation costs are concerned (Gamble et al., 1995; Munter et al., 1996; Stevens, 1996; Walden & Schwartz, 1997). The problem may lie in a lack of appreciation of the dynamic nature of the professional/societal relationship, and the need to maintain organizational legitimacy, as well as the customary professional/client relationship. A framework of ethical and environmental theory can guide the profession in understanding the need for environmental accounting, and this is discussed in the next section.

AN AWARENESS OF ETHICAL AND ENVIRONMENTAL THEORY

Neither accounting nor science are value free activities (Tinker, 1985; Feyerabend, 1975). The very act of reporting means that attention is directed at a particular subject, and future decisions will therefore be influenced (Hines,
In calling for the development of environmental accounting and reporting, academic accountants and other parties are directing the attention of the public policy makers, corporations and their stakeholders, as well as the accounting profession, towards the interactions of the corporate entity with the natural environment in the context of society. As accountants direct the attention of other decision-makers, it is imperative that accountants themselves are ethically self-aware. The accountant is appropriately held to a high ethical standard, and can be helped by the selection of an appropriate ethical framework. A better appreciation of the potential role of the accounting discipline, and the accounting profession, may be gained through discussion of an appropriate ethical framework for environmental accounting and reporting. The accountant as an ethical actor must first be grounded in an ethic; and accountants may then use that ethical understanding to locate themselves within environmental theory. Traditional classifications of ethical theory, such as deontology, teleology and virtue, may provide guidance to the accountant seeking to form an ethical framework for the social responsibility that has been accepted. These are briefly defined below, and related to environmental theory in the following section.

Deontology is defined as the theory or study of moral obligation. Deontologists argue that the rightness of an action takes precedence over the goodness of the act, or the consideration of the outcome or consequence. In the traditional literature, this is exemplified by the work of Kant; the contemporary proponent with the highest current profile would be (John Rawls, 1971).

Teleology is defined as exhibiting or relating to design or purpose. Furthermore, the design or purpose is directed towards an end. The end defines the 'good'. Examples of this are provided by both rule and act utilitarians. Aristotle, among the ancient philosophers, and in the 19th century, Mills and Bentham, have been proponents of this ethical approach. Utilitarians look for the greatest good for the greatest number; the 'amount' of goodness takes precedence over the 'rightness' itself.

Virtue is defined as particular moral excellence, or a beneficial quality or power of something. Virtue focuses on character or quality, rather than acts, and assumes that right or good acts will emerge from good character. Thus, 'being' takes precedence over 'doing', which becomes an emergent quality, and consequences follow from doing.

Traditional ways of thinking and knowing have led accountants to hold a realist philosophy with a largely utilitarian ethical view (Dirsmith, Covaleski & McAllister, 1980). We need to question this position, in the light of the present global environmental concerns and concomitant responsibilities facing accountants.
The theory of justice put forward by John Rawls (1971) provides an ethical theory in the deontological tradition, which is useful for examining environmental accounting issues (Miller, 1991; Lehman, 1995; Malone & Goodin, 1997). The theory of justice may be introduced into the decision-making activities of the accounting profession, since accounting reports and statements are used by corporations and governments to argue in favor of certain courses of action and against others. Accounting is, therefore, part of a moral discourse, and accountants need to consider the rights of the various parties affected by this discourse when determining their professional ethical obligation and behavior. The Rawlsian approach to decision-making involving moral behavior, is to invoke the 'original position'. This is a 'thought experiment', which requires decision-makers to think through all the consequences of the decision to be made, including the potential effects on each party affected by the decision. The principle of the 'original position' requires the decision-maker to select their behavior without knowing which position he/she will occupy, and therefore, how the outcome of the decision will affect him/her (Rawls, 1971).

Accounting has been accused of supporting particular groups and interests in society (Hines, 1988; Tinker, 1985), and ignoring the positions of others that have been affected by the use of accounting information. Accounting has been used as a tool of power by strong parties to influence outcomes (Cooper & Sherer, 1984). Rawls theory of justice forces consideration of the least advantaged members of society, which is congruent with the social contract of the profession. It is also congruent with the position that the accountant owes the highest ethical responsibility to the constituent with the least access to the information (Harris & Reynolds, 1993; Gaa, 1986). Further, Rawls theory can be used to examine corporate use of resources from the perspective of sustainability and therefore, can be used to address concerns of inter-generational equity as well (Lehman, 1995).

The thought experiment approach described above has the result of minimizing the maximum loss of the least advantaged groups. This would lead accounting professionals to take seriously the diversity of individual rights of those groups affected by the organizational activities being reported. Following Rawls, Lehman (1995) has argued that accounting must provide fairness of reporting in a social context and, further, "the inclusion of environmental data in annual reports does more than provide information, it establishes and articulates an accountability relationship between corporation and others (1995, p. 408)." Thus, the needs of groups that require information about the effects of the business entity on the natural environment, would be respected through the inclusion of such information in accounting reports; alternatively,
from a utilitarian perspective, interaction with the environment must be measured and reported, before the greatest good can be determined.

An attempt to develop environmental accounting must consider the natural world (Gray, 1992; Lehman, 1996), economic events and the development of environmental policy. It must be noted that this accounting takes place on three levels: local, national and global. With regard to the environment, it is seen that the global ecological system impacts, and is impacted by, local and national decisions. Accountants intend to meet the needs of the society they serve by constructing reports that reflect the accepted rules of ownership and economic goods. As the accountant has chosen an ethical perspective from which to work, so also must the accountant understand the particular environmental theory to be used before practice can be developed. A theory of the environment must be adopted to provide a framework for the discussion of environmental accounting. It is only by considering both environmental theory and attendant ethical theory that accountants will be in a position to approach environmental accounting from a new perspective. Three approaches have been proposed for thinking about the environment from an ethical perspective: the egocentric, homocentric and ecocentric models (Miller, 1991).

The egocentric model places the focus on mankind. The egocentric approach privileges people over all other beings on Earth. The goal in this theory is the maximization of individual self-interest. People thus dominate the Earth, and may use all resources for their own benefit in any way they wish. Essential to this perspective is the belief that science and technology will provide solutions to all the problems caused by misuse of the environment. Traditional economic theory is most closely aligned with the egocentric perspective, and accounting, which grew out of neo-classical economic theory, has a short term perspective and considers only the self-interest of those individuals who are the financial constituents of the entity of interest. The effects of the entity's actions on those individuals who are not financial constituents of the entity are not incorporated into the realm of accounting responsibility. At this time, financial accounting is seen as the process of reporting only financial information, to a limited group of stakeholders, for their restricted decision making interests. Although society's needs are changing and constituents are more broadly defined, accountants may be reluctant to expand their reporting to embrace environmental accounting.

The homocentric approach recognizes that humans are part of an interactive culture, and that the individual humans must be guided by broader social needs. Thus, in this approach, ethical action must consider the needs of other humans, and future generations, and the consequences of our actions for those individuals. Individuals need to have a sense of responsibility, both to
themselves and to all others. Utilitarianism, which seeks the greatest good for
greatest number, is consistent with the homocentric theory. Attempts to
incorporate information about corporate social responsibilities into accounting
reports, exemplify an expanded understanding of the relevant constituents to
include society as a whole. Attempts to internalize externalities, and thereby
include them in the cost structure and consequently to reduce further
externalities, are also part of a more homocentric environmental theory.

The ecocentric approach expands the realm of environmental responsibility
beyond human life to other forms of life, and to the ecosystem in general.
Humans are seen as individuals situated within an ecosystem (Lehman, 1999).
Rawls theory is useful, because it can be used "to formulate a vision of the
good society that would be concerned about the relationships between people
and nature" (Lehman, 1995, p. 398). Thus, the environment cannot logically be
exploited simply for human gain, regardless of whether the gain benefits all
humans, those currently living, or even a small subset of the whole. Kant's
moral obligation can be seen as congruent with the ecocentric approach. Rawl’s
theory of justice can also be seen as appropriate in this context, and begins to
take into account intergenerational equity and the maintenance of biodiversity.

It is necessary for individual accountants, and the accounting profession in
general, to reconsider their approach to the environment. Unless a move is
made from an egocentric to at least a homocentric approach, accounting will
continue to be part of an exploitative system, which is clearly unsustainable:

Current organisational behaviour clearly does not maintain environmental capital and so
overstates earnings. If diminution of natural capital is factored into the income figure it
seems likely that no company in the western world has actually made any kind of a profit
figure for many years (Gray, Owen & Adams, 1996, p. 74).

Critical natural capital must be protected for future generations. Information, in
its broadest dimensions, serves society best if it pictures fairly all the
interactions of the reporting entity with the economy, society and nature
(Mathews, 1997b). Environmental accounting can only come about through a
change in philosophical approach to the environment.

CONCLUDING COMMENTS

This chapter has considered the links between professionalism, ethics and
accounting for the environment. Professional groups are a part of the control
mechanism used by society to regulate relationships between different groups.
Members of professional groups have many common characteristics, which
earn them social status in return for appropriate conduct, including an altruistic
stance towards society. However, societal expectations change, and professions
have also to change in order to maintain their organizational legitimacy in the
eyes of society; if not, that status will be reduced, and their professional role
may be replaced by another group. At the present time, the professional status
of the accounting profession could be endangered by a myopia, with respect to
the apparent concern with reporting only financial data to a narrow stakeholder
group to enable members of that group to make investment decisions.

Attempts to concern preparers of annual reports with the social and
environmental dimensions of organizational activity have continued for more
than 25 years, the last 10 years involving the growth of environmental
accounting. The production of reports detailing the impact of the organization
on the environment has been limited and localized. Arguments in favor of such
disclosures have included impressing the capital markets, re-establishing
organizational legitimacy and as a response to the social contract of business
with society (Mathews, 1993). These arguments have not been particularly
successful in generating greater interest in these disclosures, despite the
considerable increase in unaudited disclosures of environmental information by
large corporations. What appears to be needed is an acceptance by the
accounting profession that non-traditional disclosures to wider stakeholder
groups are part of the professional field of accountancy.

This chapter has argued that professionalism, if fully developed and
dynamic, should lead the professional accountant to be more concerned with
the wider society. Furthermore, a consideration of ethical theories should assist
the accountant to recognize that the current predisposition of the accounting
discipline to support the strongest parties in society is rather problematic in the
context of a profession.

In considering environmental theory, it is evident that current accounting
practices in the U.S and other Anglo-American accounting countries are based
upon an egocentric view of the environment. To embrace environmental
accounting, it will be necessary for the accounting profession to not only accept
a dynamic view of professionalism, organizational legitimacy, and ethical
responsibility, but also to shift from an egocentric to at least a homocentric
view of the environment (and if sustainability is to be seriously examined to an
ecocentric approach). When these conditions have been achieved, the stage will
be set for an appropriate development of environmental accounting.

REFERENCES

Prerequisites of a Society. Ethics, 60, 100–111. Chicago: University of Chicago Press.
The Association of Chartered Certified Accountants (ACCA) (1997). Guide to Environment and


Canadian Institute of Chartered Accountants (1993b). *Reporting on Environmental Performance.* Toronto: CICA.


The Environment and the Accountant as Ethical Actor


Revisiting Externalities and Exploring the Environmental Account as a Basis for Internalising External Costs

by

M. Reg Mathews
School of Accounting
Charles Sturt University

Abstract:

The inclusion of externalities in the costs of production of goods and services has not received much attention in the accounting literature. This paper considers how externalities may be internalised by either regulation and pricing, pollution permits, eco-taxation, charging for the provision of services by the public sector, or the use of an environmental equity account (after Boone and Rubenstein, 1997).
1.0 Introduction

Interest in environmental accounting began some time ago (Gray et al., 1987; Mathews, 1984, 1993, 1997), recognising that organisations normally only accounted for financial variables and excluded events which were external to the organisation (externalities), or involved interaction with non-contractual parties. Thus, the effects of the organisation on social and environmental variables were not recognised, and were effectively defined out of the accounting equation (Hines, 1988). Early attempts to include social and environmental variables by converting them into a financial form, or producing mixed financial and non-financial accounts failed (Abt, 1977; Estes, 1976) because the attempts at definition and quantification were unconvincing. These attempts to encourage disclosure were somewhat confusing and 'ahead of their time'.

Early theoretical attempts to model the problematic position of accounting in relation to voluntary non-financial disclosures (Mathews, 1984; Gray, 1990) were at least partly concerned with attempts to identify, measure and value externalities, which were usually of a social or environmental nature. Many early contributions to the literature consisted of (i) atheoretical exhortations to encourage the disclosure of additional information; (ii) discussions about externalities and the need to capture, value and internalise the resulting financial measures and/or use taxation to achieve a similar outcome; and, (iii) relatively unsophisticated attempts to 'count heads' in terms of disclosures made by organisations (Ernst and Ernst, 1978, for example).

After some 20-30 years of development, voluntary non-traditional disclosures in annual reports have increased considerably, and there have been many developments in research in this field. The analysis of disclosures and the development of theories which motivate these disclosures (stakeholder theory, legitimacy theory, political economy theory, social contract theory) are now much more advanced (Deegan et al., 2000; Brown and Deegan, 1998; Patten, 1992). The discussion now includes environmental audit by accounting firms, though often without the use of accountants (Power, 1991, 1997). Critical theorists, who were not involved to any extent prior to 1995 (Mathews, 1997) are now offering criticism and comments, although not models or suggested solutions to problems (for example Everett and Neu, 2000).
The author does not suggest that progress in non-traditional disclosures has not been made, or that more information and perhaps better accountability has not been achieved over the past 30 years. However, it is argued that matters which were part of the reformist agenda some time ago, appear to have been deleted over time, not because closure has been reached, or the problems have been found to have no substance, but because other matters appear to have crowded them off the agenda. This paper is an attempt to put externalities back on the accounting agenda, by offering a critical synthesis of the existing literature, and a very basic model intended to achieve some disclosure of additional information together with the internalising of external costs.

2.0 Current Literature

Arguments about the need to identify, measure, value and internalise externalities have not appeared in the accounting literature for several years. Similarly, arguments in favour of using regulations and/or taxation to force the internalisation of costs also appear to have lost momentum. No doubt the reasons for this situation are many and varied. Public opinion in many Western democracies has turned away from centralised regulation and the use of taxation to satisfy macro-goals. Corporations have begun to move away from grossly polluting practices in terms of 'greening' their processes and products and apparently becoming more concerned about influencing a wider stakeholder body (Epstein, 1996). Annual reports often discuss the effect of the organisation on the environment, but these disclosures have been shown to be selective and concerned with responding to issues or events of apparent concern to a limited number of specific stakeholders (Deegan and Rankin, 1999; Deegan et al., 2000).

Discussion in the social and environmental accounting literature has tended to move away from the issue of externalities. For example, Gambling (1974) and Gray et al. (1987) have a number of references, but Gray et al. (1996) has none. Although there are some references to externalities in the discussion of triple-bottom-line reporting (Elkington, 1997, p.76), most of the management oriented literature appears not to have considered external costs to any great extent. Recent publications such as 'A Capital Idea' (Deni Greene, 2001) which was funded by the Australian Commonwealth Government, and 'Business and Society' (DTI, 2001) a UK Government publication, do not refer to externalities at
all, but concentrate on the advantages to business of having social and environmental policies and disclosures. These appear to be attempts to motivate business towards developing wider reporting by emphasising the benefits to be gained by the business, rather than the increased satisfaction of external obligations to society. A major Australian initiative was the publication in March 2000 of a framework for Public Environmental reporting (PER) by Environment Australia on behalf of the Commonwealth Government (Commonwealth of Australia, 2000a) by a consultancy including the Australian Industry Group. The framework was intended to be compatible with the GRI 2000 guidelines. Neither the GRI 2000 Guidelines nor the PER framework refer to the identification, quantification, valuation, and internalisation of the costs of organisational activities in the social and environmental areas. There is a brief discussion in the PER under Future Reporting Trends (Commonwealth of Australia, 2000a, Section 3.9, pp.40-41) where it is stated that:

Better estimates of the true cost of a product or service may provide a drive to reduce costs and hence improve profitability (Commonwealth of Australia, 2000a, Section 3.9.3, p.41).

This is hardly a strong endorsement of the need to recognise externalities because of the damage they may cause to society as a whole. This paper is concerned with various ways of obtaining better estimates of external costs of operation, in particular so that these costs may be internalised in the cost of providing goods and services.

The whole sustainability concept demands that attention be given to the prevention of externalities of all kinds; and costing is a first step towards prevention. Even if corporations were disclosing all the information available about their internal activities, this would still be incomplete without reference to externalities. In other words, the best run and most environmentally well-managed entity must impact the environment by carrying out any activity at all. Some of the likely effects are:

- Employees travel to work, which creates externalities such as traffic congestion, road accidents, and the provision of subsidised public transport.
- Some employees get stressed by their work and require medical treatment within the public sector.
Some employees get hurt at work and require medical treatment, which may involve the use of public funds.

Products and services are delivered leading to transport related pollution, traffic costs and related injuries borne by the public, in addition to the private costs involved.

Product may be discarded at the end of its life; packaging will be discarded at the beginning of the use of the product, leading to costs, which are frequently borne by others than the producers and users of the product.

Despite improved production methods, discharges to land, water and air are still taking place, although increasing pressures to report may be influencing these events.

Production plants often give rise to unsightly buildings, which are a cause of externalities and negative property valuation adjustments imposed on other property owners in the locality.

The public sector frequently provides the infrastructure, which enables private sector organisations to operate, without specific charges being levied to cover the public costs involved. It is assumed that taxation is sufficient to cover the average cost of providing services.

Products and services are being costed without the impact of externalities being factored in, and the purchaser/user of a given product/service may still be subsidised by the general public/taxpayer-specific individuals as the case may be. This subsidisation cannot be avoided unless the beneficiary and the payer groups are coincident, which is unlikely in most instances.

What can be done to alleviate this situation? Most suggestions revolve around prohibition and control (by regulation, policing, audit, and legal action), pricing mechanisms, using the taxation system and/or incentives, the use of pollution permits with either regulatory or pricing mechanisms, or more recently the proposal for environmental equity accounts. The objective, in all cases, is to force an organisation to either cease polluting, or to pay for doing so. In either case additional costs will have to be internalised and borne by the organisation and its customers, and not by the general public. The clear objective would be to ensure that there are no unintended externalities.
These ideas are discussed in the four sections below. The first examines alternatives other than environmental equity accounts, and is entitled Regulation and Pricing. The second section is devoted to the background to environmental equity accounts. The proposed model is presented in the third section, and the concluding comments make up the fourth section.

3.0 Regulation and Pricing

This section reviews a number of possible approaches to dealing with externalities, excluding the use of environmental equity accounts. These include regulation, pollution permits, and taxation systems.

3.1 Regulation

One approach that could be employed is regulation, which would need to be accompanied by standards, policing of disclosures, audit, and prosecution as necessary. A regulatory approach would involve setting standards for the disclosure of environmentally damaging discharges. These would have to be policed, audited, and where appropriate prosecution for infringements would follow leading to financial penalties being levied on the offending organisations. The latter would be internalised, thus raising the cost of production. To avoid incurring financial penalties, the organisation would have to avoid the discharges, if necessary by developing and paying for a more efficient means of production. There could also be specific disclosure requirements for both environmental infringements and penalties in the annual report.

The problems with the regulatory strategy appear to be; firstly, there is the difficulty of getting extensive regulations in place to cover a wide range of pollutants and being able to successfully identify the origin of the discharges. In addition, the cost of policing, audit etc. is going to be high, probably higher than the penalties that could be imposed for the discharges. Nevertheless, in an ideal world the nature and volume of major discharges should be known to the monitoring authorities. Many/all of the techniques/approaches discussed in this section rely upon a reasonable level of data about discharges from individual plants being available. This could include data in annual reports that must be reported to government agencies such as NPI (Australia) or TRI (US). However, this paper is concerned mainly with accounting data whether
internalised in costs or disclosed in annual reports. NPI and TRI data is non-financial and despite the existence of such information and requirements on some organizations to report, there are no requirements for inclusion in annual reports from the professional accounting bodies, government agencies or legislation. It is as though there can be no easy association of accounting and other data, for example successful prosecutions for EPA offences remain unreported in annual reports (Deegan and Rankin, 1996).

Secondly, the prevailing political realities are that although the public does not want discharges of pollutants, they do not want "big" government, and may not like the increased prices which result from the internalisation of pollution costs. Of course, if pollution continues, there are other costs to be borne which may not be monetary but are real nonetheless (higher morbidity rates and lower quality of life for example). There is a need to inform all parties, not only those producing the externalities but also those living with the results of discharges. Media attention results from the more spectacular of problems rather than the lower level of discharge that often accompanies routine industrial activities.

Thirdly, the application of strong regulations does not necessarily result in the cessation of discharges. If organisations cannot produce without discharges, or are prepared to pay the fines in the short term, then discharges will continue. Stronger action such as closing plants down may bring other negative consequences such as unemployment, shifting business offshore or to another area where regulations are less stringent and perhaps lengthy legal battles between producer and regulator. The regulatory approach appears to have a major role only when discharges are sufficiently toxic that they are a danger to the public, or when all other avenues have been considered or tried, and found to be less satisfactory.

3.2 Pollution Permits

Pollution permits have been advocated as one means of dealing with externalities. By permitting a predetermined level of discharges for a given industry (no more than the amount that can be absorbed by the eco-system), society may be able to regulate discharges by specific organisations within the industry. Permits may be donated by a regulatory body, or auctioned/sold, and set at an ongoing or changing
level. The latter would mean a reduction in total discharges if the level were changed downwards over time (a sinking-lid approach).

Pollution permits are mainly used within the United States (Norregaard and Reppelin-Hill, 2000) where they are favoured over eco-taxes, and usually referred to as tradable permits. Their main purpose is seen as a means of pollution control rather than a means of raising revenue or ensuring that externalities are internalised. Norregaard and Reppelin-Hill (2000) have argued that policy makers must be clear about the basic purpose and nature of the system:

- Will the system be set up as an extra measure to meet existing environmental goals? Will the system be designed and set up simultaneously with the setting of environmental goals? What geographic areas will be covered? Will the system be designed to cap overall emissions and permit trade of the right to emit a certain amount of a pollutant - known as a cap-and-trade system? Or will the system permit the trade of a 'credit' that is granted to a seller that proves he has cut emissions below a certain level - known as a credit based system? (p.8).

Once these basic questions have been dealt with there are others related to the 'design features' of the system:

- If a cap-and-trade system is chosen, how will initial allowances be distributed? Will those holding tradable permits be allowed to cut emissions more than required and 'bank' the surplus for future use or sale? Which sources of pollutant emissions will be required or allowed to participate in the system? Should new institutions be created to facilitate trading of the permits? (Norregaard and Reppelin-Hill, 2000, p.8).

The discussion appears to be more concerned with the mechanism of trading than the issues surrounding whether organisations should be polluting in the first place, which is probably why the use of pollution permits gives rise to some strong views, as evidenced by the papers in a special edition of Critical Perspectives on Accounting in 1996. The issue presented a paper by Wambsganss and Sanford (1996) and three critical commentaries by Lehman, Milne and Gibson.
The article by Wambsganss and Sanford (1996) illustrated the problems that may occur when environmental issues are seen as amenable to treatment using standard financial accounting models. The authors proposed that pollution allowances issued free of charge to utilities by the US Environment Protection Agency (EPA) should be treated as donated assets in the books of the recipients, with corresponding increases in contributed capital. When used to compensate for pollution, the book value of the allowances would be entered as part of the cost of production and closed to retained earnings at the end of the period. The authors argued that this would more effectively estimate the costs of pollution in the financial statements, and implement a market solution. The paper brought a strong response from the three commentators.

Lehman (1996) argued that environmental accounting on the basis described failed to tackle the urgencies of the environmental issue. The author asserted that environmental accounting would prove destructive of nature because it does not contextualise the relationship between humanity and nature:

> How we determine the environmental crisis depends on our ideological viewpoint. If it is accepted that pollution is a by-product of human activities, then, it is better that polluters pay some part of the cost. If, however, the preferred alternative is not to pay and not to pollute then providing a mechanism such as "pollution permits" would act against established political structures. (Lehman, 1996, p.675).

Milne (1996) argued that the proposal relied on unacceptably narrow assumptions, implying that utilities and their shareholders own rights to pollute, and that economic efficiency should be the sole arbiter in determining the regulation of environmental resources. Furthermore, it was argued that an analysis of US emissions regulations shows that both assumptions were invalid.

Gibson (1996) argued that reporting pollution allowances was not the real problem in addressing atmospheric pollution, rather the problem was the economic philosophy which attempted to address ecological problems in economic terms. Alternatives to the valuation of permits were explored within both market and non-market frameworks. Clearly, as set out by Gibson (1996), there are alternatives to the use of tradable pollution permits to reduce pollution and reduce environmental degradation.
The angst of the three commentators is understandable since the specific pollution permit scheme described by Warnbergenass and Sanford (1996) did nothing to reduce pollution, or to force any changes or charges on a polluting industry. One of the problems was the donation of the pollution permits by the EPA. Another issue was the lack of any evidence of attempts to reduce polluting discharges through the use of a sinking lid approach.

If the EPA charged for the permits, operators would probably rank their plants in order from least polluting to most polluting, and the older and less environmentally friendly plants would be upgraded or phased out as permitted discharge capacity was used up. The charge would be internalised immediately, however, the reduction in discharges would not be achieved unless a 'sinking lid policy' was also adopted. Under this strategy, regardless of whether the permit was charged for, the maximum discharges by the industry as a whole would be progressively reduced over time. The effect would be to drive out the more polluting plants and reduce discharges, with the costs of replacing older capacity being internalised by the producers. Had these alternatives been under discussion the reactions of the commentators in the previously cited journal might have been different.

An extensive investigation into the use of permits for discharges and greenhouse gas emissions trading has been carried out in Australia (Commonwealth of Australia, 1999a, 1999b, 1999c, 1999d, 1999e, 2000a, 2000b, 2000c). The main issues appeared to centre on the manner by which permits are distributed either by administrative allocation or by some form of sale by auction. Questions of efficiency and equity may be applied to these two alternatives and to the various parties involved. For example, arguments in favour of an equitable allocation of permits based on prior membership of an industry group ('grandfathering') are usually on the basis that:

...it is argued that the affected businesses established themselves in Australia on the basis of a right to emit [pollute].

...Some parties argue that there is a clear property right underlying the original investment. Others argue that while companies do not have an explicit property right to emit greenhouse gases, they have an implicit licence to emit GHGs. The community currently does not charge for this licence. According to this view, government taxes and charges are not
sacrosanct and can be adjusted at any time without compensation. A second argument for administrative allocation is on the grounds of compensation for unanticipated policy changes. (Commonwealth of Australia, 2000b, p.2).

Neither argument takes into account the philosophical positions related to the social contract of business with society (Donaldson, 1992; Shocker and Sethi, 1974; Dowling and Pfeffer, 1975), with most attention being given to the arguments put forward by business interests.

Commonwealth of Australia (2000b) noted that:

In principle, the Government can achieve its equity objectives either by allocating permits by administrative means or by selling them and recycling the revenue in an appropriate way. In practice, however, the first approach would make it difficult to compensate all of the groups identified above, while the second approach faces strong opposition from business (Commonwealth of Australia, 2000b, p.3).

In terms of efficiency, the arguments appear to favour an auction system which would ensure the internalisation of costs which would be passed on to consumers, but also produce revenue which could be used for a number of programmes including possible tax reductions to offset the increased costs. The report concludes with five recommendations:

- Emission permits to be sold annually by the Government at the international price;
- Quarterly payments to be made by companies for these annual permits, with a lag of one quarter;
- A program for recycling all of the revenue from permit sales (less the costs of administering the scheme) to be negotiated mainly between government and business, but with inputs from employee and consumer representatives;
- A revenue recycling program to be embodied in Commonwealth legislation with an agreement that this could not be amended without the agreement of all nine Australian jurisdictions, and;
- The program to run for the five years of the Kyoto commitment period and be subject to renewal as appropriate (Commonwealth of Australia, 2000b, p.11).
It is clear from this literature that the most recent developments in the field of pollution permits are beginning to move towards a position where charges may be made for permits and this would have some effect on the cost structure of discharging industries. However, the success of an auction of permits is far from assured and any administrative system that entrenched the status quo, and did not provide an incentive for the development of true costs of production would not be any improvement. It is also far from clear that pollution permits would cover many industries. Note also that the work referred to does not involve the accounting discipline, and does not address all forms of externalities. The use of pollution permits, even under this revised schedule, may not be sufficient to address the issue of internalisation of externalities.

3.3 Taxation

Although environmental taxation has been a potential means of influencing production and consumption decisions for a long time, in practice there have been few developments. Norregaard and Reppelin-Hill (2000, p.2) have noted that "...policy makers have a choice between two types of economic instruments - environmental taxes and tradable permits - to supplement more traditional policy instruments in the form of direct intervention and regulations (the so-called 'command and control' measures)". Regulation and pollution permits have been discussed above. Taxation issues are discussed in this section.

Environmental taxes are not easy to identify and define with one or more of the following being included:

- Emissions taxes that set their rates according to the amount of emissions and extent of environmental damage - known as 'pigouvian taxes';
- Indirect taxes on production inputs or consumer goods whose use can damage the environment (for example, excise taxes on gasoline);
- Environment-related provisions in other taxes; and
- Accelerated depreciation provisions and lower tax rates for equipment and production methods that save energy and reduce pollution (Norregaard and Reppelin-Hill, 2000, p.2).

46
In practice few countries use green taxes other than with regard to motor vehicles and fuel. In 1995 eco-taxes ranged from 1% of GDP for Mexico and the United States to 4% of GDP for Denmark (Norregaard and Reppelin-Hill, 2000, p.3). In most instances eco-taxes are used to attempt to reduce carbon dioxide emissions by taxing the estimated carbon content of the products emitting this gas. These taxes are described as falling "somewhere in between product taxes and pure emission taxes" (Norregaard and Reppelin-Hill, 2000, p.7) and generally not intended as major revenue raisers. Indeed there is "frequently a conflict between the fiscal and environmental goals of eco-taxes since most eco-taxes aim to eliminate or reduce their own tax bases" (Norregaard and Reppelin-Hill, 2000, p.8).

Simpson and Smith (2001) reviewed environmentally oriented taxation in the UK. Most attention was given to motor vehicles through taxes (attempts to reduce the overall consumption of gasoline and to direct users towards low sulphur fuel), and vehicle excise duty (VED) to make vehicles with smaller engines (and presumably lower emissions) more attractive to major users of road transport.

A different approach is embodied within the Climate Charge Levy (CCL) which was based on the 1998 Marshall Report (Marshall, 1998) and applied from April 2001. This is a tax on business sector energy usage which recognised that approximately 80% of carbon dioxide emissions are not generated by motor vehicles. Climate Change Levies are applied on the industrial consumption of liquified petroleum gas, gas, coal and electricity with an estimated total of £1.75 billion in 1999 (Dilnot et al., 2001, p.62). However, recognising that such taxes may also be damaging to national competitive positions, the CCL is intended to be revenue-neutral. This is to be achieved by offering 80% rebates to those organisations that enter into an agreement over energy consumption reduction measures, and also by reductions to the employer National Insurance Contributions. This is a similar process to that described as revenue recycling (Commonwealth of Australia, 2000b). Simpson and Smith (2001) concluded inter alia that:

Environmental issues are not restricted to motoring, and there is no reason to focus too heavily on a road fuel tax whilst ignoring the damaging effects on the environment caused by other sectors of the economy. In some respects, the government is beginning to address environmental issues in other ways through the
introduction of the climate change levy, although there is still scope for improving incentives for environmentally friendly behaviour in the use of other fuels (p. 68).

It is evident from the brief discussion above that eco-taxes are problematic, and so far little has been done outside of motor vehicle related taxes. The revenue-neutral (revenue recycling) aspect of these taxes would appear to affect the internalisation of externalities, since payments are likely to be offset by the relief of costs in some other areas. However, this adjustment may be necessary in the interests of equity. Corporations which are affected by the taxation of their products or services, and which suffer losses of revenues as a result, may require taxation relief in other areas if their continued existence is considered to be socially desirable.

Commonwealth of Australia (1999e) referred to the use of carbon taxes or charges in both Australia and New Zealand as key policies leading up to the implementation of the Kyoto protocol. The implementation of taxes would constitute an early action approach because they would provide clear and credible signals. However, at the present time environmentally related taxes are not part of the regime in either country.

3.5 Summary of Regulation and Pricing

Thus far the paper has considered three possible strategies for charging externalities back to the organisation responsible for generating them; namely, regulation, pollution permits, and taxation. The application of a strong regulatory framework, together with the necessary policing and enforcement mechanism, is probably not workable in the current political climate excepting where discharges are a danger to public health and welfare. Pollution permits could be useful if applied with a sinking lid or defined reduction in the level of discharges applied to the industry as a whole. It may also be appropriate to require payment for the permits, and not to distribute them free of charge. The general strategy would be to force the industry to voluntarily replace or modify older and less efficient plants and to institute internal drives towards greater efficiency.

Taxation related to environmental variables is relatively poorly developed, and devoted mainly to attempts at reducing the impact of motor vehicles on the environment. The UK has started to apply
Ecotaxes to energy consumption by industry, but in a manner that is mainly revenue-neutral. Ecotaxes that are revenue-neutral would not always increase costs but would identify externalities and would be potentially self-extinguishing.

Table 1
A Summary of Possible Approaches to Dealing with Externalities

<table>
<thead>
<tr>
<th>Method</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulation</td>
<td>Although apparently 'precise' would be difficult to implement because of the many discharges for which standards and regulations would have to be set, the difficulty of identifying polluters, and the need for audit, policing, prosecution etc. in order to levy fines and internalise externalities. Does not necessarily eliminate discharges. Should perhaps be reserved for the worst problems related to health and dangers to society and/or where discharges can clearly be identified as coming from one source.</td>
</tr>
<tr>
<td>Pollution Permits</td>
<td>May be more appropriate where the pollution attributable to an entity may be estimated and apportioned between constituent producers. Pollution permits might assist in reducing pollution and internalising externalities provided that there is a realistic charge for the permit, the proceeds from which are used for remediation. However, discharges will not be reduced unless a 'sinking lid' policy is adopted whereby the total volume of pollutants is reduced over time. This area has received little attention in the accounting literature other than the responses to Wamberganss and Sands (1996). However, there have been a number of significant government working papers based on an economic analysis of pollution permits which examine the equity and efficiency of both administrative and market mechanisms for distributing permits. There are arguments in favour of revenue recycling of permit earnings if the latter approach is taken.</td>
</tr>
<tr>
<td>Taxation</td>
<td>As noted in the relevant section eco-taxes are relatively new and not particularly widely used. They may not be especially important in terms of externalities because they are intended to direct the choices of both producers and users away from one set of choices and towards a different set. As such, if successful they will be self-extinguishing and as currently proposed many are intended to be revenue-neutral. The latter characteristic appears designed to prevent the loss of industrial activity in the taxed country, which would result from the movement of production facilities into a location without eco-taxes.</td>
</tr>
</tbody>
</table>
Table 1 summarises a number of possible strategies, some of which could lead to charges as proxies for the external costs being internalised by the organisation. However, these are either not currently in favour (e.g. strong regulation and enforcement), or seldom experimented with (e.g. pollution permits and eco-taxes). Neither does the elimination of subsidies appear to be part of any political agenda. The next part of this paper outlines an alternative strategy for internalising some costs which could be implemented by existing accounting systems; the Environmental Equity Account.

4.0 Environmental Equity Accounting

The previous section has considered how externalities may be charged to the entity responsible for their generation; by (1) vigorously regulating discharges to force organisations to internalise costs either by purchasing new technology, by paying fines, or in extremis ceasing production, and/or (2) by giving permission to discharge under permitted conditions (financial charges, sinking lid allowances), (3) by the use of eco-taxation. Note that none of these approaches indicates that externalities can be determined in financial terms with any precision, even if physical measurements can be made, and total discharges estimated. Indeed the full cost of discharges to society would include all the effects and their mitigation and remediation, which would be problematic to calculate. Thus, if externalities were internalised but not prevented, there would still need to be public expenditures to mitigate the effects of the discharges.

An alternative approach has been suggested in an attempt to develop financial measurements to fit into a more usual accounting format. This has been called Environmental Equity Accounting by Boone and Rubenstein (1997) and Epstein (1996). Boone and Rubenstein (1997) reported on the use of what they described as "Full Cost Accounting" (FCA), to integrate economic and environmental information with business decisions. They noted that traditionally externalities were not included in the cost or price of products, but borne by individuals or by society at large. Monetised external impacts are those estimated in financial terms, and therefore differing from those which are described quantitatively and/or qualitatively, but are not able to be monetised.
Two main approaches to determining externalities in monetary terms were suggested by Boone and Rubenstein (1997), firstly the cost of control approach using the cost of installing and operating environmental control technologies as an approximation of the value of the externalities removed, and secondly, the damage function approach where environmental and scientific data are incorporated with economic models and methods to estimate external impacts and costs.

The two are described by Boone and Rubenstein (1997) as follows:

The cost of control approach uses the cost of installing and operating environment control technologies as an approximation of the dollar value of externalities incurred. Proponents of this approach argue that the cost of the last unit or highest cost of control under existing environmental standards provides an estimate of the price that society is willing to pay for a given level of environmental protection. The underlying assumption here is that regulators have weighed the cost of the control technologies against society's willingness to pay and the benefits of reduced environmental impact.

In contrast, under the damage function approach, environmental and scientific data and modeling techniques are combined with economic methods to estimate external impacts and costs (Boone and Rubenstein, 1997, p.19).

Epstein (1996) included consideration of monetised environmental externalities in his chapter on capital budgeting systems. He also used Ontario Hydro as an example organisation, where a number of methods of calculating external effects have been examined but not for the purpose of financial disclosures. He observed that:

We can consider measuring environmental costs based on the cost to control pollution before it occurs, the cost to clean up pollution after it has occurred, or the cost of repairing damage to the environment caused by the pollution....Identifying and measuring external environmental costs is important for the environment and likely will be internalized through regulation (Epstein, 1996, p.191).

Boone and Rubenstein (1997) discussed the use of this information in both internal and external reporting and decision making. In terms of the
external reporting system, they suggested that the concept of a financier and a prospector joining forces, with the prospector receiving equity to the value of mining rights, as a basis for suggesting the use of the Environmental Equity Account. In a subsequent example the monetised externalities are based on statistical and scientific analysis and economic modeling arrived at by internal (within company) determination. In the example used, the company does not incorporate externalities among the costs of inputs. However, that feature is seen as an essential part of the process.

Boone and Rubenstein (1997) noted that environmental obligations would not meet the normal definitions of either assets or liabilities, however, this was because of the parameters used in their examples, and the way in which the authors regarded the process as internally generated and limited to the one organisation. The article did not envisage government backing for the inclusion of the Environmental Equity Account (EEA) as part of GAAP. The mechanism envisaged is that the EEA is a part of the ownership accounts:

The Environmental Equity Account is a quasi-ownership interest in the wealth of an enterprise that is based on a non-monetary contribution of material human, intellectual, social or natural capital, essential for the reporting enterprise to remain a going concern (Boone and Rubenstein, 1997, pp.21-22).

Increases in the EEA would have a corresponding entry among the expenses of the operation i.e. externalised costs would be internalised and added to the expenses of production. Boone and Rubenstein (1997) suggested that:

Accountants interested in rendering a real accounting of a company may find that there is a need to develop new rules based on all the resources the company consumes (both privately and commonly held). To do this, they may have to recognize that the environment has the same status as any other factor of production, whether it be land, labour or capital (Boone and Rubenstein, 1997, p.22).

Boone and Rubenstein (1997) did not set out to provide a model to be universally applied, but confined their article to reporting an actual experimental approach by Ontario Hydro. A more generalised model is proposed in the next section.

52
5.0 The Proposed Model

This paper will now attempt to set out a possible extension of the work of Boone and Rubenstein (1997), which could be encouraged by Government agencies, together with professional accounting bodies, generating pressures for the internalisation of a surrogate for externalities by reporting organisations. Using the argument proposed by Boone and Rubenstein (1997) it will be assumed that a realistic surrogate for the cost of externalities may be obtained using the cost of control approach, as determined by expert opinion on behalf of a government agency, and then given support as GAAP by the professional accounting body. This process is similar to the use of government valuers to place 'official' values on properties for the determination of property taxes (or other purposes such as probate). The determination of rateable value, and in some jurisdictions Government value or Quotable Value, for private property is well established. The revaluation of fixed assets by qualified valuers is also part of GAAP in many countries.

The number of assumptions underlying this process might be fewer than would be involved in systems of pollution permits. Furthermore, it would be applicable to a wider range of industries than is normally discussed in relation to permit schemes. The main assumptions would appear to be:

- State of the art technology appropriately operated reduces the level of environmental impact to the lowest level possible at that point in time if the need for the operation to continue is accepted.

- All plant other than state of the art imposes a higher level of impact creating externalities, which may be described as avoidable.

- The difference between the technology of an existing plant and the state of the art alternative replacement may be measured in $ terms and used as the basis for an Environmental Equity Account.

- That if part of the current corporation tax is used to ameliorate the most serious of environmental impacts of corporate activity, then the operation of the EEA may be seen as an offset to part of this taxation.
In this proposal the EEA would be created by the authority of corporation law and the normal double-entry mechanism would be used. The balance of the EEA may be written off as a charge against production, and the cash equivalent paid to an agency responsible for cleaning up and remediating the effects of the pollution caused (since discharges will continue unless the organisation pays for the installation and operation of the technology upon which the cost of control approach is based). If the organisation installs and operates state of the art equipment, pollution would be reduced to the extent possible at that time, there would be no balance in the EEA and the costs will have been internalised. Where the EEA remains as a residual quasi-owners account, the balance would be eligible for the payment of dividends in the same way as other equity holders. The dividends would be paid to the same agency responsible for cleaning up externalities. Where the corporations did not declare a dividend, a figure would have to be imputed by the taxation authorities.

Valuations could be made periodically, perhaps every three years, and any increases over the previous period, presumably caused by changes in output, technology, maintenance of the equipment or operating practices, would lead to higher dividends or capital payments to reduce the balance of the EEA. Management would be able to choose between investing in the technology, paying the dividends, paying off the capital balance of the EEA, or some combination of these alternatives. Payments should not be consolidated with other revenue, but would have to be kept separate for environmental remediation if the system is to achieve an improvement in the condition of the environment. Revenue recycling policies could be used if considered appropriate, to provide an offset against normal taxation imposts.

The double-entry for the creation and extinguishing of a charge to the EEA would follow this sequence:

1. DR Deferred Production Cost
   CR Environmental Equity Account
   To recognise the liability towards the environment.

2. DR Environmental Equity Account
   CR Bank
   To record the payment of the balance of the Environmental Equity Account.
3. DR Production Costs  
   CR Deferred Production Cost  
   To record the transfer of the deferred production cost to the actual production cost.

4. DR Profit and Loss  
   CR Production Costs  
   To record the transfer of costs into the Profit and Loss Account.

This proposal (or one similar to this) would ensure that a figure approaching environmental impact costs would be charged to products and services, either because of write-offs from the EEA, or dividends paid to the agency responsible for environmental cleanup and maintenance. Apart from the contentious issue of a government imposed EEA, the main problem would lie in the initial determination under the cost of control approach. Of course, there would not be an EEA if the producing organisation employed state of the art technology (updated regularly) which reduced any material discharges, which is the objective of any movement to identify, measure, and value externalities. A schematic summary is provided in Table 2 below:

**Table 2**  
**The Steps Involved to Implement the EEA Approach**

1. A Government Agency determines the cost to the environment based on the Control Cost Function approach.

2. This figure is entered in the Balance Sheet as the balance of the Environmental Equity Account.

3a. Alternative One: elimination of the EEA balance requires payment to an agency responsible for remediation work to repair environmental damage. The cost is thus internalised and will eventually be included with all other costs of production. This figure might be offset against corporation tax.

3b. Alternative Two: allow the EEA to remain. In which case a payment related to, say, the level of dividends paid on owners equity is to be made to the same agency. If dividends were not declared then a figure would be imputed by the taxation authorities.

4. Revision of the cost to the environment (i.e. EEA balance) to be made at regular intervals. As the plant becomes older and increasingly behind state of the art technology, the EEA will increase. Therefore, a third alternative would be to replace the plant with the latest available and avoid any addition to the EEA balance for the time being.
Of course, there is no 'correct' answer, only one which attempts to improve what currently occurs. This is no different from other accounting solutions which are negotiated, socially constructed attempts to increase disclosures, identify costs and assist in the making of better decisions.

6.0 Concluding Comments

In recent years large corporations have begun to make more environmental disclosures in annual reports, or in a separate environmental report. Unfortunately, these reports vary in quality and content. They are also voluntary, unaudited, and in many instances produced by personnel with public relations rather than accountability roles. Furthermore, no matter how much effort is put into these reports, and regardless of how good the report really is, the issue of externalities is not addressed within the accounting literature.

This paper has considered a variety of ways that externalities could be identified, measured, valued and thus internalised, where they would become part of the operating costs of the product or service provided. The use of regulations backed by audit and legal action to reduce discharges would be difficult to operate, and may only be feasible in cases of public danger through the toxicity of discharges. The use of pollution permits and thus charges for operations was also considered. Pollution permits, it is argued, only reduce discharges and impose costs which must be internalised if there is a direct charge for the permit and a sinking lid policy of gradually reducing permitted discharges. Eco-taxes appear to be problematic in that as currently introduced they are not likely to result in the charging of externalities over the longer period.

A novel development was the notion of the Environmental Equity Account (EEA) proposed in Boone and Rubenstein (1997). The basic idea was adapted in this paper in a way that the author believes could lead to a mechanism for internalising externalities. Relatively few assumptions would be necessary and estimates of externalities would be determined using the cost of control approach, and organisations would be legally required to carry this figure as an EEA balance unless it was discharged by payment to an agency responsible for mitigating the effects of environmental pollution. EEA balances carried forward would lead to actual or imputed dividend payments, also to be made to the environmental repair and maintenance unit. The author argues that
regardless of the method or methods employed to progress the issue, the current standing of environmental accounting as a voluntary, non-standardised and unaudited activity in the hands of the preparers, with no reference to the internalisation of externalities, should not be allowed to continue. Revenue recycling could be adopted, if this was perceived to be in the public interest, by offsetting EEA discharge payments against other corporate taxation. The author would like to see further debate on this important matter in the academic and professional accounting literature.

References


CORPORATE SOCIAL ACCOUNTING IN AUSTRALASIA*

James Guthrie and M. R. Mathews

This paper surveys completed research work in Social Accounting within Australia and New Zealand and is organized as follows. First, the background to corporate social accounting and reporting (CSAR) is presented, along with international comparisons. Second, we prepare a classification of relevant accounting research into groups of related papers or studies and discuss each group of studies or papers in varying detail, to illustrate chronological sequence and interrelationships. The bibliography is arranged in terms of our classification.

BACKGROUND: CORPORATE SOCIAL ACCOUNTING AND REPORTING

A review of the literature shows a number of attempts at developing a normative theory of CSAR (Overseas: Estes, 1976; Johnson, 1979; Ramanathan, 1976;

*For the purpose of this paper Australasia refers to Australia and New Zealand.

Copyright © 1985 by JAI Press Inc.
All rights of reproduction in any form reserved.

251
Seidler, 1975; and recently within Australia and New Zealand, Mathews, 1982, 1984; Mirza and Bell, 1982; Parker, 1984). In these papers there is no common definition of CSAR, and all authors do not focus on the same type of corporate socioeconomic activity. The literature during the 1970s and early 1980s is filled with fragmented inquiries (Parker, 1984). At present we have not moved sufficiently from the phase of initial individual experiments to the stage of operationalizing and testing of a more general framework (Ramanathan, 1983:29).

Table 1. International Comparison of Corporate Social Accounting and Reporting Surveys

<table>
<thead>
<tr>
<th>Surveys</th>
<th>Robertson</th>
<th>Ernst &amp; Ernst</th>
<th>Trotman</th>
<th>Pang</th>
<th>Guthrie</th>
<th>Guthrie</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number firms included</td>
<td>100</td>
<td>500</td>
<td>100</td>
<td>100</td>
<td>150</td>
<td>150</td>
</tr>
</tbody>
</table>

Disclosure Data

<table>
<thead>
<tr>
<th>Types of Social Data Disclosed</th>
<th>Countries making social disclosures in annual report</th>
<th>Countries making no social disclosures in annual report</th>
<th>Reports not available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental</td>
<td>54</td>
<td>90</td>
<td>69</td>
</tr>
<tr>
<td>Energy</td>
<td></td>
<td>79</td>
<td>42</td>
</tr>
<tr>
<td>Human Resources</td>
<td>45</td>
<td>10</td>
<td>31</td>
</tr>
<tr>
<td>Products</td>
<td></td>
<td>21</td>
<td>54</td>
</tr>
<tr>
<td>Community Involvement</td>
<td></td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Others</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of Information Disclosed</th>
<th>Number of Disclosures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Both monetary and non monetary quantification</td>
<td>n.a. 17 16 20 12 30</td>
</tr>
<tr>
<td>Monetary quantification</td>
<td>2 3 5 4 8</td>
</tr>
<tr>
<td>Non monetary quantification</td>
<td>21 29 20 24 49</td>
</tr>
<tr>
<td>Declarative</td>
<td>60 52 55 60 18</td>
</tr>
</tbody>
</table>

References: Trotman, 1979; Pang, 1982; Guthrie, 1982, 1984; Robertson, 1977; Ernst and Ernst, 1979.
Corporate Social Accounting in Australasia

Despite the lack of a generally accepted theoretical framework for CSAR, an operational definition based on Ramanathan (1976:519), and Jensen (1976:8) can be offered:

Corporate social accounting and reporting (CSAR) is defined as the practice of evaluating, measuring and reporting (both inside and outside an organization) the interaction between the organization's activities and its physical and social environment.

A number of descriptive surveys have been undertaken to examine the extent and nature of current provision of financial and nonfinancial information relating to an organization's interaction with its physical and social environment, as stated in corporate annual reports. These include details of the physical environment, energy, human resources, products and community involvement matters (Ernst and Ernst, 1979). A comparison of some of these surveys is reported in Table 1.

These data show that relatively fewer corporations make CSAR disclosures in Australasia, compared to the latest American survey. Only in the area of human resources is the rate of reporting by Australian companies comparable. Further, the two sets of 1980 results for Australia (Pang, 1980; Guthrie, 1982) show a large variance in reported findings using a similar data base, which highlights an important methodological question associated with these surveys. When comparing survey results, both within Australasia and overseas, there is a danger of error because of differences in definition, survey methods, timing, sample size and selection criteria. One goal of this paper is to present a methodology and procedure that may lead to some standardization so that comparison, in both time series studies and international surveys, can be achieved.

THE ORGANIZATION OF CSAR RESEARCH IN AUSTRALASIA

Research into these matters in Australasia has been uneven. First, a considerable effort was made in the field of employee reporting. More recently, attention has been given to impacts on industrial democracy, surveys to determine reactions of accountants to new ideas, and perhaps belatedly, attempts to derive a classification or normative framework for social accounting work.

The Australasian research to be discussed here is organized in Figure 1 and Figure 2. These figures present a rather simplistic division of the major contributions in various areas. In the case of employee reports the "normative" label is applied liberally to include attitude survey work, a separate classification in the general studies. We now consider briefly the major contributions in each of the areas in chronological order.
Figure 1. Classification of Research on General CSAR Disclosures

<table>
<thead>
<tr>
<th>Empirical</th>
<th>Normative</th>
<th>Attitude Surveys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robertson, 1977</td>
<td>Mirza and Bell, 1982</td>
<td>Anderson, 1980</td>
</tr>
<tr>
<td>Trotman, 1979</td>
<td>Holmes, 1982</td>
<td>Mathews and Heazlewood, 1982</td>
</tr>
<tr>
<td>Trotman and Bradley, 1981</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pang, 1982</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Davey, 1982</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guthrie, 1982, 1983</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Figure 2. Classification of Research on Employee Reporting**

<table>
<thead>
<tr>
<th>Empirical</th>
<th>Normative</th>
<th>Industrial Democracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Webb and Taylor, 1979,</td>
<td>Lewis, Parker and Sutcliffe,</td>
<td>Jones and Blunt, 1981</td>
</tr>
<tr>
<td>1980</td>
<td>1984</td>
<td></td>
</tr>
<tr>
<td>Hussey and Craig, 1979</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Craig and Hussey, 1981</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lewis, Parker and Sutcliffe, 1984</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lewis, Parker, Sutcliffe and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pound, 1983</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Taylor, 1981, 1982</td>
<td></td>
</tr>
</tbody>
</table>
Empirical work in Corporate Social Accounting and Reporting

Robertson, 1977. Robertson reported on the extent and kind of corporate social reporting in New Zealand 1976 company Annual Reports. The definition used for his survey was:

Corporate social reporting involves reflection upon and measurement of the social impact on the communities of a given corporation, its product, its production methods, and its internal and external social programmes. Corporate social reporting is limited to the reporting of events of significant social concern. The social impact of such events, often referred to as "social responsibilities" may be either negative or positive.

The sample consisted of the 1976 annual reports of the top 100 New Zealand companies. Information was categorized into environmental, personnel, community involvement, minority groups, products and "other" disclosures. The kind of reporting was determined by the use of an inventory approach using nonquantitative, quantitative cost, and benefit-cost as categories.

Robertson's results indicated that 54 companies included a reference to social disclosures. By far the most important disclosures were in human resources. Disclosure found was predominantly nonquantitative, with few quantitative disclosures and no attempt at benefit-cost approaches. Robertson produced a useful contribution to the area, but his survey was descriptive in nature and by later standards the study lacked quantification and the methodology was deficient.

Trotman, 1979. Trotman's study consisted of the accounts of the largest 100 companies in Australia. These companies accounted for about 90 percent of the total market value of all listed companies in Australia for each year. Disclosures in 1967, 1972, and 1977 were compared. Trotman chose the same areas as Ernst and Ernst (1979) to represent social disclosures: environment, energy, human resources, products, community involvement and "other." His results showed an increase in disclosure from 26 companies in 1967 to 48 in 1972 and 69 in 1977. The environment and human resources were the most frequently included categories in 1977.

In all three years the proportion of qualitative data (as opposed to either monetary or nonmonetary quantification) was about half of the total disclosure. The extent of the disclosure was measured in terms of average pages per company per report. This was shown to be 0.08 in 1962, 0.30 in 1972 and 0.57 in 1977. The dispersion of values about the mean was not stated.

Trotman compares the Australian results to those produced by Ernst and Ernst in the United States. He draws attention to one of the major difficulties with this type of research—defining the term social responsibility disclosure and, more importantly perhaps, developing classification devices to measure the extent of disclosure. Trotman's study was an important development in the Australian
research into CSAR because it offered comparison over time, comparison with overseas studies, and an emphasis on quantification.

Kelly, 1979, 1981. Kelly used the Ernst and Ernst social responsibility disclosure items from the annual reports of 50 selected Australian corporations over the period 1969–1978. His findings included an increase in reporting over the period, and differences in reporting according to company size and industry classification. Larger corporations tended to disclose more environmental, energy and product related information than did smaller organizations. Primary and secondary industries tended to disclose more environmental and energy related information than corporations engaged in tertiary industries, while the opposite was true of information about community interaction. The sample of 50 companies was constructed with reference to industry classification, size and activity.

In contrast to Trotman (1979) no attempt was made to quantify the extent or type of disclosure except on a “present” or “absent” basis. However, this study was important because statistical tools were used to establish relationships between types and sizes of industries and various aspects of social responsibility disclosures, even though the results are limited because of the small sample size.

Trotman and Bradley, 1981. This study was designed to test statistically a number of specific hypotheses relating social responsibility disclosures to (1) company size, (2) systematic risk, (3) social constraints, and (4) company emphasis on long-term effects of decisions.

The initial sample consisted of the 600 largest companies of the 1,080 companies then listed on the Australian Associated Stock Exchange in 1978. The refinement process resulted in a reduction to 207 companies. Annual reports of these companies were examined for social disclosures in the usual areas. The number of companies providing disclosures was 83, or 40 percent, but data for all 207 companies were used to test relevant hypotheses. The measure of social responsibility disclosures used was a line count giving a proportion of the total discussion of all issues.

Size of company was measured by both total assets and total sales at the 1978 balance date. Systematic risk was defined as the contribution of the individual security to portfolio risk (the security’s beta measurements were taken from the list provided by the Australian Graduate School of Management). Measures of the social pressures faced by companies and management’s decision horizon were obtained from a previous survey by Bradley. The results were tested for statistically significant relationships and showed that:

1. Company size, both total assets and total sales, is significantly associated with social responsibility disclosure. Larger companies are more likely to make social responsibility disclosures than smaller companies. There was also a
positive relationship between the size of company and the amount of information provided.

2. The betas of companies which provided social responsibility data were, on average, higher than those which did not provide such information. However, no significant association was found between systematic risk and the amount of social responsibility data provided in annual reports.

3. There was a significant positive correlation between the amount of disclosure of social responsibility information and the extent of social constraints faced by companies.

4. Companies which provide social responsibility information place more emphasis on the long-term effects of decisions than those which do not provide the information. For those companies which provide data there is a positive association between the amount of this information and the emphasis on long-term developments by company management.

The Trotman and Bradley study is important because of the increased sophistication of its analysis.

Pang, 1982. This study, modelled on Trotman (1979), examined the social disclosure of 100 annual reports of 1980. Pang used the same Ernst and Ernst areas common to all of these studies. Results show that in 1980, 79 of the companies made some social responsibility disclosure. The larger companies disclosed social issues much more frequently than smaller companies, ranging up to 93 percent for those whose market capitalization was A$500 million and above, as compared to 73 percent for those below A$100 million.

The locations of social responsibility information were as follows: a separate report (4); a separate section of the annual report (25); separate headings in various reports (18); coverage as part of other major topics in the annual report (32). Larger companies tended to provide separate disclosures of social activities, whereas smaller companies tended to report such activities together with other matters.

Pang found that there was very little change from Trotman’s 1979 results in the amount of quantitative and non-quantitative disclosure, and in the importance of different disclosure areas.

Davey, 1982. Davey studied the incidence of social responsibility reporting by New Zealand companies in 1982. The study examined the annual reports of a 15 percent random sample of companies listed on the New Zealand Stock Exchange at 31 March 1982. The small size of the New Zealand economy, and the number of listed companies, may be seen from the sample size which resulted. The analysis was performed on the reports of 32 companies, classified as belonging to primary, heavy industrial, manufacturing or service industries. Davey adapted the structure of reporting social accounting information proposed by Dilley and Weygandt (1974). The five categories forming the disclosure tax-
onomy were: inventory approach, cost approach, program management approach, narrative benefit/cost approach, and monetary benefit/cost approach. Attempts were made to identify user groups to whom reports were addressed. These included the staff of the organization, environmental groups, social groups, the firm itself and government agencies.

The elements were measured as "quantitative monetary," "quantitative non-monetary," and "qualitative disclosures." Any evidence of technical attestation in substantiation of claims made in annual reports was carefully noted. Typically, reported items which were used as categories for analysis included employment, pollution factors, corporate objectives, philanthropy, product development, environment, energy and "other."

The volume of disclosures was determined by calculating words as composed of five characters and a one character space (i.e., six characters in total). The quality of information was judged on a subjective basis using the criteria of relevance, consistency, understandability, reliability, freedom from bias, and verifiability. A seven point scale (7 = Excellent) was used for evaluation. Davey provides examples of his use of this scale. Davey did not include photographs in his measure of disclosures but treated tables and figures in the same way as text.

Overall results for the 32 company reports may be summarized as follows. Twenty-seven companies (84 percent) provided some form of social responsibility disclosures. However, only 60 percent (19 companies) devoted 100 words or more to this disclosure. Most reporting was in the employment area (58 percent); for 38 percent of companies, employment reporting was the sole form of disclosure. Corporate social objectives was the only other topic receiving significant attention. No attempt was made to have disclosures audited. The narrative form predominated with few attempts to use financial or non-financial quantification.

Although Davey found that social responsibility disclosures had increased in number and volume since Robertson's 1977 study, the subjective quality scores were relatively low. There was no confirmation of the relationship between the size of the organization and the volume of social responsibility disclosures, or between the type of industry and the disclosures made. This is contrary to the Australian studies of Trotman, Trotman and Bradley and Kelly, and may be the result of the small sample size.

The methodology employed by Davey was an important step forward in the analysis of company accounts for social responsibility disclosures. The main limitations of his study are in the small sample size and the subjective nature of the "quality" measure. Very few reports were judged worthy of a rating greater than 1 on any item. It should be noted that the word measure is not affected by quality rating. However, we do not know how one would evaluate various word measurements if there was a mixture of quality scores across the full 1-7 range.

Guthrie, 1982, 1983. These studies examined the annual reports of a sample of companies in Australia for 1980 and 1983 to determine whether Australian
companies were following a world-wide trend towards disclosure of social information and to analyze the extent and type of activity. These studies offered a rigorous method for analyzing corporate social accounting and reporting including the use of content analysis to measure each firm's disclosures.

Content analysis involves the selection of analytical categories to characterize the content of written material. The distinguishing characteristics of content analysis are that it must be objective, systematic and quantitative. The requirement of objectivity stipulates that variables be defined so precisely that it will allow any item to be judged as either belonging or not belonging to a particular category. These categories must be defined precisely so that independent judges applying them to the same messages can achieve the same results. Using systematic categories and consistent application of the criteria for measurement, the study should be capable of replication with similar results. The second characteristic, that of being systematic, means that the inclusion and exclusion of categories must be done in accordance with applied rules (Holsti, 1969). Each set of related categories should be exhaustive and mutually exclusive, and defined so that assigning an item to a category is not a discretionary process. The third characteristic, quantification, is perhaps the most distinctive feature; it distinguishes content analysis from ordinary critical reading.

To measure the nature and extent of social responsibility disclosure in annual reports the following dimensions were used: (1) Theme, (2) Evidence, (3) Amount, and (4) Location. Krippendorff (1980) and Holsti (1969) describe a number of options available for enumeration in content analysis. Drawing upon their ideas, a method of recording and quantification of the four dimensions was chosen. These methods do not attempt to capture qualitative features of the data, as this is considered to be beyond the bounds of the research.

The following 15 content categories were selected within the four testable dimensions:

1. Theme
   - Environment
   - Energy
   - Human Resources
   - Products
   - Community Involvement
   - Others

2. Evidence
   - Monetary
   - Nonmonetary
   - Declarative
   - None
Two instruments from Guthrie's study were used for data recording. They were an interrogation instrument and specifications for recording. An important part of Guthrie's methodology of content analysis is the ability of the interrogation instrument to be reliable and reproducible. In the words of Kaplan and Goldsen:

The importance of reliability rests on the assurance it provides that data are obtained independent of the measuring event, instrument or person. Reliable data by definition are data that remain constant throughout variations in the measuring process (1965:83-84).

Reliability tests on the research design determine that repeated measures with the same instrument on a given annual report should yield similar results.

Krippendorff (1980:129-154) outlines three goals of reliability tests. They are stability, reproducibility and accuracy. Stability is established by a test-retest situation within the research study. Here, four annual reports were selected and the interrogation device was applied by the researcher twice at a two week interval. The results were then compared and it was found the disagreement was only on one item out of 80, therefore a 0.9875 reliability was recorded. Stability is the weakest form of reliability testing because it only establishes that a recorder is consistent in the use and interpretation of the interrogation instrument and recording instructions at a later time.

The reproducibility test involved the use of two independent judges who were provided with copies of four annual reports, category definitions, coding instructions and the interrogation instrument. The judges were geographically separated and there was a minimum of verbal and written contact among the parties. Each judge was asked to complete the analysis, the results were coded and the appropriate data manipulations applied. Krippendorff's test-retest calculations were then applied, giving a coefficient of 0.821. There have been no standards for data reliability established in content analysis for social responsibility disclosure, but the guidelines discussed by Krippendorff suggest that variables above 0.8 can be considered to be reliable.

The final type and higher order of reliability is that associated with accuracy. This involves comparison with a standard, known as a test-standard. At present
there are no identified standards for social responsibility disclosure and therefore no known correct performances or measures. As a result, this reliability test could not be applied to the interrogation instrument.

The research sample consisted of two data sets representing the general population of corporations comprising the top 50 companies listed on the Sydney Stock Exchange in 1980 and 1983, according to market capitalization. These companies account for a high percentage of the total market capitalization figure of listed companies and in general employ large numbers of people, consume large amounts of energy and have a considerable impact on the social and physical environment.

Results summarized in Table 2 show that 28 (56 percent) of the companies made social disclosures in each year. Most of these companies made disclosures in more than one area, and a majority offered some form of quantification. Human resources was by far the most frequent theme of these disclosures, both quantified and unquantified, in both years.

The majority of companies disclosed their information in the general body of the report, and no company provided disclosures in a separate booklet.

In 1980 there were approximately 42.25 pages of social responsibility disclosure identified in the entire sample, and the average number of pages per

| Table 2. Companies Making Social Responsibility Disclosures, 1980 and 1983 |
|-----------------------------|-----------------------------|-----------------------------|
|                             | 1980                        | 1983                        |
|                             | Number | Percent | Number | Percent |
| Companies making Disclosures| 28     | 56      | 28     | 56      |
| Companies making no Disclosures| 20     | 40      | 22     | 44      |
| Reports not available       | 2      | 4       | 0      | 0       |
| Totals                      | 50     | 100     | 50     | 100     |
| Quantification              |        |         |        |         |
| Both Monetary and Non Monetary| 3      | 10      | 3      | 30      |
| Monetary Quantification only| 2      | 6       | 1      | 8       |
| Non Monetary Quantification only| 11     | 40      | 13     | 49      |
| Declarative                 | 12     | 44      | 5      | 18      |
| Totals                      | 28     | 100     | 8      | 100     |
| Themes                      |        |         |        |         |
| Environment                 | 15     | 30      | 6      | 12      |
| Energy                      | 4      | 8       | 1      | 2       |
| Human Resources             | 22     | 44      | 26     | 52      |
| Products                    | 1      | 2       | 0      | 0       |
| Community Involvement       | 8      | 16      | 8      | 16      |
| Others                      | 4      | 8       | 5      | 10      |
| Totals                      | 54     | 100     | 46     | 100     |

Source: Guthrie, 1982, 1983
disclosing company was 0.68 pages. Similar results were obtained for 1983, with an average of 0.70 pages.

In the 1983 study a new category was introduced into the recording instrument, that of the issuing bad or negative news about any one of the themes. There were 11 negative disclosures in the sample, all dealing with human resources, the results of reductions in staff employed because of retrenchments and reorganizations.

**Normative Work in Corporate Social Accounting Reporting**

*Mirza and Bell, 1982.* Mirza and Bell note the usual arguments for and against reporting social responsibility data, and produce a selection of social performance areas to be reported. They identify three principal approaches to giving meaning to social measures: comparison over time; comparison with standards; and comparison with other firms. They also suggest four possible classifications: single measurement units, monetary measures, nonmonetary quantitative measures, and qualitative measures. They argue that companies can organize systematic disclosures of social information using their taxonomy, the three types of comparison, and the four forms of disclosure.

Several matters requiring further research are noted, including problems in measuring corporate social performance, the cost-benefit effects of social reporting by companies, and the role of the accountant in dealing with these disclosures. This work is a first attempt at developing a normative framework as opposed to reacting to what companies do at present.

*Holmes, 1982.* Holmes deals with a recent report of the Victorian State Government, “Managing the Water Industry: The Accounting Reporting and Auditing Dimension.” Areas covered include discussions of performance measurement criteria, program briefing, and accounting and reporting standards. There is discussion on the introduction of efficiency and effectiveness auditing and other innovative public policy initiatives. The ideas dealt with in the report and the paper could be adopted for use in areas other than the water industry. Indeed, it was intended that there should be a carry over effect into other public operations.

*Mathews, 1982.* Mathews has offered a classification, rather than a normative framework, for the study of social accounting issues. The classification is based upon several distinctions—private sector/public sector, short or long-term time frame, and small or large scale organization—as well as the more familiar one of quantification and non-quantification.

According to Mathews, Social Responsibility Accounting (SRA) refers to disclosure (varying from qualitative to comprehensively quantitative) of organization performance in a variety of areas. It is possible that this area can benefit from normative frameworks (such as Mirza and Bell) and the development of
Standards for disclosure. Total Impact Accounting, in the Mathews classification, would be reserved for the valuation of organizational actions, both positive and negative, in terms of externalities, as that term is used by economists. We should be attempting to value the total impact of the organization on the environment in monetary terms via cost-benefit analysis approaches. This is obviously more difficult than SRA, but how else does the firm justify its existence or society evaluate the continued existence of the firm?

Mathews believes this concept of social accounting is going to be needed in the long-term, and that little work has been done at the theoretical and empirical levels in Australia and New Zealand. Another area in the Mathews' classification is that of Socio-Economic Accounting (SEA) after Linowes and Mobley. This classification has received some attention from academic writers, some criticism (Francis) and very little employment. Similarly there is little attention paid in the Antipodes to Social Indicators Accounting and Societal Accounting.

ATTITUDE SURVEYS

Anderson, 1980. Anderson used a mailed questionnaire to survey the attitudes of 150 members of the Institute of Chartered Accountants in Australia toward social responsibility disclosures. The survey produced a response rate of 26.5 percent of which only 41 percent thought that there was a need for social responsibility disclosures. If a need were established, the great majority (69.2 percent) thought it should be satisfied by voluntary disclosures rather than be a required feature of company accounts; only 10.3 percent endorsed compulsion.

Mathews and Heazlewood, 1982. This work surveyed 560 members of the New Zealand Society of Accountants and obtained a response of 250 (44.6 percent). Overall results were similar to those obtained by Anderson, although perhaps a little more favorably disposed towards social responsibility disclosures. There was agreement that companies should be encouraged to include corporate social responsibility disclosures in published annual reports, but relatively little support for this to be a requirement.

Social responsibility disclosures were thought to be useful to financial analysts, bankers, debt holders and customers. Disclosures should take place in a section of the annual report or the Chairman's report or letter in preference to a separate letter or newspapers and other media. There was some support for the use of mixtures of quantitative and qualitative, financial and nonfinancial, data to report social responsibility issues. There was very little support for audited reports, whether by a public accountant or a specialized accountant. A range of possible disclosure topics were suggested, and support was given to the following in descending order of preference: safety improvements; pollution reduction;
energy usage reduction; community relationships; environmental repair; recycling of waste; personal development of employees; and employee opportunities.

EMPLOYEE REPORTING RESEARCH

This section surveys reports to employees, surveys of employees, and discussions of communication with employees. The studies are reviewed in chronological order, followed by a brief consideration of normative issues.

It is difficult to divide articles in this area between empirical and normative research because very often both elements are included.

Empirical Work in Employee Reporting

Taylor, Webb and McGinley, 1979. This study examined 26 annual reports to employees in Australian companies for the year 1976–77. A wide diversity of style and content was found although most of the quantitative information came from the financial sections of the annual report to shareholders.

Webb and Taylor, 1980. Webb and Taylor examined 15 percent of publicly listed companies producing a separate report for employees (about 120 companies). In a sample of 81 employee reports they found the following items included as indicated below:

| Reference to organization objectives | 35 |
|____________________________________|____|
| A simplified balance sheet           | 47 |
| A funds (or cash flow) statement     | 12 |
| How sales or value-added was spent and/or distributed | 100 |
| Comparative financial information with more than one previous year | 24 |
| Statistical data about production or services rendered | 19 |
| Data about shareholders             | 30 |
| Information on the organization’s future outlook | 15 |

Webb and Taylor comment on the lack of uniformity in the employee reports and on the lack of reports from many organizations.

Hussey and Craig, 1980, 1981. Hussey and Craig (1980) reported the results of a questionnaire survey of Australian employers to provide a profile of employee reporting practices. In 1981 they reported the results of a survey of employees, to find out what they wanted in terms of employee reports. In this study, 1,207 employee questionnaires were processed and 231 interviews con-
ducted. Employees of six public companies and one large semi-government authority were involved in the survey. Some of the more important results are given below:

<table>
<thead>
<tr>
<th>Percent Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Received report</td>
</tr>
<tr>
<td>Read the entire report thoroughly</td>
</tr>
<tr>
<td>Read most of the report</td>
</tr>
<tr>
<td>Glanced at report</td>
</tr>
<tr>
<td>Did not read report</td>
</tr>
</tbody>
</table>

Most occupational groups claimed the reports were either "very easy" or "quite easy" to understand, although 20 percent of clerical and 26 percent of skilled manual workers found the reports "very difficult."

In the section devoted to the degree of interest provoked by the employee report the results tend to correspond to the status of the reader. Among managers, 91 percent rated the report as either "very interesting" or "quite interesting"; 36 percent of skilled manual workers find the reports "of little interest" or "a waste of time." Follow-up interviews with 231 employees showed that they were interested in local issues, future plans, financial information related to the operational sub unit, more frequent reporting, sales information, details of the organization and personal entitlements.

Pound, 1980. Pound carried out an interesting study of 62 employee reports, classified as follows:

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light Shareholder</td>
<td>2–6 pages of financial results</td>
<td>29</td>
</tr>
<tr>
<td>Heavy Shareholder</td>
<td>6+ pages of financial results</td>
<td>13</td>
</tr>
<tr>
<td>Light Newspaper</td>
<td>2–4 pages—part of company paper, limited information</td>
<td>4</td>
</tr>
<tr>
<td>Heavy Newspaper</td>
<td>6+ pages—use of charts and photographs</td>
<td>1</td>
</tr>
<tr>
<td>Cartoon</td>
<td>Glossy, broadsheet, cartoons</td>
<td>9</td>
</tr>
<tr>
<td>Throwaway</td>
<td>Pamphlet or brochure, chairman’s address and little financial information</td>
<td>6</td>
</tr>
</tbody>
</table>

62

After applying the Flesch readability score to both annual report and employee narratives, Pound concluded that reading ease scores of employee reports were higher than those of the company annual report in 75 percent of the cases tested, indicating a more simplistic approach to the presentation of material to em-
ployees. Although annual reports generally require a higher level of educational attainment than employee reports, 89 percent of employee reports require an educational attainment of years 10–12 or better. This means in effect that the annual report would be readily comprehensible to only 8.3 percent of the workforce and that employee reports, although simpler, would still be beyond comprehension of most of their audiences. Although, as Pound indicates, his study refers only to the narrative part of the employee reports, these results are both interesting and disturbing.

Taylor, 1981. This booklet reports on a survey carried out for the Australian Department of Employment and Industrial Relations. The survey involved two main questionnaires, one to chief executives of a wide range of organizations throughout Australia, the other to employees from organizations in the private and public sectors and from various occupations and locations. A total of 214 management and 1,356 employee responses were received, representing response rates of 43 percent and 56 percent respectively. The results of the survey provide a number of impressions about:

- the attitudes and practices of senior management toward employee information sharing;
- the ways employees actually obtain and prefer to obtain information;
- the extent to which management dissemination practices are compatible with employee information needs;
- the information-sharing policies and practices in different types of organizations; and
- the information needs of different categories of employees with respect to productivity-related information, financial statement data, remuneration data, working conditions information, and information about top management issues.

The booklet also provides a discussion of the meaning and scope of employee information sharing as a subset of employee participation. It puts the case for and against employee information sharing and reviews overseas practices in this area.

Lewis, Parker, Sutcliffe and Pound, 1983. This paper sets out to examine what changes, if any, have occurred in the readability of a sample of Australian corporate financial reports to employees for the years 1977 to 1980 inclusive. The paper tests readability using a range of formulae and introduces two techniques previously untried in the accounting literature. Conclusions are drawn concerning the appropriate manner of employment, ease of interpretation, and relative utility of readability formulae in accounting research. Unfortunately, there are no readability formulae for analyzing tables and numerical data, so the study was confined to the analysis of written passages.
This paper examines the literature on financial reporting to employees between 1919 and 1979 inclusive, using a total of 216 publications. The study examines variations in publication interest over time as well as variations in relative interest of accountant/non-accountant groups.

**Normative Work in Employee Reporting**

A number of the articles referred to in the previous section contained some normative aspects. However, very little has been written about the theoretical basis of research and practice in employee reports in Australia and New Zealand.

Craig and Hussey, 1982. This book is the product of five years research conducted by the authors into the disclosure of corporate information to employees in Australia, the United Kingdom and New Zealand. Its aim is to "enable the manager to assess and improve the standard of his own employee communications, by presenting a detailed picture of the current practice in Australia and by helping him to understand employee and trade union attitudes." The announced target audience includes executives with industrial relations, public relations or personnel responsibilities, company secretaries and accountants, industrial editors, trade union officials and students. The interesting questions which this text prompts, from the positivist viewpoint, include more details on what employees would like to receive via such reports (and for what purpose), the impact of company size, industry type and report medium on their responses, and trends in report content over time.

Lewis, Parker and Sutcliffe, 1982. This study provides an excellent review of the literature, more comprehensive in scope than that attempted in this paper. The authors indicate dissatisfaction with much of the research carried out in Australia and New Zealand and provide a research framework to assist future work.

**Work in the Area of Industrial Democracy**

A limited number of researchers have carried out work investigating the connection between accounting (particularly employee reports) and industrial democracy. The volume of work is not large, but this does not seem to be a growing area in Australia and New Zealand.

George, 1978. George drew particular attention to the implications for both financial accounting and management accounting of an increase in industrial democracy. George sees an increase in openness of reporting, as a consequence of industrial democracy. An interesting point is the suggestion that industrial democracy may foster a greater interest in social indicators accounting.

Clarke and Robb, 1981. Clarke and Robb made a study of the use of company reports by trade union officials in New Zealand. Results indicated that trade
union secretaries do not usually receive annual reports or employee reports from companies in which their members are employed. The trade union secretaries did not request annual reports or use them in their work. They did, however, look for reference to future employment opportunities within companies for their members. Unfortunately this study was marred by a low response rate and has not been repeated.

George, 1981. This paper elaborates George's arguments for adapting accounting as a discipline, to moves towards industrial democracy. He demonstrates, through anecdotal evidence, the success of his program of education in basic accounting analysis for trade union shop stewards. George suggests a number of basic accounting ratios which could easily be calculated from published data, whether in the annual report or an employee report. This step he regards as essential to prepare lay people for a more active role in decision-making.

Jones and Blunt, 1981. Jones and Blunt provide the results of a survey of a random sample of 350 members of the South Australian Division of the Australian Society of Accountants. A response rate of 56 percent was obtained. The results were not supportive of industrial democracy since only 28 percent found the concept acceptable. More than half the respondents identified themselves as politically conservative and when questioned about the need for management control, 47 percent wanted "strong," 27 percent "very strong" and 8 percent "total"; only 18 percent wanted less than "strong" control.

In terms of information sharing with employees, 74 percent of respondents would provide either "none" or "medium" amount. The authors conclude: "If the results of this survey are representative there will be serious pragmatic difficulties in introducing industrial democracy and information sharing programs."

SUMMARY AND CONCLUSIONS

Corporate Social Accounting and Reporting

The CSAR research in Australasia has been considered under three heads: empirical research, normative or classificatory frameworks, and surveys of accountants.

It is evident from a consideration of the empirical work that a degree of sophistication is being brought to bear upon the problem of examining published material. Attempts to quantify disclosures and relate the amount and type of social responsibility accounting data to industry size and type have been made separately. The next step is to bring these two activities together in the one study.

Given the relatively recent history of research into social responsibility accounting disclosures in Australia and New Zealand, the authors believe that good
use has been made of overseas techniques. Content analysis and its subsequent reliability testing and recording instruments have been developed specifically around the theme of corporate social responsibility disclosure. Content analysis requires objectivity and the specification of variables so that any item may be judged as falling or not falling into a particular category. Categories are defined as precisely as possible to permit independent judges to apply them to the same message and arrive at the same results. This requires detailed specifications for the recording instructions and an interrogation instrument. Reliability tests are used to see whether repeated measures with the same instrument, on a given annual report, would yield similar results.

More extensive research is required into current reporting practices of not only listed corporations, but unlisted, nonprofit organizations and semi-government instrumentalities. Some form of quality index needs to be developed by which users may measure selected disclosures. Further research could be undertaken to determine the attitudes of corporate managers towards the disclosure of social responsibility information in annual reports. Specific long-term research is required to determine changing disclosure patterns over time. More important, the attitude of various interested groups could be surveyed to identify disclosure categories and the type of information they would consider to be important for inclusion in a list of corporate social responsibility indicators. Further research could be devoted to the identification of potential users and their interest areas. The perceived information needs of users, and level of reporting should be identified before guidelines are established. Further research is recommended towards the examination and production of standards, benchmarks, and criteria in regard to CSAR matters. Increased attention should be devoted to the development of a normative theory of CSAR using an interdisciplinary approach with contributions from other disciplines such as economics, law, management and political sciences.

Employee Reports and Industrial Democracy

A large number of individual efforts have been made in the area of employee reports, which seems to be a separate activity from other social responsibility disclosures. The total result appears to be recognition that employee reports are gaining in use, are not regulated by legislation or any professional body standards, are of variable quality and readability, and may not provide the information the employees are seeking.

Recent attempts to provide a normative framework for both research and practice may assist in the general improvement of this area.

Industrial democracy and its accounting implications form a subdivision of social accounting research and development in Australia and New Zealand. Although those working in the area are enthusiastic, they are not numerous at this stage. The stimuli for developing the employee report may have originated in the
United Kingdom and Europe. This contrasts with the stimulus for developing social responsibility disclosures which appears to have been reports produced in the United States. The development of employee reports may be influenced by economic conditions, which have an effect on employer-employee relations. Consequently, the accounting researcher must be aware of this important outside influence over which he/she has little control.

Conclusions

This survey of aspects of social accounting research has attempted to cover the field by making reference to many of the studies carried out in Australia and New Zealand over the past few years. A number of specific conclusions may be drawn.

Social accounting research has been carried out primarily in Australia, which has a much larger population and consequently a greater number of tertiary education establishments and accounting academics. There are signs of renewed interest in New Zealand as a result of the work of Davey.

The methodology of investigation into the various social responsibility disclosures is now quite advanced. Validity and reliability of analysis, content analysis and the development of indices of information quality are areas to be further examined. Many of the writers whose work is discussed here are concerned about the differences between quality of disclosures and the quality or value of the information disclosed. These issues must be addressed in future studies. Surveys of accountants to determine their attitudes to various new ideas, including social responsibility disclosures, have provided useful information. It has been shown that many New Zealand accountants are favorably disposed towards social responsibility accounting provided that no audit requirement is included.

Employee reports, which in Australia and New Zealand are seen by some as part of the social reporting activities, are becoming more frequent. These reports are frequently open to criticism for inconsistent standards and poor readability. However, the quality of reports may be improving and research in this area should be on a firmer footing as a result of recent additions to the literature outlining normative approaches to this research. Specialist work in the area of accounting and industrial democracy is being developed. At the moment this is a small area and no forecast of future developments can reasonably be made at this time.

There seems to be lack of interest, and consequently effort, in other relevant areas. In general, externalities and their effects are ignored by current research. The public sector has yet to be systematically examined and normative approaches have been neglected. It must not be inferred from the above that social accounting research in Australasia is ineffectual or in disarray. There is considerable enthusiasm on the part of a number of researchers. The production of a
newsletter on all aspects of social accounting, the Social Accounting Monitor, is evidence of a certain level of interest and support. There is an apprehension that the interest in social accounting is cyclical and that the decline of United States interest in this area may eventually lead to a loss of interest in Australia and New Zealand. Only time will show the validity of this concern.

At this juncture in the history of social accounting, there are many different views as to the area covered within its domain. An urgent task is the development of a general framework and a description of the boundaries. Accounting for social change envelopes two extra dimensions of traditional accounting which deal with the legal and economic environment. Social accounting includes the dimensions of the political and social environment as well. In the Social Accounting Monitor we have identified the following broad areas of interest (Guthrie, 1983):

- Public interest accounting
- Social role of accounting
- Accounting and public policy
- Corporate social accounting and reporting
- Social measurement areas
- Social audit functions
- Accountability in the public sector including legal aspects
- Provision for accounting information to employees, trade unions, and development of participative information systems
- Social and political aspects of accounting standards setting
- Human resource accounting
- Relationship of ethics to accounting

BIBLIOGRAPHY

The bibliography which follows has been divided into the same operational areas as those used for specific detailed discussion. Where entries cover more than one area, for example employee reports and industrial democracy, a forced choice has been made.

The classifications used are General; Social Responsibility Disclosures; Survey Work; Employee Reports; Industrial Democracy; and the provision of Classification or Normative Frameworks.

General


Social Responsibility Disclosures


Employee Reports


**Survey Work**


INDUSTRIAL DEMOCRACY


George, G. R. "Reporting to Employees—a wider perspective." Seminar Paper presented to the School of Social and Industrial Administration Griffith University, Queensland: October 1981.


FRAMEWORK, CLASSIFICATION, NORMATIVE


THE CULTURAL RELATIVITY OF ACCOUNTING AND INTERNATIONAL PATTERNS OF SOCIAL ACCOUNTING

M.H.B. Perera and M.R. Mathews

ABSTRACT

This article considers the impact of culture on accounting and specifically on social accounting developments. The study of culture and cultural structures by Hofstede is reviewed, together with the application of these ideas to accounting, particularly in the work of Gray. Explanations were sought of differences in accounting practices in Anglo-American and Continental European countries within the literature on culture and accounting. The area of social accounting, specifically employee and environmental impact reports, is considered. Anglo-American accounting systems are found to be considerably less concerned with the development of employee reporting than those of Continental European countries. The opposite was found to be the case when consideration was given to the disclosure of environmental impact in annual reports. Differences in approaches are at least partly explained by the analysis of cultural effects on accounting. This paper suggests that there is evidence of the need to make allowances for these cultural effects when conducting any type of research into social accounting.
INTRODUCTION

This paper deals with the relationship between culture and accounting, and particularly with the effects of culture on the emerging field of social accounting. Social accounting is an area of growing significance but at the same time is relatively poorly defined. The aspect of social accounting that attracts most attention has been referred to as social responsibility accounting [Mathews, 1984], corporate social reporting [Abbott and Monsen, 1979; Alexander and Bucholz, 1978; Gray, Owen, and Maunders, 1987], corporate social responsibility [Bowman and Haire, 1975; Corson and Steiner, 1974], and corporate social accounting and reporting [Ramanathan and Schreuder 1982], as well as other numerous possible alternatives. The disclosures include employment related information, environmental measures, value added statements, additional segmented information, product related information, and statements of future prospects. The type of reporting envisaged here is aimed at a number of user groups including shareholders, governmental organizations at the national, regional, and institutional level, employees and trade unions, and other groups such as consumers organizations [Lee, 1981; Schreuder, 1981; Schoenfield 1978; Ernst and Ernst, 1972-78; Guthrie and Mathews, 1985]. There are many unresolved issues in this area including the validity of user demands, measurement problems involved, and the criteria for evaluating social costs and benefits [Benston, 1982, 1984; Schreuder and Ramanathan, 1984] where externalities are brought into focus. The term social reporting is sometimes used to represent reporting to society as a whole and yet at other times it is used to represent reporting on social matters to employees of the corporation.

Recent research in the social accounting area has included market studies, philosophical considerations, radical theory, and attempts to develop a structured organization of the area. Little consideration has been given so far to the effects which national and regional cultures and subcultures may have on the development of social accounting.

Market studies have attempted to show that disclosures of socially related information (of one type or another) have an effect on share prices and market returns [Belkaoui, 1976; Spicer, 1978; Ingram, 1978; Stevens, 1982; Shane and Spicer, 1983; Mahapatra, 1984; Freedman and Stagliano, 1984]. The results have been mixed and appear to be strongly influenced by the samples available and the statistical tests employed. Overall, it may be argued that these additional disclosures do have information content for shareholders, as reflected in changes in share prices.

Philosophical considerations include the social contract of business with society [Donaldson, 1982] and organizational legitimacy [Lindblom, 1983]. Externalities have provided the opportunity for a debate which has its origins in value positions [Ramanathan, 1976; Benston, 1982a, 1982b, 1984; Schreuder
and Ramanathan, 1984a, 1984b]. The philosophical-based literature extends financial reporting to encompass parties other than shareholders who might have a "right to know," such as The Corporate Report [ICAEW, 1975].

Critical (radical) theorists have offered alternative and competing views of social accounting as part of an approach to a Marxist restructuring of the decision-making and accountability functions in society [Tinker, Merino, and Niemark 1982; Merino and Neimark, 1982; Cooper and Sherer, 1984; Tinker, 1984]. Much of this literature is intolerant of current social accounting research which is viewed as supportive of the status quo in society (with limited modifications). Critical theorists want to avoid the use of the market mechanism for the allocation of resources, in favor of an administrative solution.

In addition to these attempts to argue why the area of social accounting is important to one or other group of users of accounting reports, a limited amount of research has been carried out on the various dimensions of social accounting. This paper closely defines or delineates the nature of social accounting and thereby provides a structure to be addressed. Attempts to provide structures have included Ramanathan [1976], Mathews [1984], Burke [1984], and Tinker [1984]. The Corporate Report [ICAEW, 1975] also has a number of structural implications.

Although a large volume of published material has argued the case for additional disclosures, provided classifications and structures, and reported on the state of the art [Ernst and Ernst, 1972-78; Guthrie and Mathews, 1985], the rate of development of social accounting has been relatively slow. A number of factors may influence the acceptance of the new ideas that are contained in the various types of accounting which comprise social accounting. These include economic and political conditions, the strength or weakness of the influence of marginal economic values [Tinker, 1984], the influence of the capitalist system and its social reproduction, lethargy, inertia, and the resistance to change often exhibited by the accounting profession. These factors, and many others, comprise the culture of a given country or region or are manifestations of that culture.

It has been demonstrated that the effects of culture may be used to group countries in order to study their accounting systems [Gray, 1985]. International accounting has been marked by attempts at harmonizing accounting techniques and standards and the resistance to harmonization has only recently been identified as culturally related [Perera, 1985]. Although a relatively recent hypothesis, the culture-accounting interrelationship has provided some interesting results. This paper attempts to apply some of these ideas and developments to social accounting. Social accounting researchers can perhaps learn from the experiences of others in the area of effects of culture on accounting.
This paper consists of an examination of the evidence for the influence of culture on financial accounting, and an extension to the field of social accounting. A number of specific examples show how culture may be an unspecified factor in reported research results.

THE IMPACT OF CULTURE ON ACCOUNTING

Introduction

There is a growing amount of research on national systems of accounting focused particularly on the Anglo-American countries—United States, Canada, United Kingdom, Australia, and New Zealand—and continental Europe [Zeff, 1972; Lafferty, 1975; Benston, 1982; Oldham, 1981; Nobes and Parker, 1981; Holzer, 1984]. In the middle 1970s, subsequent to the entry of the United Kingdom into the European Economic Community (EEC) accounting in Continental Europe became a significant research issue, and subsequently a number of relatively detailed studies of individual countries became available. These included Germany [Beeny, 1975] and France [Beeny and Chastney, 1978]. In addition, there were several comparative studies, relatively comprehensive in scope, which covered a wide range of countries: AICPA [1975], covering 30 countries; Price Waterhouse [1973, 1975, 1979], covering 38, 46 and 64 countries respectively; OECD [1980], covering 20 countries; Choi and Bavishi [1982], covering 100 companies in 24 countries; Cairns, Lafferty, and Mantile [1984], covering 250 companies in 33 countries; and Gray, Campbell, and Shaw [1984], covering 20-50 companies in each of the 30 countries concerned. The findings of these studies confirmed the existence of world-wide diversity of accounting requirements and practices and this diversity has been attributed to a variety of environmental factors under which accountants work.

Classification of National Systems of Accounting

As national differences in accounting systems and practices became known to researchers, attempts were made to identify patterns and to classify countries on the basis of those patterns. Two alternative approaches have been taken. The first involves the identification of relevant environmental factors and links them to national accounting practices [Mueller, 1967, 1968; Zeff, 1972; Radebaugh, 1975; Nobes, 1983, 1984]. The second classifies accounting practices using statistical analysis and then attempts to explain the patterns discovered by reference to environmental factors [AAA, 1977; Frank, 1979; Nair and Frank, 1980; Da Costa et al. 1980; Goodrich, 1982; Belkaoui, 1983].
It is interesting to note that many of the classifications developed through these approaches suggest, inter alia, significant differences between Anglo-American countries and continental European countries in terms of their patterns of accounting development. For example, Mueller [1967] identified four categories of accounting in western capitalist countries: (1) accounting in a macro framework, where enterprise accounting is closely linked with national economic policies (Germany, Sweden); (2) accounting based on microeconomic factors, where accounting is regarded as part of business economics (Netherlands); (3) accounting as an independent discipline, where accounting is regarded as a separate service function in business practice (United Kingdom, United States); and (4) uniform accounting, where accounting is viewed as a regulatory device (France). Nobes [1983, 1984] adopted Mueller's analysis as the basis of a classification which divided western capitalist countries and their accounting systems into two broad categories: micro-based systems and macro-uniform systems. Subclassifications were also identified. Micro-based systems were divided into business economics based (Netherlands) and business practice based systems. The macrouniform systems were divided into Continental and government economic-based systems (Sweden). Nobes went on to divide the business practice based group into systems under U.K. influence (Australia, New Zealand, United Kingdom, Ireland) and under U.S. influence (Canada, United States), and the Continental group into tax based systems (Belgium, France, Spain, Italy), and law based systems (Germany).

It can be seen that the Anglo-American countries are grouped as micro-business practice based systems, whereas the European countries, with the exception of the Netherlands, are grouped together as macrouniform systems. The classifications put forward by Mueller and Nobes are shown in Figures 1 and 2. The data on which these classifications were based have been criticized as being defective; however, such criticisms do not materially affect the relevance of those classifications to the present discussion.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting in a macro framework:</td>
<td>Microeconomic factors:</td>
<td>Service function in business practice:</td>
<td>Uniform accounting:</td>
</tr>
<tr>
<td>Germany</td>
<td>The Netherlands</td>
<td>United Kingdom</td>
<td>France</td>
</tr>
<tr>
<td>Sweden</td>
<td></td>
<td>United States</td>
<td></td>
</tr>
</tbody>
</table>

*Figure 1. Mueller 1967*
Figure 2. Nobes 1983-1984
One of the significant outcomes of research endeavors in the comparative analysis of accounting in different countries has been an enhanced awareness of the importance of environmental factors in moulding a country's accounting system. This in turn has led to serious attempts at identifying both the relevant environmental factors and the mechanism by which such factors influence accounting.

Only recently, particularly since the early eighties, has culture been considered as a significant environmental factor influencing accounting. The argument here is that because accounting is a sociotechnical activity it involves dealing with both human and nonhuman resources or techniques as well as with the interaction between the two. Although the technical aspect of accounting is less culture-dependent than the human aspect, since the two interact, accounting cannot be culture-free. It has also been argued that accounting is in fact culturally determined [Violet, 1983]. The relationship between accounting and culture was the theme of at least three recent international conferences: Workshop on Accounting and Culture (Amsterdam, June 1985), AAA Annual Conference (New York, August 1986) [Cushing 1987], and Workshop on Accounting and Culture (Brussels, December 1987).

**ASPECTS OF CULTURE**

"Culture" is not a monolithic concept. It has been defined as: "the total way of life of a people"; "the social legacy the individual acquires from his [her] group"; "a way of thinking, feeling and believing"; "an abstraction from behavior"; "a theory on the part of Anthropologists about the way in which a group of people in fact behave"; "a storehouse of pooled learning"; "a set of standardised orientations to recurrent problems"; "learned behavior"; "a mechanism for the normative regulation of behaviour"; "a precipitate of history" [1973]. In view of the diffusion demonstrated, any attempt to provide an all-encompassing definition would be nonproductive. Culture is to a human collectivity what personality is to an individual.

National culture is the sum of the shared values of members of a nation. However, this does not mean that every individual within that culture behaves in the same way. Culture produces an average pattern of behavior, yet within a national culture, there are also a large number of subcultures. For example organizational culture is identified by the values shared by the members of an organization, and occupational culture consists of the values of those belonging to a distinct occupation such as accounting. We can also identify a generation culture, a class culture, and so on. However, in general, reference is often made to the fact that members of a given culture tend to share social meanings, understandings, values, beliefs, and symbols [Takatera and Yamamoto, 1987]. That is, they subconsciously assign similar interpretations
to events, and think, react, and perceive events in a consistent fashion. This is similar to Hofstede's [1980] definition of culture: "The collective programming of the mind which distinguishes the members of one human group from another" [p. 25].

Hofstede [1983c] observed how the cultural differences between nations, which often appear to share similar frameworks of meanings, values, and symbols, manifest themselves in behavior. For example, the British will form a neat queue whenever they have to wait but the French will not; the Dutch will, as a rule, greet strangers when they enter a small enclosed space (railway compartment, doctor's waiting room, lift) but not the Belgians; Austrians will wait at a red pedestrian traffic light even where there is no traffic but not the Dutch; the Swiss tend to become very angry when somebody, say a foreigner, makes a mistake in traffic, but the Swedes do not. Hofstede concluded that all these manifestations are part of an invisible set of mental programs which constitute these countries' national cultures.

Culture-based behavior patterns, as demonstrated by individuals, are difficult to change unless s(he) is detached from his/her culture. Within a nation culture changes only slowly, particularly because what is in the minds of the people generally enters the institutional arrangements such as government, legal and educational systems, industrial relations, family structures, religious organizations, sports clubs, settlement patterns, literature, architecture, and even scientific theories. All these reflect traditions and common thinking patterns, which, rooted in one culture, may be different in another [Hofstede 1983a].

Prior to 1970, most attempts to understand the determinants of human behavior had a distinctly ethnocentric bias [Triandis, 1980]. Recently there has been an increased interest in cross-cultural research, primarily due to the desire to test the universality of Euro-American psychological theories [Berry, 1975]. Research findings have resulted in the realization that not all the key elements of contemporary psychological theories, such as motivation theory, may be universal. This has led to efforts to determine which aspects of psychological theorizing are truly universal, and which may be valid only in a particular culture area.

A major difficulty in cross-cultural research has centered on the contrast between emic and etic considerations. The emic concept is that cultures can only be understood in their own contexts. Individual features of different cultures have different "cultural meanings," and, hence, they are not comparable. On the other hand, the etic concept considers behavior across many cultures from a universal perspective. As such, etics present culture-free aspects that must operate in at least more than one culture. A potential pitfall is the tendency to use the emic concepts of one culture to explain characteristics of another. Triandis [1980, p. 35] pointed out that this was the case in most cross-cultural research prior to the 1970s.
The study of culture is characterized by another problem arising from the infinite nature of its components. It is essential, therefore, that in analysing the impact of culture on the behavior of the members of any particular subculture, a researcher must select the cultural components or dimensions most pertinent to the particular facet of behavior being studied.

ACCOUNTING AND CULTURE

Recently there has been an increase in interest in applying behavioral ideas to accounting. This has, no doubt, enriched the field and contributed significantly to changing the status of accounting as a purely technical discipline. Research in this area has ranged from consideration of the psychological factors which influence the preparers of accounting statements, to sociopolitical consideration of the role of accounting in organizations and societies. The most recent social science area to be applied to accounting, is cultural anthropology.

A social science orientation of accounting research has led to the realization that some behavior patterns of accountants as well as users of accounting reports were likely to be moulded by culture. For example, Jaggi [1975] attempted to identify the impact of culture on the disclosure of financial information. He argued that the values of managers are an important factor influencing their disclosure decisions, and that such value orientations of individuals in society are, to a great extent, the product of the cultural environment of that society. Jaggi used concepts developed by Parsons and Shils [1950] to identify the different patterns of value orientations of individuals in different countries; “Universalism,” representing a value orientation toward institutionalized obligation to society, and “Particularism,” representing a value orientation toward institutionalized obligation to friendship.

In an attempt to classify countries on the basis of the value orientation of individuals, Jaggi identified countries which possess complex technology, emphasize individual freedom and mobility, and appreciate competition and achieved status as predominantly universalistic. Those countries that are less technical, less scientific, and less urban were identified as predominantly particularistic value oriented. Accordingly, the economically developed countries are categorized under the former group, and the developing countries under the latter. Extending this classification to work situations, individuals in universalistic societies are expected to be impersonal in their relations with other individuals, loyal to the firm, and honor their obligations to society. In the work situation of particularistic societies, individuals are assessed by others primarily in terms of their relations with them, and evaluation in an impersonal and objective manner is rare. Jaggi noted that this kind of impersonal association is also extended to the adult's entire social world, which influences
perceptions of social situations and close personal bonds. He draws support for the argument from management literature [for example, Harbison and Myers, 1959; Haire, Ghiselli, and Porter, 1966]. With regard to information disclosure, it can be argued that managers with universalistic value orientations are likely to be committed to disclosing relatively reliable information compared to those with particularistic value orientations, who are not likely to accept obligations to outsiders or to society. The obligations of the particularistic value oriented managers will be related to family members owning and managing firms with external reporting practices designed to meet legal and customary requirements. This may result in relatively low reliability of information disclosed in financial statements because these statements are not central to the family interests.

Beazley [1968] stated that cultural differences and similarities between countries are likely to explain why people behave differently and that different is not necessarily synonymous with inferior. McComb [1979] expressed a similar view: it is important to try and understand the cultural and structural reasons for the existence of national differences in accounting principles and practices. AlHashim [1973] drew attention to the study of cultural factors as important in determining the attitudes of preparers and users of accounting statements, which are significantly influenced by the environments in which they operate. With regard to corporate disclosure in India, Singvi [1967] and Das Gupta [1977] expressed similar views and both referred to the reluctance of managers to disclose certain information for economic and cultural reasons. Frank [1979] and Nair and Frank [1980] attempted to establish that a close association existed between economic and cultural variables and the classification of countries into groups based on their accounting practices. They concluded that due to economic and cultural differences it may be more difficult for policymakers to achieve harmonization of practices than was previously realized.

In an examination of the suitability of U.S. management accounting concepts to other cultural environments, Seidler [1969] pointed out that American management accounting techniques and concepts, such as responsibility accounting, are based on the assumption that attempts to increase both individual discretion and responsibility in large organizations will be acceptable to both management and employees. He then argued that such techniques and concepts may be both unacceptable and unworkable in many developing countries where drive for achievement and advancement is not strong and employees may not desire additional, or indeed any, responsibility at the price of possible failure.

The implications of motivation theory for accounting have also attracted the attention of accounting researchers. An understanding of the motivational effects of accounting systems and reports is vital for (at least) the following reasons: (1) a major purpose of managerial planning and control systems is
to motivate performance; (2) organizational goals and accomplishments are often stated in accounting terms; and (3) individual performance is often evaluated by accounting measures. However, cross-cultural research has revealed that the problem of motivating people differs from one society to another and, therefore, not all of the key elements of contemporary motivation theory may be universal [Tannenbaum, 1980].

Culture has featured prominently in more recent discussions of the factors influencing the accounting development of a country [Nobes and Parker, 1981; Bromwich and Hopwood, 1983; Choi and Mueller, 1984; Arpan and Radebaugh, 1985; Perera, 1985]. It has also been argued that the lack of consensus on what represents good accounting is because its purpose is cultural not technical. The content of financial reports depends on local history and convention [Hofstede, 1985]. This is probably why the product of accounting—financial statements and reports—sometimes has a shareholder orientation, other times a creditor orientation, and occasionally serves the interests of national planners or public administrators [Mueller, 1985].

It is clear that cross-cultural behavioral research in accounting is likely to provide some explanations about why there are differences in accounting techniques and practices between countries and to answer the question whether the first findings of researchers in one culture can be transferred without modification for effective use in another culture. However, most of what has been written on this subject so far consists of ex cathedra propositions lacking analysis, or of nongeneralizable case studies. Therefore, research efforts should be directed toward developing a theoretical framework to be used in analyzing the issues involved. In this context, research findings on similar issues in other related fields may be helpful. For example, in the field of management, Hofstede has sought to analyze differences in work-related values across cultures. His study was based on data collected through an employee attitude survey in a multinational corporation. The survey took place twice between 1968 and 1973, involving different subsidiaries in 64 countries, and 116,000 questionnaires in 20 languages [Hofstede, 1983a].

Hofstede's Model

In an attempt to develop a commonly acceptable, well-defined, and empirically-based terminology to describe cultures, Hofstede identified four distinct dimensions which he considered reflected the cultural orientation of a country: (1) Individualism versus Collectivism, (2) Large versus Small Power Distance, (3) Strong versus Weak Uncertainty Avoidance, and (4) Masculinity versus Femininity. The main features of each of the dimensions is discussed, followed by a consideration of their implications for accounting.
Individualism versus Collectivism

This dimension relates to the degree of integration a society maintains among its members, or the relationship between an individual and his/her fellow individuals. Individualism represents a preference for a loosely knit social framework in society, wherein individuals are supposed to take care of themselves and their immediate families only; similar to Jaggi's notion of Universalism. On the other hand, Collectivism represents a preference for a tightly knit social framework in which individuals can expect their relatives or other in-group to look after them in exchange for unquestioning loyalty, similar to Jaggi's Particularism.

The identified characteristics of this dimension tend to raise some questions in regard to established theories which have a bearing on management thought in general—for example, the validity of economic theories based on self-interest, and of psychological theories based on self-actualization—because in a collectivist society, preference is given to collective interest and achievement. Some other issues that are likely to become important under this dimension include the nature of the employer-employee relationship, and the priority given in business. In an individualist society, employer-employee relationships tend to be calculative, whereas in a collectivist society, such relationships tend to be morally based. On the other hand, in an individualist society, priority in business is given to task rather than to the relationship as in the case of a collectivist society. Hofstede [1983c, p. 80] concluded that the degree of individualism in a country is statistically related to that country's wealth. Accordingly, wealthy countries tend to be more individualist oriented, whereas poor countries tend to be more collectivist oriented. Japan represents an unique situation in that, although it is certainly among the wealthy countries of the world, it is given a ranking of 29-30 on Hofstede's Individualism vs. Collectivism scale, indicating a much lower degree of individualism as compared to that of the United States or United Kingdom. However, the Individualism/Collectivism dimension would seem to indicate an aspect of clear difference in societal values that exist between countries (see Appendix 1).

Large versus Small Power Distance

This dimension relates to the extent to which the members of a society accept that power in institutions and organizations is distributed unequally. For example, in large power distance societies, people tend to accept a hierarchical order in which everybody has a place which needs no further justification, whereas in small power distance societies, people tend to strive for power equalization and demand justification for those power inequalities that do exist.

The identified characteristics of this dimension tend to draw attention to issues such as whether subordinate consultation is necessary or paternalistic management is accepted. In a large power distance society, subordinate
consultation may not be as important as in a small power distance society, because there is a tendency for its members to accept paternalistic management. The degree of inequality in a society is measured by the extent of power distance. The level of power distance is related to the degree of centralization of authority and the degree of autocratic leadership. Societies in which power tends to be distributed unequally can remain so because this situation satisfies the psychological need for dependence of the people without power. In other words, the value systems of the two groups are complementary. Hofstede [1983c, p. 82] identified a global relationship between power distance and collectivism. Collectivist countries always show large power distance, although individualist countries do not always show small power distance. It is interesting to note that all poor countries are collectivist with large power distance (see Appendix 1).

**Strong versus Weak Uncertainty Avoidance**

This dimension relates to the degree to which the members of a society feel uncomfortable with uncertainty and ambiguity. The fundamental issue involved here is how a society reacts to the fact that the future is unknown—whether it tries to control the future or to let it happen. In the weak uncertainty avoidance societies people have a natural tendency to feel relatively secure, whereas in strong uncertainty avoidance societies people tend to try and beat the future because the future remains essentially unpredictable and there will be a higher level of anxiety. In such societies, there will also be institutions that try to create security and avoid risk. One important way of creating security is through the law and other formal rules and institutions, whereby protection is provided against the unpredictability of human behavior. The existence of a relatively high degree of planning of economic activities in strong uncertainty avoidance societies could also be explained in terms of this value dimension. Religion is another way of creating a feeling of security. All religions attempt to create in the minds of people an expectation of something which is certain.

The identified characteristics of this dimension tend to draw attention, among other things, to the existence of an emotional need for formal and informal rules to guide behavior, the degree of formalization, standardization, and ritualization of organizations, the extent of tolerance for deviant ideas and behavior, and willingness to take risks. There are different patterns of relationship between the degree of uncertainty avoidance and power distance (see Appendix 1).

**Masculinity versus Femininity**

This dimension relates to the division of the roles between the sexes in society. Masculinity represents a societal preference for showing off, achievement, heroism, assertiveness, making money or enjoying material success, thinking big, and so on. Femininity represents a preference for putting relationships
with people before money, helping others and caring for the weaker, the quality
of life, preservation of the environment, "small is beautiful," and so on.

The characteristics identified by this dimension tend to draw attention to
the existence within society of competitiveness as against solidarity, equity as
against equality, and achievement motivation as against relationship
motivation. Career expectations and the acceptability of macho manager
behavior are some of the issues raised by this dimension. On this dimension
there is no identifiable pattern between countries (see Appendix 1).

Gray's Adaptation of the Model

Arpan and Radebaugh [1985] identified a set of cultural factors which are
considered to influence accounting practices: conservatism, secrecy, attitudes
toward business, and attitudes toward the accounting profession. They did not,
however, provide any systematic analysis of the relationships between these
factors and accounting practices. Gray [1985] attempted to develop such a
model by identifying the mechanism by which societal values are related to
the accounting subculture which directly influences accounting practices. Gray
employed Hofstede's culture-based societal value dimensions as the basis for
his analysis. Furthermore, he identified four value dimensions of the accounting
subculture which are also related to societal values: professionalism,
uniformity, conservatism, and secrecy. Professionalism thrives where there is
a preference for the exercise of individual professional judgment and the
maintenance of self-regulation as opposed to compliance with legal
requirements and statutory control. Uniformity exists where there is a
preference for the maintenance of uniform accounting practices between
companies and for the consistent use of such practices over time as opposed
to flexibility to suit the perceived needs of individual companies. Conservatism
exists where there is support for a prudent and cautious approach to
measurement so as to cope with the uncertainty of future events. Secrecy occurs
where there is support for confidentiality and the restriction of information
about the business to only those closely involved with management and
financing functions.

Using Gray's analysis, it is possible to identify certain direct associations
between the values of the accounting subculture and the societal dimensions
of individualism and uncertainty avoidance (Table 1). By extending his
analysis, Gray also classified accounting systems on the basis of each of the
four accounting values (Appendix 2).

Values of the accounting subculture are likely to influence certain aspects
of accounting practice, namely (a) the authority of accounting, (b) its force
of application, (c) the measurement practices used, and (d) the amount of
information disclosed [Gray, 1985]. In particular, the degree of professionalism
preferred in an accounting subculture would influence the nature of authority
Table 1. Direct Associations Between Societal and Accounting Values

<table>
<thead>
<tr>
<th>Values of Accounting Subculture</th>
<th>Relationship with Societal Values</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Positive</td>
</tr>
<tr>
<td>Professionalism</td>
<td>Individualism</td>
</tr>
<tr>
<td>Uniformity</td>
<td>Uncertainty Avoidance</td>
</tr>
<tr>
<td>Conservatism</td>
<td>Uncertainty Avoidance</td>
</tr>
<tr>
<td>Secrecy</td>
<td>Uncertainty Avoidance</td>
</tr>
</tbody>
</table>

Table 2. Relationship Between Societal Values and Accounting Practice

<table>
<thead>
<tr>
<th>Societal Values</th>
<th>Accounting Values</th>
<th>Accounting Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individualism vs. Collectivism</td>
<td>Professionalism</td>
<td>Authority</td>
</tr>
<tr>
<td>Large vs. Small Power Distance</td>
<td>Uniformity</td>
<td>Application</td>
</tr>
<tr>
<td>Strong vs. Weak Uncertainty Avoidance</td>
<td>Conservatism</td>
<td>Measurement</td>
</tr>
<tr>
<td>Masculinity vs. Femininity</td>
<td>Secrecy</td>
<td>Disclosure</td>
</tr>
</tbody>
</table>

for accounting. The higher the degree of professionalism the greater the degree of professional self-regulation and the lower the need for government intervention. The degree of uniformity preferred in an accounting subculture would have an effect on the manner in which accounting is used. The higher the degree of uniformity the lower the extent of professional judgment and the stronger the force applying accounting rules and procedures. The amount of conservatism preferred in an accounting subculture would influence the measurement practices used. The higher the degree of conservatism the stronger the ties with traditional measurement practices. The degree of secrecy preferred in an accounting subculture would influence the extent of the information disclosed in accounting reports. The higher the degree of secrecy, the lower the extent of disclosure. These associations between culture based societal values and accounting systems are shown in Table 2.
However, any given aspect of accounting practice may be influenced by more than one accounting value. For example, the extent of disclosure is likely to be influenced not only by the degree of secrecy, but also by the degrees of conservatism, uniformity and professionalism preferred in an accounting subculture. The higher the degree of conservatism the more prudence will be preferred to disclosure; the higher the degree of uniformity (or the lower the degree of professionalism) the more emphasis placed on compliance rather than disclosure. Therefore, the extent of disclosure in financial reports would seem to differ between countries in line with differences in the value orientations of the preparers of those reports.
On a broader perspective, societal values are affected by ecological influences through geographic, economic, demographic, historical, technological, and urbanization factors, which in turn are influenced by external factors, such as the forces of nature, trade, investment, and conquest. On the other hand, both ecological factors and societal values influence a society's institutional arrangements with regard to the legal and political systems, corporate ownership, capital market, professional associations, education, religion, and so on, which impact upon accounting values and accounting practices. These relationships are shown in Figure 3.

The foregoing analysis suggests some associations between societal values and accounting values (hence accounting itself). Understandably the associations are complex. Tables 1 and 2 and Figure 3 incorporate Hofstede's four variables concerning culture-based societal values:

- Individualism v. Collectivism
- Large v. Small Power Distance
- Strong v. Weak Uncertainty Avoidance
- Masculinity v. Feminity

and Gray's four values of an accounting subculture:

- Professionalism
- Uniformity
- Conservatism
- Secrecy.

Focusing on the relationships between societal values and the accounting subculture (and disregarding for the moment the link between the accounting subculture and accounting), Table 3 could be used to formulate the following specific propositions about those relationships.

**Proposition 1.** The greater the Individualism and the smaller the Uncertainty Avoidance within a society then the greater the Professionalism (or the smaller the Uniformity) exhibited within an accounting subculture.

**Corollary.** The less the Individualism and the greater the Uncertainty Avoidance within a society then the less the Professionalism (or the greater the Uniformity) exhibited within an accounting subculture.

**Proposition 2.** The greater the Uncertainty Avoidance and the less the Individualism within a society then the greater the Conservatism exhibited within an accounting system.
Table 3. Frequency of Publication of Corporate Social Responsibility Information

<table>
<thead>
<tr>
<th></th>
<th>United Kingdom 1982/83</th>
<th>United States 1978</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Environment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Pollution control</td>
<td>10</td>
<td>133</td>
</tr>
<tr>
<td>2. Prevention or repair of environmental damage</td>
<td>7</td>
<td>15</td>
</tr>
<tr>
<td>3. Conservation of natural resources</td>
<td>—</td>
<td>39</td>
</tr>
<tr>
<td>4. Other environmental disclosures</td>
<td>—</td>
<td>46</td>
</tr>
<tr>
<td><strong>B. Energy</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Conservation</td>
<td>16</td>
<td>126</td>
</tr>
<tr>
<td>6. Energy efficiency of products</td>
<td>10</td>
<td>45</td>
</tr>
<tr>
<td>7. Other energy related disclosures</td>
<td>2</td>
<td>29</td>
</tr>
<tr>
<td><strong>C. Firm Business Practices</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Employment of minorities</td>
<td>1</td>
<td>52</td>
</tr>
<tr>
<td>9. Advancement of minorities</td>
<td>26</td>
<td>47</td>
</tr>
<tr>
<td>10. Employment of women</td>
<td>6</td>
<td>49</td>
</tr>
<tr>
<td>11. Advancement of women</td>
<td>—</td>
<td>142</td>
</tr>
<tr>
<td>12. Employment of other special interest groups</td>
<td>11</td>
<td>18</td>
</tr>
<tr>
<td>13. Support for minority businesses</td>
<td>—</td>
<td>18</td>
</tr>
<tr>
<td>14. Socially responsible practices abroad</td>
<td>15</td>
<td>43</td>
</tr>
<tr>
<td>15. Other statements on fair business practices</td>
<td>1</td>
<td>104</td>
</tr>
<tr>
<td><strong>D. Human resources</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Employee health and safety</td>
<td>46</td>
<td>69</td>
</tr>
<tr>
<td>17. Employee training</td>
<td>53</td>
<td>80</td>
</tr>
<tr>
<td>18. Other human resource disclosures</td>
<td>75</td>
<td>32</td>
</tr>
<tr>
<td><strong>E. Community involvement</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. Community activities</td>
<td>13</td>
<td>56</td>
</tr>
<tr>
<td>20. Health and related activities</td>
<td>5</td>
<td>35</td>
</tr>
<tr>
<td>21. Education and the arts</td>
<td>11</td>
<td>70</td>
</tr>
<tr>
<td>22. Other community activity disclosures</td>
<td>7</td>
<td>56</td>
</tr>
<tr>
<td><strong>F. Products</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. Safety</td>
<td>11</td>
<td>42</td>
</tr>
<tr>
<td>24. Reducing pollution from product use</td>
<td>—</td>
<td>22</td>
</tr>
<tr>
<td>25. Other product related disclosures</td>
<td>14</td>
<td>46</td>
</tr>
<tr>
<td><strong>G. Other social responsibilities disclosed</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26. Other disclosures</td>
<td>11</td>
<td>56</td>
</tr>
<tr>
<td>27. Additional information</td>
<td>49</td>
<td>16</td>
</tr>
</tbody>
</table>

**Notes:**
- Analysis of sample of 300 reports used for Financial Reporting 1983-84.
- Adjusted from sample size of 500 pro rata to 300 to provide comparison with United Kingdom [Ernst & Ernst, 1978].

**Source:** Gray, Owen, and Maunders [1986, p. 60].
Corollary. The smaller the Uncertainty Avoidance and greater the Individualism within a society then the smaller the Conservatism exhibited within an accounting system.

Proposition 3. The greater the Uncertainty Avoidance and the less the Individualism within a society then the greater the Secrecy exhibited within an accounting subculture.

Corollary. The smaller the Uncertainty Avoidance and greater the Individualism within a society then the smaller the Secrecy exhibited within an accounting subculture.

As previously stated, these hypotheses were developed from Hofstede's observations and classifications of circumstances in 1968-73. This would seem to suggest an excellent project for further research in this area. For example, under such a project, it would be possible to replicate the above analysis by remeasuring variables to see whether the relationships hypothesized from 1968-73 data still hold in 1990s.

CULTURAL INFLUENCES ON SOCIETAL ACCOUNTING DISCLOSURES

The distinctive nature of the culture of a particular people implies that its programmes may represent alternative solutions to common problems. This may be relevant to an understanding of the wide range of national differences which exist in social accounting disclosure patterns and also in formulating strategies to promote international social accounting disclosures.

Different Cultural Environments: Anglo-American versus Continental European

That the ideas developed in any society are a product of the socio-politico-economic environment can be illustrated by a number of specific examples. The growth of economic activity in the United Kingdom took place in an atmosphere of classical liberalism with a broadly laissez faire approach to government. This was also true of the economic growth that began to gain momentum in the United States in the middle of the nineteenth century. In such a highly individualist atmosphere, the promotion of investment, by trying to interest people with uncommitted funds in various investment projects, became an important activity. Once prospective investors began to assess investment opportunities on the basis of their expected earnings, financial statements that included some kind of earnings figure became a necessity for the functioning of the entire system [Abel, 1971]. This was the background
for the development of capital market activity which is the main source of funds for investment in both countries. The activities of these markets have resulted in continuous pressure being exerted for the provision of financial information for investors, making investors the most important recipients of accounting reports from companies [AICPA, 1973; FASB, 1978]. The pressure for disclosure had a significant effect on the development of accounting principles and practices in these countries and the requirements of the capital markets became a major influencing factor in their disclosure patterns. Furthermore, financial reporting and capital market activity were so closely related that they became interdependent [Barrett, 1977]. Similar developments took place in other Anglo-American accounting countries such as Australia, Canada, and New Zealand. It was assumed that these developments should be implemented by accountants, independent of legal direction or government intervention.

The position in much of Continental Europe is quite different from that already outlined. There has been a tradition of state intervention in economic affairs in both France and Germany. Unlike the position in the United Kingdom and the United States the influence of the classical economists was far more limited in Continental Europe. Instead, there have been a succession of economic theories with a common thread of anti-individualism. Financial accounting in France since World War II is generally influenced by legislation, due mainly to the determination of the French Government to obtain data for macro-accounting purposes. The 1947 Plan Comptable Général (uniform chart of accounts), which has been adopted by virtually all French enterprises, contains a detailed chart of accounts and a series of model financial and statistical reports which are considered necessary for the micro- and macro-accounting purposes. The French plan makes it clear that among its objectives in seeking data on an enterprise are, (a) the promotion of more reliable national economic policies, (b) the minimization of social misunderstandings, (c) ensuring the availability of data for government studies of market trends, and (d) assistance to the government authorities in exercising control over the economy. Furthermore, French companies have traditionally relied much less on an active new issue market as a source of long-term funds than have U.K. and U.S. companies. This has resulted in a lower emphasis being given to the investor-oriented corporate financial reporting and to the audit function as a safeguard for investors. Therefore, the primary influence on the development of accounting principles and practices in France has been the uniform chart of accounts, rather than the pronouncements of the accounting profession. Similarly, in Germany, as demand for industrial capital increased during the second half of the nineteenth century, strong banks, rather than individuals organized by a promoter, emerged as suppliers of a significant portion of that capital.

These environmental differences are reflected in the different approaches taken in those countries with regard to accounting issues. For example, it is widely held that accounting reports should be oriented toward the user's needs
on the assumption that the public interest will be best served by a user orientation. In industrialized countries, the public interest is taken to be synonymous with the interest of the main group that provides capital. However, this group varies from one country to another; in the United States, it is the private investors [Nobes and Parker, 1981, p. 64]; in the United Kingdom, it is the institutional investors such as pension funds and building societies [Lee and Tweedie, 1977, p. 4]; in France, it is the family holdings and the state; and, in Germany, it is the banks [Hopwood and Schreuder, 1984]. The social and cultural differences between these countries can also be seen in the paths they have taken toward the development of social reporting.

Social Reporting:
International Pressures for More Disclosure and National Disclosure Patterns

There has been considerable pressure at an international level, particularly from the UN and the EEC, for greater disclosure with special reference to information which is relevant to employee interests. The 1977 UN proposals highlighted the need to extend the scope of required disclosures beyond purely financial reporting [UN, 1977]. These proposals, although not specifically recommended, favored the production of separate social reports. Areas identified for disclosure were: labor and employment, production, investment programs, organizational structure, and environmental measures.

The fifth EEC directive on employee information and consultation, and the Vredeling proposals for giving information rights to employees of "large" companies (issued in 1980 and revised in 1983) were even more extensive in scope. They required the disclosure of information relating to corporate organizational structure, employment, the economic and financial situation, probable developments in production, sales and employment, production and investment programs, rationalization plans, and plans for new working methods or other methods that could have "a substantial effect" on employee interests. The OECD [1976] also required the disclosure of the average number of employees, categorized by function, together with employment costs showing social security costs and pensions. However, despite these pressures at an international level, for a well chosen program for promoting greater disclosure in social reporting, the extent of regulation at national level tends to be minimal [Gray, McSweeny, and Shaw, 1984] with the notable exception of France, where employee reports are required by law. Since 1977, large corporations in France have been required by law to publish a separate social report (Bilan Social). Detailed information must be disclosed about a wide range of matters including: employment; wages, salaries, and social security payments; hygiene and safety conditions of work; training; and trade union activities. The emphasis is on the impact of the corporation on employees. The
extent of voluntary disclosure is significant and growing in other European
countries such as Germany, the Netherlands, and Sweden, where additional
special employee reports are often provided [Schoenfeld, 1978; Schreuder,
1979, 1981]. Information relating to employees is also required to be disclosed
by U.S. and U.K. companies but the instances are fewer and the required
disclosures are relatively minimal.

Some Specific Examples of Differences in Reporting Practices

Employee Reporting

The Continental European countries seem to be much more advanced in
regard to "social" or "employee" reporting, at both institutional and practical
levels than the Anglo-American countries. This can be explained to some extent
in terms of their different cultural environments. Systems usually develop
unique characteristics as a result of both internal and external pressures.
Pressure groups and institutional influences which are active in developing
social disclosures in industrialized countries generally include employees and
trade unions, shareholders, community leaders, environmentalists,
consumerists, idealists and moralists, professional guidelines and
pronouncements, and legislation and regulation. In a given country some of
these will be more prominent than the others, and the emergence of pressure
groups and institutional arrangements is likely to be influenced by its cultural
background. As clearly demonstrated elsewhere by historical development and
also by Hofstede's analysis of culture, the United Kingdom and United States
are both oriented toward individualism, whereas France and Germany are
relatively less individualist and more collectivist oriented (see Appendix 1 for
specific data). It is interesting to see how the pressures for social disclosures
have varied between these two groups of countries. Employees have been a
powerful force in France and Germany whereas consumerists and
environmentalists have been predominant in the United States and the United
Kingdom, although recent changes in the relationship between the United
Kingdom and Europe may be expected to affect these positions in the longer
term.

Industrial Democracy

In the collectivist oriented cultures of Continental Europe, industrial
democracy or worker representation on boards of directors has provided a co-
determination framework for corporate performance and disclosures. As a
result, employees have been a powerful force [Gray, Owen, and Maunders,
1987]. By contrast, in individualist cultures, the relationship between the
employer and employee is a business relationship based on the assumption of
mutual advantage. Either party can terminate the relationship in favor of a
better deal elsewhere. In classical economic theory which was largely responsible for moulding the individualist cultural thinking, employees are "labour," a "factor of production," and "part of a labour market." They are not regarded as important contributors to decision making by the organization management. This is why employee and union pressure in North America has been relatively insignificant in terms of claims for additional disclosures. For example, when top-ranking officials of each of the 20 largest Canadian unions were surveyed in 1984 about industrial democracy, they did not agree that workers should be represented on boards of directors and doubted that this would become widespread by 1994 [Brooks, 1986]. Therefore, contrary to the European experience, social disclosure developments in the United States and Canada have developed from other forces such as environmentalists, consumerists, and idealists. Also, in the United Kingdom, the issue of expanded social reporting has not met with rapid acceptance, partly due to the current value accounting debate which has tended to retain the forefront of disclosure proposals and partly the result of political shifts following the 1979 election [Gray, Owen, and Maunder 1987].

The situation in Japan is different. Although Japan scores as the most collectivist amongst the industrialized countries (see Appendix 1), the relationship between employee and employer has a moral component. On the side of the employer, protection of the employee is maintained, almost regardless of the latter's performance in the workplace. In return, the employee is loyal to the employer to the point where changing employers is often socially disapproved. Under these circumstances, because companies' have traditionally assumed a protective role toward employees, they are not pressing for more information [Estes, 1977, p. 2]. Therefore, unlike the position in Europe, the collectivist orientation of Japanese culture has exerted a negative effect on employee reporting. On the other hand, as Triandis [1980] points out, achievement and affiliation in workplaces tend to be negatively correlated in the western industrialized countries, but positively correlated in Japan. Furthermore, the attitude toward culture itself is dependent on culture. For example, the collectivist environments find culture a natural control approach, thereby reinforcing existing relationships, while in strong individualist environments such as the United States, culture's importance and efficacy are underplayed leading to a resistance towards research demonstrating the importance of culture as a variable.

Environmental Disclosures

In contrast to the position on employee reporting there is some evidence of a greater concern for environmental matters in North America. Tinker [1984] has referred to the Love Canal scandal, Wiseman [1982] and Rockness [1985] have examined the veracity of corporate disclosures on environmental matters,
and the Ernst and Ernst [1972-1978] studies of disclosures by Fortune 500 companies showed that considerable attention was given to environmental matters. A summary of the 1978 survey is shown in Table 3, which also incorporates similar data from U.K. studies.

The categories provided show a wide range of disclosures, in contrast with Continental European reports which emphasize employee matters almost exclusively [for example, Deutsche Shell as reported by Schreuder, 1979]. Although the Ernst and Ernst studies show some human resource disclosures, in addition to those connected with the employment and advancement of minorities and women, they are proportionately underrepresented in comparison with categories such as environment, energy, and community involvement. The later U.K. study carried out by Gray, Owen, and Maunders shows that compared with the United States, U.K. companies have a higher proportion of disclosures relating to employees; nevertheless, there are disclosures in all the categories other than Human Resources.

Brooks [1986] provided a useful analysis of the issues addressed in corporate social reports. The results, presented in Table 4, show the different emphasis which has already been noted. Studies of corporate social reports originating in West Germany, Austria, and Switzerland show an overwhelming concern for the human resources category of disclosure compared to those from the United States. Human resources related material in U.S. reports has been divided into different categories by Brooks [1986, p. 213] and the nonmonetary verbal disclosures do not appear in the table. Australian company disclosures are divided between most of the categories used.

A number of attempts have been made to link the provision of environmental information, whether supplied by the reporting organization or an outside body such as the Council for Economic Priorities (CEP), with changes in the market price of shares [Stevens, 1982; Spicer, 1978; Shane and Spicer, 1983]. This work follows the general trend of the individualist, market related cultural features, to which we have already shown in Table 2.

Conversely, the discussion of the measurement and valuation of externalities has been contested by several academics [Benston, 1982, is probably the best known example] on the grounds that shareholders would be forced to pay for additional information which they would not want. The same view would be put forward in relation to other social disclosures.

Institutional Requirements and Uncertainty Avoidance

It is also clear that European companies are much more subject to institutional requirements for social disclosure than are their North American counterparts. This may also have a cultural basis because the extent to which people feel that behavior should follow fixed rules differs from one culture to another. It is important to note here that the Continental European
### Table 4. Issues Addressed in Corporate Social Reports

<table>
<thead>
<tr>
<th></th>
<th>Two-Year Period</th>
<th>One-Year Period</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>West Germany</td>
<td>Austria</td>
</tr>
<tr>
<td>General personnel policy</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>Size of workforce, distribution, changes</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Employment of foreigners</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Labor costs</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td>Working conditions</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Training and development</td>
<td>15</td>
<td>6</td>
</tr>
<tr>
<td>Fringe benefits—general</td>
<td>19</td>
<td>10</td>
</tr>
<tr>
<td>Employer health services</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Company pension plans</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>Company housing</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>Employee ownership of property</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Labor representation</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Communication with employees</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Communication involvement</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Environment</td>
<td>19</td>
<td>1</td>
</tr>
<tr>
<td>Energy</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Product related matters</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Research and development</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Stockholder relations</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Fair business practice</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

**Notes:**
- NA = not available.
- *U.S.* statistics do not include 180 companies with only nonmonetary verbal disclosures.
- *Subsequent to the survey date, the FASB required research and development disclosure.*

**Source:** Brooks [1986], p. 213.
countries—in particular France and Germany—are high on the Uncertainty Avoidance scale, whereas Anglo-American countries are relatively low on the same scale (Appendix 1). The characteristics of the Uncertainty Avoidance dimension reveals that in cultures which are high on the scale, behavior tends to be more rigidly prescribed, either by written rules or by unwritten social codes; the presence of these rules satisfies people's emotional needs for order and predictability in society, and people feel uncomfortable in situations where specific rules are absent. Although there will be written and unwritten rules, people are able to live comfortably in situations where specific rules are absent in cultures low on the scale. Therefore, in general, one can expect more formalization and institutionalization of procedures in strong uncertainty avoidance societies than in weak uncertainty avoidance societies.

Figure 3 shows some direct association between societal values and accounting values. Accordingly, a high level of individualism in a society will have a positive effect on the degree of professionalism and negative effect on the degrees of uniformity, conservatism, and secrecy preferred in the accounting subculture. A strong uncertainty avoidance in a society will have a negative effect on the degree of professionalism and positive effects on the degrees of uniformity, conservatism, and secrecy preferred in its accounting subculture. The former represents the situation in Anglo-American countries while the latter conditions apply in continental European countries, particularly France and Germany. For example, as described elsewhere, there is a preference for the exercise of individual professional judgment, the maintenance of professional self-regulation, and flexibility in accordance with the perceived circumstances of individual companies in the accounting subcultures of Anglo-American countries. On the other hand there is a preference for compliance with prescriptive legal requirements and statutory control, the maintenance of uniform accounting practices between companies, and the consistent application of such practices over time, in the accounting subcultures of continental Europe. Also, there is more support in the former group for a prudent and cautious approach to measurement to cope with the uncertainty of future events and the confidentiality of the information by restricting disclosures to only those involved with the management and financing of the organization. These characteristics in turn tend to influence the degree of disclosure expected in the respective accounting systems or practices. For example, in France and Germany, where the level of professionalism is relatively low and the preference for conservatism and secrecy is relatively high, the combined effect on the degree of disclosure will be negative. On the other hand, the collectivist or nonindividualist values of the society require business enterprises to be accountable to society by way of providing information, therefore, it becomes necessary for the government to intervene and lay down certain disclosure requirements, including those in regard to social accounting, in particular employee reporting. Furthermore, this situation is not likely to
be rejected by the accounting profession, because as discussed earlier, there is a preference for compliance with prescriptive legal regulation and statutory control in the accounting subculture. By comparison, in the United States and United Kingdom, although the relatively high level of professionalism and the low level of preference for conservatism and secrecy tend to have a positive combined effect on the degree of disclosure in accounting practices, the individualistic values of the society are more concerned with the provision of information to shareholders or investors than with those issues involving accountability to society at large. The fate of the recommendations in The Corporate Report would support this position.

CONCLUDING COMMENTS

This paper has explored the recent work on the effects of culture on accounting and the implications for social accounting, as a developing area within the accounting discipline. Social accounting has been the subject of a number of examinations in the recent past including empirical studies about disclosures which demonstrate changes over time within the one social system (Ernst and Ernst) and differences between different social systems at the same time [Brooks 1986].

The study of the impact of culture on accounting has a relatively short history and has not yet been extended to the developing area of social accounting. This paper is a first attempt and deals only with macro groupings on a limited basis, namely Anglo-American accounting and that practiced in Continental Europe, particularly in the area of employee reporting and environmental disclosures. No attempt has been made at this stage to consider differences within the major groups such as those between the United States and Canada and the extent to which the United Kingdom approach is moving toward that of Continental Europe as a result of that country's entry to the EEC.

The application of the work of Hofstede [1983] and others to the field of international accounting differences [Gray, 1985] is worthy of a further extension to the social accounting field and should not be ignored by social accountants working in both empirical and normative-deductive domains.

(Appendices follow)
Book Reviews:
A Limited Review of the Green Accounting Literature
M.R. Mathews
Massey University, Palmerston North, New Zealand

Introduction
Until recently the accounting literature has not given much attention to attempts to classify, record and measure externalities, such as the effects of pollution, or the inappropriate use of non-renewable resources. The debate about sustainable development has been within the economics and environmentalist literature; most accountants have ignored these issues and in turn those concerned with environmental matters have ignored the potential contribution of accountants (Dickson, 1975; Elkins, 1986; Fisher, 1981; Goldsmith et al., 1972; Lovelock, 1979; O'Riordan and Turner, 1983; Rees, 1985; Schumacher, 1973; Turner, 1988; all provide valuable insights). Of these references, only Goldsmith et al. would make any use of social accounting. A recent research study on the future of accounting makes little reference to either the opportunities or the responsibilities of accountants, or their discipline, in environmental matters (Hopwood, et al. 1990).

Within the accounting literature early material relating to environmental matters includes a number of normative-deductive discussions which debate the use of additional disclosures and recommend further research (for example, Estes, 1972; Mathews, 1984; Ramanathan, 1976). Other theoreticians have taken an opposing view and argued against the involvement of accountants in the measurement of additional social variables (for example, Benston, 1982a, 1982b, 1984).

A third group, the critical theorists, have argued that the accounting profession has adopted the value position of marginalist economics, and cannot easily develop any meaningful attempt at accounting for social variables (Tinker, 1985). Like the normative-deductive literature to which reference has already been made, the critical theorists do not offer any specific alternatives to present day accounting models. The credit for attempting to detail the damage caused by environmental abuse should probably go to the social audit movements. The work of social audit activists is described very well by Gray, Owen and Maunders (1987). This literature may be seen as directly antecedent to the more specific concerns now being expressed in some literature towards the overuse of the environment. It is doubtful if this work could strictly be described as part of the accounting literature.

The review which follows is concerned with several books, which make a contribution to the green accounting issue from a number of perspectives. These include two which use economic analysis (Pearce, Markandya and Barbier, 1989; Siebert and Antal, 1979), the use of a green approach to business decisions, (1910) and finally the development of green accounting itself (Gray, 1990). However, before examining these offerings we need briefly to set them into the overall context of the literature. This review makes no claim to be comprehensive; on the contrary, it is highly selective, concentrating on books, mostly recent, which will provide the newcomer to green accounting issues with an overall introduction to the subject.

The literature of the environmental specialists may be divided into three categories, moral, sociological and economic. The contributions described as moral are concerned with arguments...
about the social contract and the rights of all parties to clean air and a pollution-free environment. The sociological literature subsumes many of the arguments of the previous category, but extends the coverage to include other attributes to life, such as working conditions, the organisation of enterprises and social structures. Neither of these categories makes reference to accounting or measurement to any extent, although in some cases there is a strong regulatory element underlying much of the discussion. The third category, the economic literature, certainly uses quantification, often in financial terms, to argue the case for market solutions to environmental problems. The economist's use of financial and other quantification is often not the same as that of the accountant; mention of social accounting in the economic literature usually refers to a form of national income accounting. This tripartite division of the literature is, of course, simplistic because many books contain references to more than one category. However, it provides some structure from which to view a complex collection.

The Political Economy of Environmental Protection

H. Siebert and A.B. Antal
JAI Press, Greenwich, 1979

This book was originally published in German and subsequently included as part of an international series of monographs under the collective title "Contemporary Studies in Economic and Financial Analysis". No direct reference is made to the subject of accounting, although a part of the book is devoted to remedies which may involve taxation. The reference list contains mainly works by economists, and the book may be categorised as part of the economics literature but with strong environmental undertones. The reviewer found it to be an excellent introduction to economic/environmentalist thought, which provided good background information, and a solid basis from which to proceed to more advanced material.

One of the most attractive features of the early chapters, which set out the environmental record of western economies, is the understated manner in which this is achieved. A low key presentation, backed up by full references, is impressive because it avoids overuse of the emotive language which is often employed in debates about environmental matters. The effect is all the more effective, as a selection of quotations will show.

Chapters 1 and 2 discuss pollution and other environmental issues. The dramatic increase in outputs of waste products is documented and their effects explained, including the meaning of scientific terms such as BOD. An example of accumulated waste from chapter 2:

Not only is the air we breathe saturated with pollutants from our economic development; our water is also contaminated. Germany's celebrated Rhine transports 24 million tons of poisons and pollutants to the Dutch frontier yearly. Daily, this represents about 3 tons of arsenic, 450kg of mercury, 30,000 tons of sodium chloride ions, 16,000 tons of sulfates, 2,200 tons of nitrates, and over 100 tons of phosphates (p. 11).

Chapter 3 discusses the effects which the high levels of discharge are having on both the ecology and on human beings. The point that the classification of the atmosphere and waterways as free goods by economists is at the root of the problem is well made. A further point, which is often not clearly stated, concerns the demands which we all make on renewable resources, to the extent that these resources do not get time to be renewed and are in danger of becoming depleted; consider oxygen for example:

We are now threatening the earth's store of oxygen. The demand for oxygen is constantly rising. Every combustion process requires oxygen. A VW uses as much oxygen in 900 km as does a person in a year; a jet at take-off consumes as much as a 17,000-hectare forest produces in a night (p. 37).

A second group of chapters (4 to 6) explains how conventional economics has caused problems by regarding the environment as a free good and ignoring externalities and by attempting to solve social problems by economic growth. Accounting has followed the lead of economics and also fails to include externalities in computations of the costs of production. The problems of the conflicting goals of economic growth and environmental quality are explained in chapter 5, together with the distortions which may occur if one measure of social wellbeing dominates all others, as has happened with GNP:
The amount of consumer goods, then, says little about the measure of wellbeing. Wellbeing results from a sum of consumption acts of private and public goods, including the environment. As long as nothing is known about the relationship between wellbeing and amounts consumed, little can be said about how the amount of goods produced affects the measure of wellbeing (pp. 71-2).

Chapter 6 introduces the "spaceship earth" concept and the interrelationship between all the passengers. The role which a revised economics might play, in solving some of the problems created by conventional economics, is discussed in the context of planning models.

The costs and benefits of a cleaner environment are discussed in chapter 7. This chapter contains the methods by which the economist arrives at the cost which people are willing to pay to enjoy a cleaner environment. No consideration is really given to social contract issues which would suggest that people have rights to such a state. However, this is a comment on the economists' approach and not on these specific authors. The valuation techniques covered include market prices, interviews, willingness-to-pay and cost assessment; these must be accompanied by measures of environmental quality. The following quotation sums up the trade-off as seen by the economist:

The costs are an input into the political system, while the environmental policy measures are an input into the technological-economic system. The cost of environmental protection includes the costs of forfeited production and the opportunity costs with respect to other economic goals (full employment, price stability, and balance of payments) (p. 117).

Chapter 8 is entitled "The Recipients of Public Bads", and examines the distribution of the dysfunctional results of industrialisation. As might be predicted, some groups in society are found to suffer more than others. This leads the authors to view the problem of distribution from a different perspective:

Social groups must be prepared to calculate into their real income the value of an improved environment, and must be willing to sacrifice income increases in the traditional sense of the term in favor of improvements in environmental quality (p. 134).

Most accountants would find the chapter dealing with subsidies, taxes, standards and charges of greater interest, since it is at this point that financial measurement is brought into focus. The authors do not totally reject moral suasion to achieve a reduction in pollution; nevertheless, they certainly do not rely on it. Subsidies are examined in detail as a means of combating pollution, but the authors conclude that there are significant limitations to this approach including: a failure to guarantee an improvement in the environment, their use is retrospective, subsidies are financed through taxes and are a charge to the general public, and they promote the sale of environmentally damaging products.

The public reaction to pollution problems is often to demand Government intervention in the form of laws, prohibitions and standards. This has also been the approach favoured by the ecologists. There are a number of problems with the use of emission norms which, the authors argue, seriously reduce their effectiveness. In particular, standards must be set for many pollutants and various media, knowledge is required about damage and diffusion functions, and common measures would be difficult to achieve. In the final analysis, the view one takes of regulation will depend upon a personal position vis-à-vis intervention by Government in production and investment decisions.

A significant part of this chapter is devoted to the question of how to use taxes to assist in reducing environmental problems. In particular the authors favour an emission tax:

The authors believe that only taxes, emission standards, and pollution permits should be considered to be key measures. Subsidies, public investments, the concept of a "basic right" to the environment, and moral suasion are simply insufficient as primary answers to the allocative problem (p. 164).

The international aspects of environmental pollution are dealt with in chapter 10, while chapter 11 provides a short statement of the authors' conclusions.

This is a well-written book, which would serve as a good introduction to the subject for accountants, although it is unlikely that such a readership would be entirely satisfied with the
approach taken. In particular the rejection of a regulatory approach or the moral suasion argument
might not satisfy some accountants, any more than it will please ecologists. Nevertheless, this
is a book to read as a preparation for more recent and advanced works.

**Blueprint for a Green Economy**
*D. Pearce, A. Markandya and E.B. Barbier*
Earthscan, London, £7.95

This book originated as a report produced for the Department of the Environment in the United
Kingdom. It was well received by the Minister and has been influential in both economic and
accounting circles. There are seven chapters; introduction, the meaning of sustainable
development, valuing the environment, accounting for the environment, project appraisal,
discounting the future, and prices and incentives for environmental improvement. Unlike many
of the contributions in the economics literature, Pearce *et al.* have a policy-oriented approach.
However, the economist's approach shows through quite clearly, and has prompted a response
from Gray (1990), thus increasing the depth of the debate.

Chapter 1 introduces the idea of sustainable development, a concept which has been influential
for about ten years:

Sustainable development involves devising a social and economic system which ensures that these goals
are sustained, i.e. that real incomes rise, that educational standards increase, that the health of the nation
improves, that the general quality of life is advanced (pp. 1-2).

To achieve sustainable development Pearce *et al.* state that three key concepts: environment,
futurity and equity, must be integrated through an underlying theme. The theme is that future
generations should not be left worse off by the actions of the present generation. The idea of
capital being divisible between capital wealth and environmental wealth is introduced at this point
and repeated throughout the book. It should be noted that there are many, often conflicting,
definitions of sustainable development which the authors list in an appendix.

The theme of sustainable development is continued into chapter 2. The authors make a
significant contribution when they stress that this generation should not affect the quality of
life of the next:

What is the justification for ensuring that the next generation has at least as much wealth — man-made
and natural — as this one? The intuitive idea underlying this approach to sustainable development is
that of *intergenerational equity*. What is being said is that we can meet our obligations to be fair to the
next generation by leaving them an inheritance of wealth no less than we inherited (pp. 34-5).

The authors favour a restricted view of wealth, as consisting of a stock of environmental assets,
which must be maintained, even though economic activity is needed to satisfy the needs and
wants of society. The challenge is clearly to take the cost of environmental degradation into
account, while at the same time providing for the material wellbeing of society. To achieve this
outcome the authors argue that the environment must be valued, so that any effect of economic
policy on the environment may be measured.

The various techniques which economists and others use to value the environment are discussed
in chapter 3. Monetary valuations are covered in much greater depth than hitherto; the traditional
cost-benefit analysis is replaced by total economic value, which is built up as follows:

\[
\text{Total economic value = Actual use value + Option value + Existence value}
\]

Where: existence value = intrinsic value, option value = value in use (by the individual) + value
in use by future individuals (descendants and future generations) + value in use by others
(vicarious value to the individual)

The remainder of the chapter is concerned with the actual techniques which might be used
to determine monetary valuations of the environment. These include the hedonic price approach,
contingent valuation, travel cost approaches, and empirical measures of option and existence
values. Pearce *et al.* conclude that, although accurate determination of monetary valuations is
not possible, to attempt the exercise demonstrates: that environmental services are not free,
that a rational approach to decision making is necessary, that many things cannot be valued by
existing techniques, and:
The fact that we find positive values for so many environmental functions means that an economic system which allocates resources according to economic values (i.e. consumer preferences) must take account of the economic values for environmental quality (p. 81).

An annexe to chapter 3 provides details of a number of estimation techniques, including their limitations.

Chapter 4 is entitled 'Accounting for the Environment'. Within this chapter the authors attempt to use an accounting framework to present relevant information for decision making. They advocate the development of a balance-sheet, sources and uses account, and stock and flow accounts to link the balance-sheets of one year with the next. A number of approaches are examined including the physical approach, as exemplified by French and Norwegian systems, and a monetary approach. The monetary approach attempts to correct errors in the national accounts by including:

(i) the use of defensive expenditures, (ii) the negative impact of any environmental damage on the economic welfare of society, and, (iii) the treatment of degradation or depreciation of natural and environmental resources (p. 105).

Defensive expenditures are made by individuals to counter the effects of environmental damage, the negative impact of environmental damage is an estimate of 'residual pollution damage' from non-mitigated actual pollution, while depreciation of natural resources applies to the rate at which these resources are used up. The choice of approach is not straightforward, since each has both strengths and weaknesses. Pearce et al. favour the development of sustainable income which is defined as follows:

\[
\text{Sustainable income} = \text{Measured income} - \text{Household defensive expenditures} - \text{Monetary value of residual pollution} - \text{Depreciation of man-made capital} - \text{Depreciation of environmental capital (Ecosystem function damage, Renewable capital, Exhaustible capital)} \quad (p. 108).
\]

It must be noted that the systems outlined are not in general use, and require further refinement. Furthermore, the accounting system is on a macro scale, the national accounts, and not based on the enterprise, which is the normal concern of accountants. Consequently, there are opportunities for accountants to reorganise conventional accounting for enterprises, and make their own contributions to the problems which confront us.

The next chapter (5) examines project appraisal within the context of sustainable development. The mechanics of Cost-benefit Analysis are explained, including the additional requirements necessary to make allowances for environmental damage. The European Community Directive on Environmental Impact Assessment is expected to have an effect in those countries, like the UK, to which it applies. Sustainable development implies that environmental values should be integrated into project appraisal, if necessary by making programmes of investment projects subject to a sustainability constraint to make sure that in the aggregate environmental capital is not reduced. How this objective can be achieved for other than Government investment is not explained.

The use of discounting in project appraisal is covered in a separate chapter (6). At first sight this seems strange since most books deal with these topics in the one chapter. However, here discounting is discussed not only as a technique, but also as an activity which has environmental and social implications. There is a thorough critique of discounting, from an environmentalist perspective, which looks at pure time preference, risk and uncertainty, diminishing marginal utility of consumption, and opportunity cost of capital. Despite the strength of these arguments, the authors do not favour adjusted rates (i.e. the use of social rates) but market rates in conjunction with better information. This would include the use of improved valuation techniques, the integration of environmental considerations into all economic decisions, and the incorporation of a sustainability constraint into the appraisal of environmental programmes.

The final chapter explains the role that prices and incentives may play in improving the environment. As might be expected, as economists the authors favour price mechanisms based on markets. However, it is well known that there are market inefficiencies which have led to our present environmental crisis. Pearce et al. propose to use the market to remove market-based problems, by ensuring that the value of environmental services is included in the prices of goods and services. This regulatory process is called establishing market-based incentives.
It is argued that a market-based system of regulation is more efficient than one based on command and control.

The most powerful tool by which to achieve the proper pricing of products and services is the "polluter pays" principle. The polluter is made to pay:

(i) by setting standards, the cost of achieving which is initially borne by the producer;
(ii) by setting charges or taxes on the polluting product or input;
(iii) by setting a standard, issuing pollution permits in amounts consistent with the standard, and allowing those permits to be traded" (p. 158).

Market-based incentives include pollution charges and taxes such as carbon tax, and creating markets for pollution permits.

This book is an extremely important addition to the study of environmental economics, and should be consulted by accountants who are interested in the area. The most important features include; the concept of sustainable development, the separation of capital into natural and man-made assets together with a commitment to intergenerational equity, the description of macro accounts based on both physical and monetary measurements, the arguments over discount rates and finally the use of market-based incentives to ensure that the environment is properly valued.

There are a number of positions taken by the authors with which accountants might disagree, including the emphasis on markets and against regulation, together with the use of only macro accounts. However, these are interdisciplinary differences, and should be recognised as such. Accountants are challenged by this book to define a position which will take those parts which are acceptable and produce alternatives to those which are not.

Greening Business: Managing for Sustainable Development
J. Davis

This book is quite different in orientation from the two previously reviewed, in that it follows a line of reasoning dating back to the original Schumacher (1973) period. Both Siebert and Antal (1979) and Pearce et al. (1989) were concerned to use economic analysis to determine the means by which abuse of the environment could be contained. There was little reference to ethical matters (right to a pollution-free environment, for example) or discussion of alternative forms of ownership and social/industrial organisation. In other words, the economist's approach may be criticised for accepting the status quo (Tinker, 1985, for example). Davis (1991) is concerned with a managerial view of sustainable development, but a small managerial view, as opposed to an accepted view of efficiency as coming from only large organisations. This book may be described as coming within the sociological part of the literature and is useful as a means of gaining perspective, not for learning about techniques which could assist green accounting.

Davis is a follower of the Schumacher (1973) "small is beautiful" dictate, who retired from a management position with a multinational corporation, to devote himself to setting up small business enterprise agencies in the UK. Consequently, there is more than a hint of the convert providing a polemical work about the book.

The first chapter outlines the author's view of sustainable development:

Sustainable development is a complex idea which, from a business point of view, can be described as something that (a) uses renewable resources in preference to non-renewables, (b) uses technologies that are environmentally harmonious, ecologically stable and skill-enhancing, (c) designs complete systems in order to minimise waste, (d) reduces as much as possible the consumption of scarce resources by designing long-life products that are easily repairable and can be recycled and (e) maximizes the use of all the services that are not energy- or material-intensive, but which contribute to the quality of life (p. 38).

Succeeding chapters offer interesting and challenging views on the manner in which organisations should be restructured; to reduce size and industrial concentration, eliminate hierarchical management structures and develop alternative technology. Of particular interest to accountants would be the discussion of the means by which sustainability could be measured, and of different
forms of corporate ownership. The author ties his view of green business to a co-operative power-
sharing form of business organisation, in which ownership is not held by absentee owners in
perpetuity.

The financial system that has evolved along with the joint-stock limited liability company has become
increasingly averse to risk and short-term in outlook. So long as control remains with these absentee
landlords, managers will be in a strait-jacket (p. 144).

Davis provides an insight into both his own (and others') view of accountants, and at the same
time throws down a challenge to reforming accountants in references to a money-centred vision
of industrial/commercial organisations which will have to change to survive in a changing world.

To conclude, this book offers a view of sustainable development which is quite different from
an economic or accounting view and much closer to a philosophical or ecological treatise. There
is a degree of normative prescription which many accounting academics will find disturbing.
Nevertheless, the reviewer found much of interest, not least that there is a whole literature
which does not view accountants as the natural leaders of attempts to improve our productive
organisations!

The Greening of Accountancy: The Profession after Pearce
R.H. Gray
Certified Research Report 17, The Chartered Association of Certified
Accountants, London (available from 2 Woodside Place, Glasgow G3 7QF,
Scotland), 1990, £20.00

This monograph marks a turning-point in the development of attempts by accountants, to assist
in accounting for environmental degradation and reducing the effects of our society on future
generations: Green accounting. The author indicates ways in which the normative models, put
forward by accountants in the 1970s may be operationalised, without becoming dominated by
the economist's market view of the world. Although this monograph owes much to the interest
generated by the Pearce report, Gray maintains an intellectual independence which will ensure
the stature of his contribution.

In an appendix Gray provides a critique of the Pearce Report, identifying weaknesses as the
preoccupation with continued economic growth, the reliance on market-determined values, the
ignoring of ethical perspectives when discussing environmental matters and the omission of a
systems approach. Clearly, Gray is seeking a much deeper shade of green in any response to
environmental problems than the economists (aided by traditional accountants) are able to provide.

This monograph was sponsored by The Chartered Association of Certified Accountants in the
UK, which "... considers this study to be a worthwhile contribution to discussion, but does
not necessarily share the views expressed, which are those of the author alone". Presumably
this is part of a standard disclaimer, which may not apply to all accountants, some of whom
may agree with the author!

The monograph is divided into seven chapters of varying length. The first provides an
introduction to the rising interest in green sentiment in the UK since 1988. The manner in which
the Pearce Report came about is described, and related to other factors such as the renewed
interest in social responsibility and business ethics. The author warns that we have travelled
the same path before:

However, in what follows, it would be well to learn from the 1970s and remember that all the rhetoric
in the world, all the promises of legislation, are insufficient actually to achieve anything in the way of
change (pp. 18-9).

The objective of the work is to suggest how accounting and accountants can assist in the process
of environmental protection, based on assumptions that accountants have much to offer, in a
debate which has been to date on too narrow a front.

Chapter 2 is entitled "Ecology, Economics and Ethics: What are the Real Issues?" and
addresses a number of interrelationships. First, Gray presents a familiar (and serious) list
of environmental problems; global warming, toxic waste production, deforestation, the ozone layer, acid rain, and biodiversity, all of which have worsened over the past 20 years as a result of inaction. The systems theory approach is, according to the author, most important to ecology and environmentalism. Gray applies systems theory to accounting, to illustrate the partial nature of the picture presented by accounting reports.

The traditional accounting report is concerned with debits and credits, measuring inflows and outflows of information, funds and physical resources/goods and services. This is represented as part of a system, to which must be added a social dimension which is not at present captured, because it does not get priced in the marketplace. To complete the picture requires the addition of an environmental dimension, to capture non-priced items and waste in the biosphere, as well as the depletion of natural resources:

Accounting reports provide a partial picture of events and thus construct a 'social reality' which is based upon the economists' view of the world, a view which Gray (among others) identifies as a major problem in dealing with environmental matters. Economists are taken to task for their continued concentration on wealth creation as measured by GNP, their failure to recognise values other than those associated with property rights and market exchanges, and for ignoring ethical issues in relation to the environment. The latter are discussed in a separate section.

Gray notes the importance of moral philosophy in discussions about the environment. This involves three types of ethical reasoning; motivist, deontological and consequentialist. Economists employ a utilitarian approach (a particular form of consequentialism) which evaluates actions in terms of net benefits which generate increases in financial wealth.

The motivist and deontological positions do not attract much attention from economists or accountants, that is debates about the rights of actions are submerged by those related to outcomes. Clearly these different approaches make an alliance between environmentalists and economists very difficult to envisage. Whether the same applies to accountants will depend upon the extent to which the message contained in this monograph is heeded.

Chapter 3 examines environmental pressures for organisational change, and finds that many organisations are still not taking a lot of notice of environmental matters. Although there has been some loose talk about the opportunities to be green and more profitable at the same time, this has not been established. Gray suggests that sensitive firms must consider three groups; consumers and employees, resources products and the ecosphere, and the financial sector. The first is important because these groups may not wish to be associated with an insensitive organisation. The second, because continued environmental pollution will result in heightened levels of both requirements and penalties. Finally, ethical investment funds are beginning to appear, and have an effect in the capital markets. In addition to the above, governments will eventually have to take action. The reviewer found this part of the chapter to be rather speculative.

Two surveys of businesses are cited, as providing evidence that so far business has not been active in making the changes which environmentalists argue are needed. The CBI survey is described by the author as upbeat and uncritical, whereas a survey by Touche Ross of 32 UK companies found that companies are generally not doing enough. Gray comments:

...few organisations have senior managers who seem to appreciate that 'business', 'making profits', and 'efficiency' are somewhat redundant notions if the planet has reached a point where it will no longer support life and so most organisations continue to treat environmental matters as rather peripheral to the mainstream of business (p. 57).

The frustration inherent in this statement begs the question: How do we make these people take notice? The answer(s) presumably lie(s) in a mixture of education, compulsion, and incentive.
In chapter 4 the author outlines his view of the connection between accountants and the environment. Claims to professional status by accountants would be enhanced, if a much expanded theoretical framework were developed, to include areas of activity not currently included. Furthermore, the public interest would be better served at the same time.

The strengths of accountants, Gray argues, are not in the areas of financial measurement, but in designing and operating information systems:

In many regards, the most important talent of the accountant probably lies in the design of, recognition of, assessment of and control of the information systems in an organisation. That perception extends to information systems outside the organisation and, in putting these internal and external systems together, the accountant can generate data, evaluate its probable reliability and determine its appropriateness to the issues under consideration (p. 66).

In addition, the accountant has a reputation for personal characteristics, which would be as valuable in the new role as in the old.

Gray notes that the notion of reporting to a group of stakeholders, rather than just to shareholders, is not that new, dating from the early 1970s. A good example (not specifically cited) would be the notion of rights to information for stakeholder groups contained in the Corporate Report (ASSC, 1975).

The needs of what the author refers to as Pearce-world are likely to include professionals with the ability to separate man-made and natural capital, which is critical to any decision about sustainable development:

This is precisely what is needed for the Pearce-world to work — an accounting for the increases and diminution in man-made and natural capital and, most importantly, an accounting of the transfers between the two. Accountants should have considerable expertise to offer, in various ways, to the development of this accounting (p. 69).

This chapter, unlike the previous one, is not at all speculative or tentative. It is positive and reflects the author’s conviction, shared by the reviewer, that accounting and accountants have a great deal to offer beyond their present roles. Some of the possible developments are detailed in chapters 5 and 6 of the monograph.

In chapter 5, internal accounting and information systems are considered. Most organisations have undisclosed means of collecting information to assist with decision making. Gray is suggesting an enhancement of these systems to include data more directly concerned with avoiding environmental damage. The impetus for change must come from the top of the organisation to be fully successful. Once an organisation has decided to implement change, it is suggested that an environmental department be set up. This would be an independent identifiable part of the organisation with senior management and board representation. The role would include; monitoring issues and priorities, engaging in strategic questions, the integration of environmental awareness and sensitivity into organisational life.

The organisation needs to have an environmental policy, which is not of the PR variety. This might include; the particular orientation of the organisation, providing information for employees, customers and suppliers, as well as stating the parameters of acceptable activities.

Setting up an environmental department and developing an environmental policy must be followed up with an information system:

The selection and design of the information system will therefore be a complex and crucial element of the organisation’s environmental response — systems must be selected that can deliver believable information; of an understandable nature; relevant to the actors receiving or reporting the information; they must identify what is happening and what is not happening — selected from the universe of all possible activities — and action/non-action identified against yardsticks of acceptable action (p. 79).

The reports suggested include: a compliance report or audit, an ethical audit, a waste audit, an energy audit, an emerging issues audit, environmental impact assessment/appraisal/analysis, a general environmental audit, and a financial environmental audit.

The purposes of each are evident from the titles. The compliance report or audit makes sure that the organisation is complying with legal requirements in relation to the environment. The ethical audit refers to above-the-law requirements which management may require. Setting such
requirements would necessitate an open discussion about a large range of issues within the organisation. The waste audit should identify waste, the costs associated with the treatment and disposal of waste, and identify that which may be recycled. A similar modification to the accounting and management information system will allow energy flows to be audited. The emerging issues audit reminds us that the problems of the environment are ongoing, and that initiatives must be maintained.

The environmental impact assessment/appraisal/analysis will have serious effects on organisations, as governments regulate planning and location matters more thoroughly. There are costs associated with environmental protection which will have to be included in project costs. The reference to a general environmental audit is an alternative to the structured approach detailed above, which might be carried out by an outside consultant as a starting-point. The financial environmental audit is included as a warning against short-term evaluation to determine whether the organisation would be "better off" to break the law. If the ethical audit has been effective, there should be only one answer to such a question!

Other suggestions for an expanded reporting system include; the environmental budget, the environmental investment rate, and environmental asset maintenance. The environmental budget is a title given to the process of ranking environmental criteria on a level with other criteria. Once the pollution budget is set for a period, interorganisational differences might be levelled out by means of pollution permits.

The investment process is going to have to be overhauled to take account of environmental costs. This will include the investment rate. Not only will taxation initiatives, as discussed by Pearce et al., become important, but other initiatives including potential and actual legislation. The Best Practicable Environment Option, and the Best Available Technology Not Entailing Excessive Cost:

Both concepts are an attempt to articulate the criteria that regulatory authorities must apply to organisational assessment and, whilst it is clear that the State believes that environmental criteria must not dominate commercial criteria, the position is now just a little harder and organisations will have to prove that they did in fact choose BPEO and/or BATNEEC and, further, failure so to prove may lead to retrospectively awarded reparation damages (p. 95).

Finally, environmental asset maintenance is discussed. The records of the organisation must be capable of distinguishing between natural and man-made capital. Furthermore some natural capital will be critical and some will be "other" natural capital. Concepts of ownership and stewardship will have to be revised.

The author has presented a wide (almost bewildering) range of ideas in this chapter. All are interesting. However, digestion might have been easier, if the more speculative had been clearly separated from the more operational.

External reporting of green accounting material is discussed in chapter 6. The author argues that there are three reasons for organisations to develop environmental reporting. The principle of accountability; a requirement to report; will influence actions, information influences perceptions. External social audits are regarded as influential in providing an alternative view of the organisation to that which may be projected by in-house literature. Self-reporting, as advocated by some social accountants for many years, has not been particularly successful. Gray suggests that a pragmatic approach is needed, such as that being put forward by the United Nations.

The UN initiative on external reporting addresses the following areas: the definition of environmental expenditure and activity, the question of whether expenditure on environmental issues could be capitalised, contingent liabilities with respect to future environmental costs, taxation and disclosure. The points about contingent liabilities and capitalised expenditures are very important, having a place in even conventional financial accounting. Disclosure is central to accounting and, therefore, a compliance-with-standard approach as advocated by the author seems quite appropriate, even though the data are likely to include non-financial material. Finally, the issue of the nature of assets is revisited. Three elements must be considered; their definition and categorisation, transfers between categories (to and from man-made capital) and maintenance of the assets in each of the categories.
As stated by Pearce et al., man-made capital should be separated from natural capital. However, Gray, following Turner, separates natural capital into two groups; critical capital and other natural capital. The transfer between categories questions the rights and obligations which property rights and ownership infer. In seeking maintenance of the assets within existing categories, the main objective is quickly to eliminate movements between critical capital and other categories, and to slow down movements between other natural capital and man-made capital.

The author concludes that the most pragmatic approach to environmental accounting in the short term would be:

(a) to follow the UN initiative within the current framework of financial reporting; (b) to require the addition of a compliance-with-standard report in order to capture the current legal framework of pollution regulation and; (c) in order to initiate a reorientation of the accounting from ownership towards stewardship and to enable the implementation of the Pearce proposals on natural and man-made capital, introduce a redefinition of assets and capital maintenance (p. 128).

Chapter 7 provides a summary of the main recommendations given in chapters 5 and 6. Experimentation, the sharing of experience and ideas, the reanalysis of the ways in which accountants think, and further research, are all stated to be the products of this monograph.

Overall one cannot fail to be impressed by the dedication and commitment of this worker for change in accounting practice. Gray has spent many years identifying the problems associated with conventional accounting, and attempting to point the way forward to more socially appropriate forms of disclosure. In this monograph, the author is attempting to operationalise for accountants some of the ideas put forward by Pearce et al., whilst converting them to a deeper shade of green and removing the distortions present as a result of the economist's paradigm. It was a difficult task, but one which has largely succeeded. Certainly, there is currently nothing better as a preparation for accountants.

The reviewer was surprised on occasion by a degree of unevenness in the writing, possibly caused by the depth of feeling which the author clearly has for the environment. A further criticism, probably unfair, is the Anglo-centricity of the focus. Inevitable though this may be, it is unfortunate where there is a similarity of problem and, therefore, potential solution in many parts of the Anglo-American accounting world. Finally, the author could perhaps have differentiated more clearly between greater and lesser degrees of speculation, when discussing possible disclosures of non-traditional accounting information. The reviewer looks forward in anticipation to further contributions in this area, from both this author and others who will be inspired by this report to make their own contributions.

Some Concluding Comments

This multipart review was intended to provide the reader of the green issue of AAAJ with a number of reviews which would help him/her to get some basic preparation in this area of accounting. Consequently we have looked at four books, each putting forward a different perspective on sustainable development and green accounting/business/economics. All are worth reading, all are apparently sincere, all adopt a different perspective. Siebert and Antal (1979) offer an environmental economist's perspective, with little or no reference to a role for accountants, and a clear market orientation. There is, nevertheless, a lot of very interesting material for the newcomer. Pearce et al. (1989) offer a different though still economics-based view, which introduces some crucial new ideas into the debate. These include the separation of capital into man-made and natural capital, the undertaking of intergenerational equity which must have an effect on policy, and ideas about accounting for environmental conditions. Neither of these books appears to be concerned about ethical matters or the way in which society is organised. They are content with the status quo, except where stated, and do not seek to make changes to ownership practices or organisation. They have a light green orientation.

Davis (1991) takes a completely different view of the world, apparently unimpressed by the talents of either accountants or economists, excepting those of a Schumacherian persuasion. However, Davis advocates a sociological and idealistic world, in which a totally different organisational structure pertaining. In many ways his view is that of the revolutionary, wishing to change ownership patterns and the manner in which management operates.
The research monograph authored by Gray was sponsored by a professional accounting body, and is written in a style appropriate to that audience. The radical nature of many of the ideas appears to be toned down. Nevertheless, this powerful work provides a link between the ideas expressed in Pearce et al., the accounting profession, and environmentalism. The division of capital is usefully refined into man-made, critical capital and other capital, pragmatic recommendations for improved internal and external reports are made and the deficiencies of the economists’ approach to environmental matters are expertly covered.

Taken individually, these are all good or very good references; taken as a package, they are excellent.

References
Accounting Standards Steering Committee (1975), The Corporate Report, ICAEW, London.
RECENT DEVELOPMENTS IN SOCIAL AND ENVIRONMENTAL ACCOUNTING

M. R. Mathews*

This article is intended to bring the reader up to date with post 1990 developments in social and environmental accounting, and to comment on recent work in the area of the valuation of externalities. A comprehensive list of recent works is provided.

INTRODUCTION

The intention of this article is to update readers interested in the areas of social and environmental accounting, and the valuation of externalities. The field of social accounting has tended to follow the trends which are evident in the accounting discipline as a whole, with normative and empirical phases or fashions (Henderson and Peirson, 1983). For example, in the 1970s many writers urged social responsibility upon corporations using almost exclusively normative language (Ramanathan, 1976). This was followed by many empirical papers in which researchers sought to measure and report on social responsibility disclosures in annual reports, or to establish relationships between social disclosures and corporate performance (Guthrie & Mathews, 1985). It is quite possible that a similar sequential development may follow in the environmental accounting area, with normative statements giving way to attempts to measure the effect (if any) of social pressures for change on corporate annual reports. In this review recent will be defined as 1990 onwards.

There is a growing literature in the areas of social and environmental accounting, especially the latter, since 1990. The recent development of teaching programmes in both social and environmental accounting are also worthy of comment. However, this literature is confined to a relatively small number of sources. Consequently the same names will appear frequently throughout this article.

SOCIAL AND ENVIRONMENTAL ACCOUNTING DEVELOPMENTS

The first section will refer to environmental accounting including the contributions of Gray (1990, 1991, 1992, 1993), the special 'green' issue of AAAJ, the involvement of professional bodies, CSEAR, and Owen (1992).

Environmental Accounting


The turning point in the development of environmental accounting was probably the response by Gray (1990) to Pearce et al. (1989), in which a strong statement was

* Professor M R Mathews, Faculty of Business Studies, Massey University, New Zealand.

A.F. June 1994 Page 5
made differentiating the accounting and economic positions on the regulation and monitoring/auditing of disclosures about environmental impacts.\(^1\) This important publication introduced a number of important ideas including the role of accountants as designers of information systems *per se* and not simply of financial reports. A full review of the paper was given in Mathews (1991). Subsequently, Gray (1991) and Gray (1992) developed these ideas further, incorporating at one point proposals for including financial measures of environmental impact in annual reports, because the result would be so dramatic that attention would be directed towards these issues:

To be effective, this shadow accounting system would, preferably, produce numbers which can be deducted from calculated accounting profit and be expended in the restoration of the biosphere. This will, thus, lead to a recognition that organisational income has been grossly overstated for some considerable time and that current generations have been benefiting at the cost of some future generation. *The probability is that no Western company has made a "sustainable" profit for a very long time, if ever* (Gray, 1992, pp. 419-420, original italics, as cited by Robinson, 1993).

There is a basic conflict between holding deep green views and advocating financial measurement of environmental impacts; however, in this case Gray was arguing for maximum impact, and not because he thought that it was appropriate to cost the environment.

Gray has continued his arguments in a recently published book (Gray, 1993), the preface to which contains the following passage:

Within less than five years, accounting for the environment has moved from being considered the most marginal and irrelevant of topics to its present position of occupying an increasingly central role in the deliberations of the worldwide accounting profession. Further, environmental accounting is now seen as an essential element in any organisation's environmental response (Gray, 1993, preface).

Gray (1993) is a valuable reference work for all who are interested in accounting for the environment.

**AAAJ Green Issue (1991)**

In 1991, Gray and Laughlin co-edited a special edition of the Accounting Auditing and Accountability Journal (AAAJ) devoted to green accounting. In the editorial it was stated that:

The articles in this issue cluster around what we see as the central questions of accounting and environmentalism:
What mental frameworks can be used for meeting the new challenges - can, for example, conventional frameworks of economics actually handle the ideas at all? Can General Systems Theory be revitalised in any useful way? Or do we need completely new and much "softer", even non anthropocentric, ways of intellectually interacting with our world?

Is there any role for accounting? And, if so, what sort of accounting might this be?

What is the role, if any, for measurement and conventional regulation - the "juridification" question. Is the determination to make life, human as well as non-human - subject to measurement, quantification and order simply the cause of the problem wherein no solution can lie? (Gray & Laughlin, 1991, pp. 5-6)

In addition to their editorial and a review of some of the green accounting literature by Mathews, a number of impressive contributions addressed the issues from many positions. Maunder and Burritt, in a paper entitled 'Accounting and the Ecological Crisis' examined the difficulties caused by a mismatch between accounting information and the environment as applied to ecological issues. The authors viewed recent developments in 'green accounting' as unsatisfactory because certain basic values are in conflict (qualitative matching is deficient). They concluded with a detailed description of deep ecology and the limited role that accounting will be able to play, unless there is a radical modification of the current accounting system to one where prices are based on 'existence values'. This article does not provide a basis from which accountants with a "light green" approach may proceed to develop further environmental accounting.

A short but pointed contribution by Hine's 'On Valuing Nature' used an example from her own garden to draw out the position that net profit, budget surplus and gross national product are emphases which are destroying the natural environment. The message is not that different from that of the previous paper.

Power examined the rise of the environmental audit in a paper entitled 'Auditing and Environmental Expertise: Between Protest and Professionalisation'. His contribution explored the principal/agent structure as applied to environmental audits. There is a sense in which this new type of audit is being captured by those who see environmental problems in terms of an intellectual technology, which is based within the existing culture which caused the problem in the first place. Environmental audits offered by accounting firms may not be the essential factor in ameliorating environmental degradation that many see them to be, because the audit process is submerged or captured by the routine, as often occurs with the standard financial audit.

Laughlin and Varangu, 'Accounting for Waste or Garbage Accounting: Some Thoughts from Non-Accountants', reported on their experience of dealing with waste management problems in large urban situations. The authors noted that two
approaches to waste management frequently put forward are by regulation or by using market forces. Regulation may be used to protect the environment from the worst hazards by simply prohibiting particular actions. The actions of management may be influenced by using the market to change factor prices; for example by selling pollution rights which may be traded. Measurement is also considered. Here the authors proposed the development of a "Resource/Environmental Unit of Measure (REUM)" by multi-disciplinary teams comprising accountants, engineers, scientists, etc. The article provides some interesting ideas and offers one way in which accountants can get involved in meaningful projects to mitigate the effects of pollution by waste accumulation.

Harte and Owen in 'Environmental Disclosure in the Annual Reports of British Companies: A Research Note', showed how some British companies are providing environmental information in their annual reports. The reports of 30 companies were examined for any mention of environmental matters, and secondly, the extent of both financial and non-financial disclosures. Ten companies used a separate section to report on the environment with total disclosure ranging from one half to two pages, and an average of one page. Twelve companies provided statements about social and/or environmental matters in the statement of corporate objectives. Six companies disclosed financial information about environmental performance, but without involving externalities. Only three companies provided non financial quantified data; the majority used a narrative section to provide information. Compliance with specific standards did not appear to affect disclosures, i.e. information required for other purposes was not used in annual reports. The authors concluded that a great deal more information is available for disclosure when organisations make the decision to do so.

In a paper entitled 'Environmental Disclosures: A Note on Reporting Practices in Mainland Europe', Roberts examined a sample of English language annual reports produced by companies domiciled in five European countries. The total sample was 110 companies, and the basis of analysis was the presence or absence of items within nine categories of information. The results showed a variation of incidence between the different countries, from 80% in Germany and Sweden down to 52% for France. There were considerable differences in the production of environmental information compared to that relating to employees. The level of disclosure was generally low, although with some encouraging exceptions. On average there were lower levels of environmental than employee related information. There was also limited evidence of differences between countries. The study indicated the need for further research in this area since there was no attempt to measure the extent or quality of disclosures, simply their existence.

The article by Milne, 'Accounting, Environmental Resource Values, and Non-Market Valuation Techniques for Environmental Resources: A Review', examined the problems associated with the determination of environmental resource values. Too frequently simplistic approaches are adopted such as valuing nature at zero or at infinity. It is argued that environmental impacts should be incorporated into accounting based investment decisions. From here the author proceeded to a discussion of a wide range of techniques which would enable decision makers to incorporate non-market valuations in the calculation. In doing so they would be using...
a broader ethical position than is usually allowed for in economic maximisation. This is a very informative paper for accountants unfamiliar with the newer ideas in this branch of economics.

The special green edition of AAAJ incorporated a number of important contributions for readers of both a philosophical and a practical inclination. The collection is likely to have some effect on the development of environmental accounting, not least because teachers will find some of the articles useful for assigned reading and classroom use. To date the overall effect appears to have been an increase in research of all kinds dealing with environmental aspects of accounting.

**Involvement of Professional Accounting Bodies**

There has been a limited involvement by professional accounting bodies in the last few years. Gray (1990) was sponsored by the Chartered Association of Certified Accountants (ACCA) in the UK, and they have continued to support social and environmental accounting in Owen (1992), through their own publications including Gray (1993), and by such means as awards for environmental reports. The Chartered Association of Management Accountants (CIMA) in the UK has also shown an interest in the area, although their contribution in Owen (1992) is stated to be not an official view. The Institute of Chartered Accountants in England and Wales (ICAEW) has had an environmental accounting research group for some time. A report was issued in 1992 (Macve and Carey, 1992) which recommended *inter alia* that an environmental charter be produced. Of these developments, the most promising is the cooperation between Gray, CSEAR and the ACCA.

In Canada the Society of Management Accountants of Canada has published an issues paper on accounting for the environment (SMA, 1992) which is interesting in that it ignores the excellent contributions on accounting within the social area, although not specifically on accounting for the environment, by Burke (1984) and Brooks (1986) which were also published by the same body. The Canadian Institute of Chartered Accountants has published a manual on environmental auditing (CICA, 1992).

An examination of appropriate professional and academic accounting literature shows that the contribution of professional accounting bodies in Australia and New Zealand to date has been rather superficial, and that in the US practically non-existent.

These developments are too recent for any concrete changes to be demonstrated. There is evidence of a growing environmental auditing 'industry', which does involve accountants to a limited extent, and which could eventually require professional support and standards.

**Owen 1992**

Owen (1992) is an edited book of readings covering a wide field in four parts, with almost all of the papers in two of the sections. The first part is entitled the background to green reporting, and consists of a lengthy paper by the editor setting out the implications which 'greenness' would have for the accounting function. Owen
concluded that if a reformist (as opposed to a radical) perspective is adopted, then accountants can make contributions in both the internal and external reporting fields. Firstly, by developing management information systems to assist organisations to control micro level responses to macro level initiatives, and secondly, by developing external reporting practices including the audit function. However, the world view of many accountants may be an impediment to these developments. Owen noted that a lot of time has elapsed since the Corporate Report (ASSC, 1975) encouraged developments in the social area. The overall message of the contributions is that the time for action has arrived.

The second part takes up about one third of the book, and is entitled the future of green reporting. The contributions are divided between various interest groups including, industry and commerce (three papers), the trade union movement (three papers), the accounting profession (three papers), green pressure groups (two papers), and the investor (two papers).

The contributions of the representatives of the accounting profession are stated to be personal contributions in two out of three cases which is unfortunate, since it does make for some confusion on the part of the reader; are the professional bodies simply being cautious, or are they divided over the issue, or even opposed to disclosure (back to the world view impediment again). The message given by each of the contributors in this section (apart from institutional public relations) is that there is clearly a role for people with skills similar to those of accountants to design systems to capture and disseminate information, and to audit disclosures. However, in some cases accountants will have to work with members of other disciplines (for example engineers and chemists) in inter-disciplinary teams. One might question whether the preparation of accountants will aid them in performing these roles.

Approximately one third of the book is given to part three, which deals with current trends in green awareness. Part three consists of five ungrouped papers dealing with; environmental disclosures in corporate annual reports in Western Europe, current trends in the reporting of green issues in the annual reports of United Kingdom companies, environmental management in practice, the social audit movement and green investment.

Part four on the further development of green reporting includes only one paper on the practical implications of developing green reporting systems. This paper covers the problems inherent in dealing with qualitative issues and 'soft data' in general.

**Centre for Social and Environmental Accounting Research (CSEAR)**

Networking is important in all spheres of research but particularly so where there is a concentration of experience in relatively few locations, and the field is a new one. Consequently, the setting up of CSEAR at the University of Dundee in late 1992 was an important development. The centre produces a newsletter, *Social and Environmental Accounting* the successor to the *Social Accounting Monitor*. In addition to short articles, the newsletter contains reviews of books and journal articles as well as announcements and requests for assistance. The centre itself provides a vehicle for
seminars and research workshops, and for consulting with professional accounting bodies and other organisations.

Summary

There has been an impressive increase in the output of material concerned with the philosophical/normative aspects of environmental accounting since 1990. The range of publications is quite wide, although based upon the work of relatively few individuals. What is not clear so far is whether the ideas put forward by theoreticians are having the hoped for effect on the content of annual reports, or even more importantly on the manner in which managers and their organisations interact with the environment. It remains to be seen whether comparable effort will be devoted to empirical studies over the next few years.

Social Responsibility Accounting Disclosures

Recent articles dealing with social responsibility accounting disclosures may be divided into two groups; those which are philosophical/discursive and empirical studies. The first group includes contributions by Owen (1990) and Tinker et al (1991), which critique aspects of the literature, and two papers which attempt to extend the field in new directions. Perks et al (1992) use available information to determine the criteria used for investment by ethical unit trusts, while Christophe and Bebbington draw up a blueprint for additional disclosures building on to the Bilan Social. Brief outlines of these papers follow.

Owen (1990) critiqued a theory of social investment which is based upon prevailing market ideology. He concluded that such a conceptual framework will not assist in overcoming current problems. Certain aspects of the theory are accepted, especially the emphasis in local communities and decision making. Tinker et al. (1991) provided a strong critique of mainstream theories pointing out that the 'middle ground' does not exist as a static conception, but moves in line with changing parameters of what are regarded as the extremes. The authors demonstrated this effect by examining the role of accounting in a social context over several time periods, and concluded that the middle ground approach must be rejected because; it is contestable at all times, it is politically expedient, and finally that it perpetuates a conservative tradition which benefits only a few constituencies.

Perks et al. (1992) studied ethical investment in the UK with reference to the main UK ethical investment trusts. The published investment policies of 14 ethical unit trusts were examined to determine the criteria used for investment. Nine negative and positive criteria were located. However, it is apparently difficult to avoid all involvement in companies which do not fit the criteria. Annual reports and other information supplied by companies did not make for easy application of the criteria. Christophe and Bebbington (1992) attempted to develop the Bilan Social further towards a report which would also encompass the physical environment. The authors advocated a continuation of compliance with standards and an environmental pollution variance to produce a systematic and standardised report with information content for readers.
Recent empirical research in this area may be divided into two groups, those studies which attempt to relate events to market outcomes in order to determine whether there is a relationship, and those which use particular theories to explain or predict the incidence of social responsibility accounting disclosures. Examples of the first group are Patten (1990), Zeghal and Ahmed (1990), Freedman and Stagliano (1991), Yamagami and Kokubu (1993), Lynn (1992) and Jaggi and Freedman (1992).

Patten (1990) conducted a market study associating reactions to an event, in this case the signing of the Sullivan Principles outlining US corporate behaviour when dealing with South Africa. This study concluded that social responsibility information is used by investors in making investment decisions, although in this case the disclosures were of a specific and limited nature.

Zeghal and Ahmed (1990) considered corporate social reporting using a range of media, and not only annual reports as is usually the case. A study of the six largest Canadian banks and the nine largest petroleum companies operating in Canada in 1981 and 1982, showed that the use of annual reports did not provide a full picture, since in many cases brochures and advertisements were used to target specific audiences. The study was limited and further research along these lines is indicated.

Freedman and Stagliano (1991) reported on the market reaction of investors to the imposition of stricter standards for the reduction of cotton dust emissions in the workplace. These standards were finally imposed after a legal struggle, which meant that shareholders would have been aware of these events. Stock prices were adversely affected by the more stringent standards, especially where the firm did not provide detailed quantitative information about the impact of the standards. The stock price of firms reporting in narrative terms, or those attempting not to make disclosures had the largest decline.

Yamagami and Kokubu (1991) offer a view of corporate social disclosure in Japan. Using the 200 largest international companies included in the Fortune 500 biggest industrial corporations outside the USA in 1985, the authors produced a sample of 49 company reports for the years 1985 and 1986. These were analysed for disclosures about environment, community involvement, employee relations, research and development and international activity. They concluded that Japan has been slow in developing corporate social disclosure compared to North America and Europe. Research and development and international activity were widely disclosed but there was very much less information relating to environment, community involvement and employee relations.

Lynn (1992) examined the incidence of corporate social disclosure in Hong Kong. This study of 264, 1989 annual reports of Hong Kong based public companies, found that only 6.4% made any social disclosure. This is an extremely low figure, but apparently higher than previously reported. Cultural factors and the local political situation are believed to be relevant.
Jaggi and Freedman (1992) examined the association between pollution and economic and market performance using US Environmental Protection Agency reports. They found that economic performance was associated in the short term with pollution performance. There was weak evidence that good pollution records do not score highly in the stock market. The study is somewhat limited in scope.

The second group consisted of three studies by Ness and Mirza (1991), Patten (1992) and Roberts (1992). Ness and Mirza attempted to show that agency theory can explain the relationship between the nature of an industry and environmental disclosures. The limited results indicated that a positive association existed between environmentally related disclosures in the annual reports of 131 large UK companies and their being part of the oil industry. This was a preliminary study using agency theory and clearly there will be others. Patten (1992) attempted to explain social disclosure using legitimacy theory. Content analysis was performed on the responses of 21 petroleum companies to the Exxon Valdez disaster. The results suggested that threats to the legitimacy of an organisation result in more social responsibility information being disclosed. Roberts (1992) considered the behaviour of stakeholder groups in response to social responsibility disclosures. A sample of 130 reports on major US corporations for 1983-1986 was used. The data came from the Committee for Economic Priorities. It was reported that stakeholder theory (Ullman, 1985) could provide a foundation for empirical analysis.

**Summary**

Philosophical and empirical studies in the field of social responsibility accounting continue to appear, with the majority of work being of an empirical nature. Social disclosures in annual reports and other releases from corporations are clearly still the subject of academic attention. The various studies outlined above are all of value even if their range and variety simply serve to highlight the difficulty of performing this type of research. The influence of the researcher, subjectivity and a lack of generalisability are still limiting factors which even the introduction of more sophisticated techniques cannot entirely eliminate.

**Teaching Programmes**

In 1992, the Canadian Academic Accounting Association sponsored a conference on Environmental Accounting Education which was held in Montreal. Although not all of the papers were in English, the majority of these papers dealt with the introduction of social and environmental accounting courses in degree programmes. Contributions by Gordon (SFU, Canada), Specht (Trinity University, USA), Lewis, Humphrey and Owen (Manchester and Leeds Universities, UK), Mathews (Massey University, NZ) and Milne (Otago University, NZ) were presented. With the exception of the last presenter all stated that these programmes were actually used in their respective institutions. There were a number of interesting contrasts between the different approaches as might be expected, and in total they represented only a limited number of all possible formats.
Gordon (1992) introduced a short segment on social responsibility accounting into a traditional North American undergraduate intermediate accounting course, with an introductory pre-class survey and a subsequent post-class survey, in an attempt to determine whether any changes of view occurred among the students.

Specht (1992) (an attorney as well as an accountant) used the advanced auditing class to set sophisticated problems using case studies of audit problems, where environmental damage may be present.

Lewis, Humphrey and Owen (1992) described an undergraduate programme together with some of the problems associated with running it over some five years of operation. They reported difficulties in getting adequate numbers of students to take an elective in their final year, when prior courses had been heavily directed towards technical accounting. Those taking the course were often not adequately prepared, to engage in extensive discussion of alternative positions on the purpose of accounting and reporting in society.

Mathews (1992) reported on a programme which could be taught at either undergraduate or postgraduate level, although he concluded that graduate students appeared to benefit from an in-depth study of the area, whereas undergraduate students benefited from a brief introduction as part of a full-year accounting theory course somewhat in the manner suggested by Gordon. The role of accounting theory courses in the preparation of students was seen as important by Mathews (1992), and the lack of a sympathetic theoretical preparation might be a factor contributing to the problems described by Lewis, Humphrey and Owen (1992).

Milne (1992) included a number of implications for management accounting education in the latter part of his paper. He advocated that the costs to society of pollution and other impacts should be included in investment decisions. However, to do this effectively accountants would have to be versed in environmental economics and non-market valuation techniques, perhaps ecology and geography, law and ethics. In this regard Milne was arguing from a different position from that generally put forward by the other contributors, who take a regulatory or compliance-with-standards perspective.

Summary

There have been relatively few articles on teaching materials or courses of study in the social and environmental accounting area. These are mostly small scale undergraduate ventures, with success depending to a large extent, on the enthusiasm of the instructor and the preparation of the student body. The extent to which the students have a grounding in accounting theory appears to be important.

THE VALUATION OF EXTERNALITIES

Externalities result from the failure of markets to take all factors into account when determining price and quantity demanded at equilibrium. Consequently, since modern
Anglo American accounting is based on 19th Century economics, externalities are not part of the accounting process. An example will serve to make this clearer.

Imagine a production process which yields a 'product' and a 'waste product'. The 'product' will be costed by determining material, labour and overhead content, prices will be set and tested in the market place, theoretically equilibrium will be reached and the market will be cleared. The 'waste product' is dumped in landfill or disposed of somehow, and any subsequent inconvenience/damage is a public cost i.e. it does not appear in the private costs of the enterprise. If we replace 'waste product' with airborne and waterborne pollution, damage to employees health, and perhaps to jointly owned facilities such as roads, we have a realistic view of the impact of externalities.

The inclusion of public costs is the process of Total Impact Accounting as conceptualised by Mathews (1984, 1993). The full cost of the 'product' must include any public costs of the 'waste product' as well. However, there are other effects since excluding part of the costs leads to lower costs and prices, higher production levels and the generation of more externalities than would otherwise be the case.

In opposition, some will argue that corporations pay taxes and charges, which are their contributions towards public costs, and also that products are cheaper for the purchaser of those goods which do not have externalities factored into their cost structures. However, these are at best averaging processes which penalise polluters and non-polluters alike and also force non-consumers to subsidise the consumers of the product. Whilst the theory is fairly well established, there are some philosophical problems which many accountants and managers have to overcome if they are to address the valuation of externalities (Milne, 1991, pp. 83-86). These include the arguments that the atmosphere and waterways are free goods not subject to ownership, that there are insoluble problems of joint pollution products, that measurement techniques are undeveloped or "non-accounting" (non-financial) in nature, and that much pollution crosses political boundaries between sovereign states or has an effect only over a long period of time between event and result. These arguments can be examined in turn.

Free goods are those from which competing parties cannot be excluded, and for which private ownership rights cannot be obtained; we all enjoy the benefits of the atmosphere and waterways. In classical economic terms we cannot exclude others from using these benefits. Society now tends to distinguish between use and abuse, and increasingly to prevent or penalise parties from using free goods where that has a deleterious effect on other users. Examples would be air and water pollution or perhaps industrial injury, where private costs are forced into the public arena. Although often confined to developed economies, increased restrictions can be expected in the future as the full recognition of social inter-connections is appreciated (see Milne, 1991).

Joint pollution products mean that it is difficult in practice to ensure that externalities are internalised by the appropriate parties. If we imagine one firm in an isolated location, then any externalities may be identifiable and perhaps be measurable, but where groups of industries all produce waste products, identifying offenders becomes much more difficult if not impossible. However, this does not mean that we should not
attempt to do so. If necessary allocation techniques, so frequently used in other aspects of accounting, might be used to distribute the cost of repairing damage to the public domain. It is true that within accounting measurement techniques are not well developed, certainly at the financial level.

However, there is a strong argument for the use of non-financial measurement and disclosure such as parts per million of pollutant, particulates, pH of waste water etc. and for supplementing this information at a later date as techniques improve. By contrast there is a section of the literature which rejects quantification even in non-financial terms (Maunders & Burritt, 1991, pp. 21-23; Hines, 1991). Other 'deep ecologists' would accept non-financial accounting measurements as a means of reducing the damage done to the environment (Robinson, 1993). The determination of non-market values for environmental resources has been developed within the economics literature, with at least one author attempting to make the translation into accounting (Milne, 1991). However, as noted previously this approach has not been widely adopted by accountants.

The difficulties caused by pollution crossing national boundaries can be readily appreciated. How would one account for Canadian maple trees being killed by pollution from US power station emissions, or acid rain in Scandinavia resulting from discharges from UK power stations, or the accumulation of pollutants in rivers as they pass national borders in Europe? There are also difficulties where considerable time separates the event and the result of that event. Examples might be the effect of Thalidomide on the foetus, and the effect of mining for coal (black lung, pneumoconiosis) or working with asbestos (asbestosis).

Summary

This section may be summarised as follows:

1. To get the total cost (private plus public) of operating an entity, it is necessary to value externalities, or to prevent them.

2. In the absence of valuation procedures it is necessary to begin by basing disclosures on non-financial quantification.

3. There are a number of positions taken up on the issue of valuation ranging from that of the deep ecologist (whatever is done will not be meaningful without attempts to control growth, resource usage and non-subsistence activities), through non-financial quantification to financial quantification, in the belief that disclosure will demonstrate that the conventional profit figure is quite misleading. These alternatives are also discussed at some length in Milne (1991) from a decision making perspective.

4. Some assistance with valuation outside the market mechanism may come from the environmental economics literature.
5. Another approach would be to use compliance with standards with heavy fines for breaches to force the internalisation of costs. Unfortunately this would not prevent the environmental degradation in the first place.

6. Market based mechanisms have been suggested, such as marketable pollution rights which would internalise costs and set a limit on total discharges.

There has been a change in approach to the matter of externalities between the early 1980s and the present. Attempts to value externalities on a macro scale appear to have been abandoned in favour of a micro approach based on prevention of the discharges which would produce externalities in the first place.

The valuation of externalities is not confined to problems of pollution although that is the issue which comes to mind most frequently. Other problems at the theoretical level include loss of value because of the deterioration of adjacent properties (or the reverse, a gain in value as the result of other property owners expenditure), or loss of value from having an attractive view built out. There are also value gains and losses resulting from local authority actions such as re-zoning or new road construction. Here it is capital values which are affected rather than ongoing production costs. To conclude, the valuation of externalities in financial terms is still some distance away, but some progress has been made in resolving philosophical and theoretical problems.

CONCLUDING COMMENTS

This paper has attempted to do two things, firstly to review developments in the field of social and environmental accounting since 1990, and secondly to examine the valuation of externalities.

A review of the literature since 1990 showed that the major interest by far has been in environmental and not social accounting, and furthermore that the major contributions have been concentrated in the hands of relatively few contributors. The work of Gray (1990, 1991, 1992, 1993) provides an obvious starting point for any study of the environmental accounting literature. This is supported by Owen (1992) and the contributors to a special green accounting edition of AAAJ.

Other major developments have been the interest in teaching about the social and environmental aspects of accounting, which was demonstrated at a special conference in Montreal in 1992, and the attention given by the professional accounting bodies in Canada and the UK. Finally, the setting up of the Centre for Social and Environmental Accounting Research (CSEAR) at the University of Dundee has assisted in networking and further research.

Research into the role and importance of social responsibility disclosures in annual reports and other media continues, although perhaps at a lower rate than previously. There are now more sophisticated attempts to find the motivation behind these disclosures, rather than simply whether they exist and their extent.
The valuation of externalities is associated with social accounting in its widest sense. There are many views ranging from a philosophical rejection of the concept to a willingness to ascribe financial values even though they would be tentative. In between there are other alternatives such as the use of non-financial measures. The author concludes that most of the philosophical problems have been overcome and that in many instances it is possible to consider the identification and disclosure of externalities in non-financial terms. However, valuation in financial terms is still fraught with difficulty. It is perhaps noteworthy that most contemporary studies address the problem at a micro level. For example a plan put forward by the EC does not refer to externalities as such (Bebbinton, 1993) but strongly advocates individual entity action to disclose discharges. This might be viewed as "prevention is better than cure".

This latter point is surely very important. If individual organisations are required to measure and disclose their discharges, and to take action to prevent them in the first place, then the cost of production will be closer to the total cost and the cost of repairing public facilities will not be as relevant, since most of the damage will not have been caused by industrial activity in the first place. Clearly there is a role for accountants to play in the further development of techniques for measurement and valuation at all levels.

NOTES

1. Other important contributions such as Jensen (1976), Preston & Dierkes (1977), and the American Accounting Association Social Cost Report (1976) have not been included since they are well ahead of the period under discussion, and furthermore, they did not cover the same area as recent references.

REFERENCES

Accounting Standards Steering Committee, (1975), The Corporate Report, London: ICAEW.


Canadian Institute of Chartered Accountants, (1992), Environmental Auditing and the Role of the Accounting Profession, Toronto: CICA.


Social and Environmental Accounting: Practical Demonstration of Ethical Concern?  

M. R. Mathews

The accounting profession has regarded itself as ethical ever since the first modern professional accounting body was founded in the second half of the 19th Century. However, the code by which members have bound themselves has been professional ethics codes, which are more concerned with the relationship between professional and professional, professional and client, than that of the professional society as a whole. Recently, a number of national programmes have been developed which attempt to go beyond the limited view of professionalism, and into the field of ethics and professionalism. These programmes are based on an application of the work of Kohlberg and Rest. In the opinion of the author these aspects of ethics and professionalism are important developments, which need to be wed up by the development of social accounting, which would be a practical demonstration of ethical concerns by members of the accounting profession.

Aspect of business ethics is outlined in the next section.
managers, and their output has to be audited by other professionals (public accountants) notionally employed by the shareholders, but in reality often not fully independent of management. The values underlying modern accounting are defined by what are known as Generally Accepted Accounting Principles (GAAP), supported and enhanced by conceptual frameworks and codified accounting standards. Features such as “Conservatism” and “Objectivity” are combined with the definitions of assets, liabilities, owners' equity, revenues and expenses to produce financial statements with an apparent exactitude which often cannot be challenged by those without a knowledge of the principles and procedures. Much of the status of accountancy and accountants is derived from these apparently “scientific” outcomes.

Although considerable progress has been made towards the elimination of the excesses of what has been termed “cosmetic accounting” in recent years, there are several features of GAAP which prevent the adoption of a system of accounting which is more concerned with the overall impact of business upon society. These features include the recognition of the market mechanism as the main means of determining values and allocating resources, placing private ownership rights at the centre of the definitions used in accounting (assets, liabilities and owners equity) (Hines, 1988), and a concern with short term results. The latter comes from the accounting period, usually one year, and the entity principle requiring that accounts be prepared for a tightly defined entity.

Accounting is a socially constructed discipline, similar in many ways to the law, and just as the laws of the land often lag behind public opinion, it may be argued that the accounting principles underlying GAAP are in need of some updating, to bring them into line with current societal opinions.

What has been the effect of these basic values, definitions and principles on the search for a more meaningful or socially responsible accounting? The manner in which accounting terms have been defined and the technicist nature of accounting means that the effects of business decisions on individuals and communities cannot be recognised, and environmental impact through externalities is defined out of existence. Short term gains for the entity (and therefore the shareholders) are placed ahead of impacts on individuals, communities and the environment. This may be recognised as a potential problem which is not always going to occur, although, the impact of Western commercial/industrial practices over the past 200 years suggests that many current problems are, in fact, caused by modern accounting practices (Gray, 1993).

It was to combat the perceived excess of modern financial reporting that a number of writers (Gray et al., 1987; Mathews, 1984, 1993) put forward alternatives to modify or replace (Tinker, 1985) the present system. A group of critical theorists have criticised accounting for being partial in defending one class interest (capital) against another (labor), and for defending the status quo. Furthermore, this literature argues that accounting is more socially constructing than socially constructed. Accounting is seen as serving capitalism, and the critical theorists want to change both. They do not believe that modifying the present system is either possible or desirable.

Reformist writers are probably in the majority in the debate about developing social and environmental accounting. This literature argues in favour of extensions and additions to the present system, rather than for wholesale change. Thus, employees might be recognised through Human Resource Accounting and be provided with separate reports, externalities would be admitted, identified, and valued, and any damage to the environment would be costed and applied to the products of the enterprise. Actions of benefit to the community would be reported and in general a more “open” attitude shown to society as a whole. There is a fine line between providing meaningful information and engaging in public relations hype, and the line is difficult to identify. Furthermore, critics argue that the cost of providing the information may be greater than the benefit. Deficiencies in measurement, combined with ideological positions have generated criticism of even the reformist approach (Benston, 1982).

The recent rise in interest in environmental
ters has added a new dimension to arguments in favour of modifying accounting to include social statements and additional types of audit. The environmental accounting literature has become extensive and threatens to overwhelm other types of socially related accounting.

The educational and professional preparation of accounting personnel is both a reflection of factors affecting the development of the discipline, and an influence in maintaining the technical/instrumental view of the role of accounting in society. In most Anglo-American accounting countries, the curriculum avoids any discussion of philosophical issues (the why), in favour of technical detail (the how to), reinforcing the view of accounting as a pseudo-scientific activity. In recent years, increased use of computers in accounting practice has led to greater prominence of data processing in the curriculum; the same may be true for the use of mathematical models and quantitative analysis.

The manner in which the existing curriculum forces the technical nature of accounting, at the expense of the social and contextual, has been recognised to some extent by educators and professional accounting bodies in the United States, Australia and New Zealand. In the US a programme of curriculum change has been advocated through the Accounting Education Commission (AECC); the Mathews report in Australia favoured an extension of technical material in accounting education. New Zealand, proposals for a reduction in the portion of accounting in tertiary education programmes, but not in the absolute amount of accounting material, have been supported by the New Zealand Society of Accountants. The effects of these changes will be to increase the length of educational preparation to five years in the United States, and to four years in Australia and New Zealand, with the majority of the additional year to be devoted to non-accounting subjects.

Generally, accounting education devotes little attention to ethical issues other than professional conduct. A recent study (Chua et al., 1991) found that in Australia and New Zealand there are few examples of separate ethics courses. The typical pattern is for about three hours within an Auditing or Advanced Financial Accounting course to be devoted to the study of codes of professional ethics. These codes are concerned with the relationships between professional and professional, and professional and client, and not with relationships between professionals and society and professionals and employers. Consequently, the mainstream view of accounting as serving the interests of shareholders and creditors through technical processes which produce an exact determination of income and owners equity is not challenged by the majority of academic programmes, although there is a literature (Morgan and Willmott, 1993) which challenges all of these assumptions.

There are a limited number of academic programmes which encompass non-traditional views of the role of accounting and accountants. Problems are often encountered in grafting these subjects on to a traditional and unsympathetic earlier preparation (Lewis et al., 1992; Mathews, Forthcoming). For example, arguments in favour of extending accounting into the measurement of externalities (market efficiencies) is more difficult where the prior preparation of the students does not recognise the limitations of the market. Similarly, where students have been taught that the only way that value may be determined is through an exchange process in the marketplace, they will not be sympathetic towards arguments recognising the worth of the environment. The 19th Century view of labour as a cost to be reduced as far as possible, will not encourage accounting students to accept ideas such as human resource accounting, or the production of employee reports, since the latter implies that employees have rights to information about the organisation.

Whether the enlarged non-accounting components of future accounting programmes will assist in broadening the views of accountants, remains to be seen. There is a need for an ethical dimension which moves beyond the restatement of professional codes to consider questions of the relationship between the accounting discipline and society as a whole, and not just shareholders and creditors. However, this ethical dimension of the revised curriculum should not be a theoret-
ical exercise but find a practical expression, since accounting is an applied discipline. The ethical dimension which is needed for a more socially responsible accounting may be seen in some parts of the following section which outlines arguments in favour of a wider accounting.

**Arguments in favour of a wider accounting**

Accounting is a socially constructed discipline similar to the law, in that over the long term accountants must be producing what society requires. Accounting may also be socially constructing in so far as society is influenced by what accountants do and do not do. An example of this "push–pull" effect may be found in a study of externalities or public costs imposed on society by private activity. The usual example of an externality is pollution from a production process.

Traditional accounting would record and measure the private cost of production in terms of the components material labour and overhead; but ignore the cost to the public of reduced amenities, quality of life or clean-up costs. This was, and to a large extent still is, not seen as 'bad' or unethical. Why? Probably because in classical economic terms the atmosphere was a free good, not owned by any one person/group and therefore available for use by all. Note that what was good or not good did (does) not enter the argument, which was based on private property rights and values determined by the market place. Similar views are still to be found in the economics and accounting literature (Friedman, 1962; Benston, 1982). Traditional views of accounting were socially constructed in that society (or those in dominant positions within society) did not require any different action to that described. Today, society does not take the same view of pollution and gross externalities usually earn public condemnation, and sometimes fines or other sanctions.

However, society is also tolerant of levels of environmental degradation because of the socially constructed nature of accounting which had led to lower values being placed on natural assets such as non-renewable resources and species diversity. One well-known environmental accounting advocate has argued that if environmental impacts were taken into account it could be shown that Western industrial concerns would not have made a profit for many years.

Although the requirements for disclosure are uniform across industries and types of organisation the reports actually produced vary considerably in terms of coverage. Some will comply with statutory requirements and usually those of the relevant professional body, while other organisations will produce volumes of additional material. Although there has been a lot of empirical research categorising the types of disclosure and measuring the volumes of data produced, there has been little research (if any) which attempts to find out why some corporations make more use of the annual report as a communication device than do others. What follows must, therefore, be intelligent speculation based on the available literature. The nature of the discipline is to change slowly in line with societal expectations/pressures. Consequently, it may be that arguments in favor of a wider accounting must be used to establish the conditions conducive to the expenditure of scarce resources on additional disclosures. These arguments are considered under three headings, those related to traditional suppliers of finance, those related to organisational legitimacy, and those related to the social contract of business with society.

**Market related arguments**

One of the traditional duties of management is to supply information for shareholders. Over time shareholding has become of shorter duration and is often increasingly speculative in nature, involving a modern stock exchange and active trading in corporate securities. Information is the life blood of the determination of share price made by the market, and modern management must ensure that, so far as possible, share prices and returns on capital for their organisation should be comparable with competing investment opportunities.

Consequently, it may be argued that some
corporations provide some socially oriented information because to do so may influence share prices and returns, and therefore be in line with the role of modern management. The empirical evidence is mixed, and some of the earlier studies are suspect on methodological grounds. In general, however, there is at least weak support for the argument that social disclosures in annual reports do not reduce share prices and may in fact support them.

It is clear that regardless of the outcome, these additional disclosures are not made for ethical reasons but as an extension of normal business practice. As such they do not fit within the general thesis of this paper, that social and environmental accounting disclosures may be seen as tactical demonstrations of ethical concern.

Organisational legitimacy arguments

Management may be motivated to undertake voluntary additional disclosures in annual reports because they want to establish or enhance the legitimacy of the organisation with a specific target group or the general public. Dowling and DeFeffe (1975, p. 122) refer to organisational legitimacy in the following terms:

Organizations seek to establish congruence between the social values associated with or implied by their activities and the norms of acceptable behavior in the larger social system of which they are a part. In so far as these value systems are congruent we can speak of organizational legitimacy. When an actual or potential disparity exists between the two value systems, there will exist a threat to organizational legitimacy.

In order to serve the owners (shareholders) managers must attempt to establish and then maintain legitimacy for their organisations, perhaps by making social and environmental accounting disclosures, in order to demonstrate accountability. Does this mean that these disclosures constitute a practical demonstration of ethical concern?

The answer to this question is not clear, but must be qualified by consideration of the attributes being legitimated, and the completeness of the disclosures. Disclosures have tended to be biased towards good news, and sometimes are not truthful (Wiseman (1982); Rockness (1982)). On the other hand, some managements of corporations in traditionally polluting industries are making apparently good attempts to clean up their image, and in doing so to re-legitimate their organisations with the public. The publicity given to donated prizes, scholarships and community activities fall into the category of organisational legitimacy disclosures, as do general institutional advertising aimed at raising the level of public consciousness or recognition of an organisation.

Some would see the organisational legitimacy argument as a means to an end; a way of getting management to increase social disclosures not because it is the right thing to do, but because it is part of their job to advance the interests of the organisation they manage on behalf of investors. This might be taken as an amoral argument. To the critical theorist organisational legitimacy arguments are a means of protecting the status quo and the supremacy of capital. However, in the end society as a whole (if we accept this concept) determines the content of accounting disclosures.

Social contract arguments

The most persuasive moral arguments in favor of increased social and environmental disclosures in annual reports, and therefore the basis for a practical demonstration of ethical concern, lie with the social contract of business with society. The social contract argument is summed up by the following from Shocker and Sethi (1974, p. 67):

Any social institution – and business is no exception – operates in society via a social contract, expressed or implied, whereby its survival and growth are based on:

1) the delivery of some socially desirable ends to society in general and,

2) the distribution of economic, social, or political benefits to groups from which it derives its power.
In a dynamic society, neither the sources of institutional power nor the needs for its services are permanent. Therefore, an institution must constantly meet the twin tests of legitimacy and relevance by demonstrating that society requires its services and that the groups benefiting from its rewards have society's approval.

Many modern States have created the limited liability joint-stock corporation with the status of a legal person, as a means of stimulating investment and encouraging the diversion of capital into productive activity rather than personal consumption. Some of the returns from this investment have been distributed by way of dividends, but much has been available for re-investment. It may be argued that the success of the modern corporation is the result of financial accounting and statutory auditing. The latter ensures that most financial reports are basically trustworthy whilst the former excludes the "inconvenient" costs of externalities and other costs which are not included, such as reduced quality of life by those affected by industrialisation. It is these dysfunctional aspects which social and environmental accounting disclosures are intended to deal with. The power of the modern corporation means that society often appears to have little control over its own creation, which is clearly undesirable. Even the most successful corporations should be subject to the control of the legislature. In addition, corporations should also be subject to principles of morality and justice.

The moral position of the corporation has been outlined by Donaldson (1982, p. 30) as follows:

In order to qualify as a moral agent, a corporation would need to embody a process of moral decision making. On the basis of our previous discussion, this process seems to require, at a minimum:

1. The capacity to use moral reasons in decision making;
2. The capacity of the decision-making process to control not only corporate acts, but also the structure of policies and rules.

Where corporations (in reality the management) do not act as moral agents there are grounds for a structural restraint approach which would probably mean increased legislative control and restraint. The modern corporation exists to provide benefits to society and the social contract which underlies the corporate structure should include justice. This is well expressed by Donaldson (1982, p. 53):

the application of the concept of justice to productive organizations appears to imply that productive organizations avoid deception or fraud, that they show respect for their workers as human beings, and that they avoid any practice that systematically worsens the situation of a given group in society. (original emphasis)

To fail to act in a moral and just manner is to fail to live up to the hypothetical contract between business and society (Donaldson, 1982, p. 57).

If the social contract argument is accepted, and there is a substantial literature on the subject, then there is a need for data to be collected, analyzed, and disclosed and verified, to enable society to evaluate the performance of the organisation in areas other than the determination of income and net worth. The notion of the social contract provides a sound basis for widening the field of accounting. The following section provides some idea of how this might be done in practice.

Social and environmental accounting

Social accounting, Social Responsibility Accounting (Mathews, 1984, 1993), also known as Corporate Social responsibility (Gray et al., 1987), describes the extension of accounting reports to include information about product, employee interests, community activities, and environmental impact. There are no standards or guidelines in Australia or New Zealand, to cover what is disclosed or how this should be done, and very seldom is there any attempt to provide an audit of the figures or statements involved.

Empirical research on annual reports in the United Kingdom, the United States, Australia,
Canada and New Zealand has shown that the volume of disclosure appears to vary with economic conditions, size of organisation, and the industry involved (Mathews, 1993). The industry and size variable may be explained by reference to the organisational legitimacy arguments discussed previously, since some corporations have a higher exposure and political risk than others. The effect of economic conditions may be explained by the need to place survival ahead of all other considerations during periods of economic stress. Disclosures of socially oriented information are often descriptive with relatively little quantification by which to judge change.

Clearly the processes under way are at an early stage of development lacking standardisation, regulation or verification, in a similar manner to financial disclosures in the 19th Century. However, the act of producing the information may be viewed as significant, since management is acknowledging (implicitly at least) that employees are entitled to information where employee reports are produced, that the environment may be important, and that the organisation must relate to the community. These are small steps, but they are also significant if comparisons are made with financial reports of, say, twenty years ago, which concerned only informal information for shareholders and creditors. There is also a long way to go before Social Responsibility Accounting disclosures carry as much weight as conventional information does.

Many aspects of social accounting could represent demonstrations of ethical concern mixed in with public relations hype. Another innovation which suffers from similar problems is environmental accounting.

Environmental accounting

Accounting for the environmental impact of an organisation is a comparatively recent development. Mathews (1984) referred to the need for Total Impact Accounting, in which both private and public costs would be used to compute the total cost of production of goods or services, which would be used in the determination of prices. In theory this development would remove many of the externalities, such as the costs of pollution from the public responsibility. In practice the quest for a reduction in the cost of externalities has taken a different path.

Current developments in the field of environmental accounting are concerned with regulation and disclosure on the one hand, and the use of market forces and tax incentives on the other. The main driving force behind the regulation approach are accountants, whilst economists are chiefly concerned with the use of prices and fiscal incentives.

The regulatory quasi-legal nature of much of accounting, when allied to strong personal beliefs in the need to conserve resources, and to remedy the effects of neo-classical economics, produces various degrees of “green accounting” (Gray, 1990, 1993; Owen, 1992). From a light green perspective Gray (1993, p. 53) considers the conflict between environmental matters and financial criteria:

A company may consider that employee protection is a good long-term financial investment or (more typically in a TQM culture) that accidents and injuries to employees are simply unacceptable to any reasonable, responsible and ethical organisation. Either way, some basis upon which ‘social’, ‘human and/or ‘ethical’ matters can transcend immediate financial criteria has been established. So it is with environmental issues.

It is clear from all the organizations with which we had dealings that until environmental matters are embedded into the performance appraisal system . . . environmental matters will nearly always lose out to financial criteria.

Gray (1993) goes on to produce a number of very detailed operations by which environmental actions may be accounted for. This is clearly provided as a guide to action which, if implemented, would aid the ethical treatment already referred to. However, towards the end of the book, a rather deep green Gray contemplates sustainability, accountability and transparency:

Until the West in general, and Western corporations in particular, are able seriously to address sustainability in a climate of accountability and transparency we cannot see how substantive
measures to mitigate environmental crisis can be
developed. (Gray, 1993, p. 299)

and finally:

We are simply convinced that change is essential
because any system – such as accounting – which
reflects an economic theory which is so funda­
mentally socially and environmentally malign
cannot itself lay legitimate claim to being envi­
ronmentally benign. (Gray, 1993, p. 306)

Clearly, environmental accounting is suffering
from a full scale identity crisis – where does it
fit? into an extension of the traditional financial
accounting system? or something completely
different? Almost the only clear conclusion that
emerges is that green accountants are concerned
about ethical matters, and therefore, the adoption
of environmental accounting disclosures would
be an indication of ethical concern.

Concluding comments

This paper has attempted to relate the develop­
ment of social and environmental accounting to
an expression of ethical concern by the
accounting discipline. The current basis of
Anglo-American accounting is amoral in so far
as certain aspects of industrial and commercial
performance are defined out of consideration.
These include the impact of private organisations
on society as a whole (externalities) and the
inability to relate to individuals and groups other
than in a contractual relationship.

The codes of professional ethics which have
been developed within accounting do not readily
assist with resolving ethical matters, since they
are designed to regulate relations between pro­
fessionals and clients or other professionals.
General concerns about ethical behaviour are not
normally included in the preparation of accoun­
tants.

There are arguments in favour of widening the
definition and practice of accounting to include
social and environmental matters, although it is
not always clear that these arguments demonstrate
ethical concern. Attempting to influence capital
markets would not be such a demonstration. The
process of demonstrating organisational legiti­
macy is more problematic, since, although the
main objective is to maintain or improve the
status of the organisation in the eyes of target
groups or the general public, there is also a will­
ingness to provide more information in order to
achieve this. On balance, this does not appear to
be a strong demonstration of ethical concern.

The social contract between business and
society provides a strong argument for widening
the basis of accounting disclosures to include
social and environmental issues. This argument
is concerned with moral, ethical and just actions
by the management of organisations. Social
accounting disclosures may lead to expressions of
ethical concern; but they may not do so. Infor­
mation about product, employees, commu­
nity activities and environmental impact can be
helpful but there are no standards to control or
validate the disclosures made. There would
appear to be not direct connection between
ethical behaviour by the management of orga­
nisations and the enlarged scale of disclosures. The
same limitation applies to environmental disclo­
sures which may be motivated by organisational
legitimacy or market pressures, or by a belief in
the social contract.

Although additional disclosures are important
and accounting theoreticians should continue to
press for them, an extension of accounting
reports is not synonymous with ethical behaviour
or concern. The development of ethical behav­
ior will have to rely on factors other than social
and environmental accounting, such as a broader
education for professionals, and the setting of
appropriate standards of decision making by the
people at the top of the organisation.

References

Benston, G. J.: 1982, 'An Analysis of the Role of
Accounting Standards for Enhancing Corporate
Governance and Social Responsibility', Journal of
Accounting and Public Policy, 5–17.
Chua, F. C., M. H. B. Perera and M. R. Mathews:
1991, 'Ethics Education in Accounting: An
Australasian Perspective', Discussion Paper No. 116,
Massey University: Division of Accountancy.


Theo's, M. R.: (Forthcoming), 'A Comment on Lewis, Humphrey & Owen, Accounting and the Social: A Pedagogic Perspective'.


Faculty of Business Studies, Massey University, Palmerston North, New Zealand.
Twenty-five years of social and environmental accounting research

Is there a silver jubilee to celebrate?

M.R. Mathews
Massey University, Palmerston North, New Zealand

Introduction
One of the major growth areas within accounting in the last five years has been "accounting for the environment", which has generated interest well beyond the confines of accounting academics and professional accountants. Managers, the media, politicians and the public have noted environmental and, therefore, social problems which may be addressed, in part at least, by identifying, measuring and (perhaps) valuing the interactions between business and the environment. This has not been the situation in the past, and the review which follows identifies the ebb and flow and changing fortunes of the various activities within the overall field of social and environmental accounting. It is important that we do not lose the current momentum, because this field of study must lead to action and change in the relationship between business, the stakeholders which make up society, and the environment which we need to support us all.

The objectives of this paper are:

• to review the past 25 years of social and environmental accounting literature (SEAL);
• to provide a structure to enable readers and intending researchers to organize the literature;
• to comment on trends which appear evident from a systematic study of the literature; and
• to offer a detailed bibliography as a starting point for those interested in this area.

The start of the chosen period coincides with the publication of a number of important contributions (see Beams and Fertig, 1971; Churchman, 1971;
Linowes, 1972; Mobley, 1970), and ends just prior to the symposium on environmental accountability issues in Canberra in February 1996 (that is 1971-1995).

This paper uses three time periods and a number of sub-groups. The rationale for this pattern is outlined in the section on methodology; the author argues that this is a logical division of the literature, while acknowledging alternative structures could be devised, such as country of origin or accounting sub-group. It is argued that the key issues in a review are to recognize trends and developments in the literature without becoming too deeply mired in detailed examination of any particular contribution, and to avoid becoming unconsciously selective and favouring particular areas.

This paper is organized as follows: the introduction is followed by sub-sections on methodology; then the literature is examined in respect of each of the time periods, and then placed into one or more of the categories or sub-groups. Finally, the paper provides concluding comments, including an attempt at determining where SEAL was and where it might progress in the future.

Methodology

The time periods used are: 1971-1980, 1981-1990 and 1991-1995. The headings employed are: empirical studies, normative statements, philosophical discussion, the non-accounting literature, teaching programmes and textbooks, regulatory frameworks, and other reviews of the literature. Within this framework, contributions will be examined in chronological order. In addition to the list of references, a bibliography divided into the same categories has been attached as an Appendix.

The time period has been divided at 1980 and 1990. The first division is considered appropriate because that date has been used by some UI researchers as marking a major change in thinking following the Thatcher electoral victory in the UK, and also because the specialist accounting journal which encourage research in this area were set up in the decade beginning in 1980. The second division coincides with the publication of Pearce et al (1989) and the response by Gray (1990) which is regarded by many as the start of a new era of interest in environmental accounting matters.

The sub-sections are a relatively loose means of comparing similar and dissimilar contributions, and also act as a guide to the relative proportions in each category. The descriptions are self-explanatory, although the separation between normative statements and philosophical discussion was more difficult than anticipated. In many cases, it was a matter of how strongly the author made their arguments, and/or how focused or general the points were that were being made.

This is a personal review in which the author makes many choices; what to include and what not to include, under which sub-heading or heading a particular subject should appear, and the emphasis to be given to particular developments. It is appropriate to acknowledge a previously stated position
favour of evolution rather than revolution, which some readers may construe as placing limitations on the review:

...it must be stated that this book is based upon existing socio-economic conditions of a managed mixed economy and is evolutionary rather than revolutionary in orientation. The position argued is that a more socially responsible accounting may be justified and should be implemented, not to radically change society but to modify and improve our present system, by including measurement and reporting relationships which are currently excluded (Mathews, 1993, p. 6).

However, a deliberate effort has been made to balance any predisposition towards evolution by a deliberate inclusion of some radical sources of literature.

Definitions of social and environmental accounting
Social and environmental accounting has been defined by Gray et al. (1987, p. be) as:

...the process of communicating the social and environmental effects of organizations' economic actions to particular interest groups within society and to society at large. As such it involves extending the accountability of organizations (particularly companies), beyond the traditional role of providing a financial account to the owners of capital, in particular, shareholders. Such an extension is predicated upon the assumption that companies do have wider responsibilities than simply to make money for their shareholders.

And by Mathews (1993, p. 64) as:

Voluntary disclosures of information, both qualitative and quantitative made by organizations to inform or influence a range of audiences. The quantitative disclosures may be in financial or non-financial terms.

And also by Gray et al. (1993, p.6) who defined environmental accounting in the following terms:

...it can be taken as covering all areas of accounting that may be affected by the business response to environmental issues, including new areas of eco-accounting.

Definitions applicable to SEAL do not appear to be problematic, despite some differences, especially where authors cannot decide whether disclosures are expected to be voluntary, or in compliance with legal or quasi-legal requirements, or whether disclosure must be quantitative or financial, to be regarded as a part of the accounting process. The definition which implicitly governs this survey of the literature is broad, as provided by Mathews and Perera (1995, p. 364):

At the very least, social accounting means an extension of disclosure into non-traditional areas such as providing information about employees, products, community service and the prevention or reduction of pollution. However, the term “social accounting” is also used to describe a comprehensive form of accounting which takes into account externalities. Public sector organisations may also be evaluated in this way, although most writers on the subject of social accounting appear to be concerned with private sector organisations.

The period 1971-1980
Introduction
The first period considers the literature from a time when the subject was introduced (Beams and Fertig, 1971; Churchman, 1971; Linowes, 1972; Mobley,
1970) to the end of the decade, by which time a reasonably large volume of empirical work had been published, together with a number of papers explaining the building of models to foster social accounting disclosures.

During the period 1971-1980, the social and environmental accounting literature (SEAL) was underdeveloped. Journals such as Accounting, Auditing & Accountability Journal (AAAJ, 1988); Critical Perspectives in Accounting (CPA, 1990); and the Journal of Accounting and Public Policy (JAPP, 1982) were not in existence, and Accounting, Organizations and Society (AOS, 1975), which was sympathetic to SEAL, had also been concerned with behavioural and organizational aspects of accounting. The leading North American accounting research journals were almost as inaccessible to SEAL then as they are now with perhaps the exception of The Accounting Review's publication of Ramanathan's paper (1976).

It will become apparent in the sections that follow that the majority of SEAL between 1971 and 1980 was directed to reporting fairly unsophisticated empirical studies, which attempted to measure the amount of new information being produced and published by a limited number of enterprises. This was accompanied by a relatively small volume of normative and philosophic contributions. Furthermore, environmental matters were not often identified separately at this time (Dierkes and Preston (1977) and Ullman (1976) were exceptional), but treated as part of a generally undifferentiated social accounting movement.

The material is now presented in the groups outlined previously, beginning with empirical studies.

**Empirical studies**

As indicated above, early empirical studies were not specific in focus. It was a matter of attempting to develop methods to measure the incidence of information disclosure by organizations which was voluntary, tentative, frequently unreliable and unorganized. The focus of these disclosures, if there was one, often changed from one period to another.

The typical outcome of many studies was a "yes" or "no" to the existence of a disclosure of information related to the social dimension of accounting, frequently connected with employees or product (Ernst and Ernst, 1972-1978). Environmental concerns were "invisible" at that time, whether by managers, accountants, or the majority of other observers: the Ernst and Ernst survey included three environmental categories out of 27 (Ernst and Ernst, 1978, p. 22-28). This yes/no analysis was developed over time to include measures of volume (pages, lines, words, etc.) in specific areas, which also brought problems of subjectivity (what should be included and what should not be), and consequent issues of replicability. Measures of the volume of different types of information could also be related to characteristics of the disclosing organizations, such as size or industry, and profitability or capital market performance.
This early literature is still of interest, since this type of research reappears from time to time, and now includes environmental disclosures (see Abbott and Monsen, 1979; Anderson, 1980; Belkaoui, 1980; Bowman and Haire, 1975; Ernst and Ernst, 1972-1978; Grojer and Stark, 1977; Trotman, 1979). This early work suffered from problems with subjectivity of analysis and was also difficult to reproduce. There was also no sound theoretical base. A more detailed analysis of the studies published in the period 1975-1984 can be found in Mathews (1993, pp. 12-23 and Chapter 5).

The accounting firm of Ernst and Ernst produced a series of analyses of the annual reports of Fortune 500 companies between 1972 and 1978 (1971-1977 annual reports). Towards the end of the series, disclosure rates for socially-oriented information occurred with about 90 per cent of the annual reports, but the average volume was about half a page (Ernst and Ernst, 1978, p. 1).

Early empirical studies had a variety of motivations. Bowman and Haire (1975) was one of the earliest studies which looked for a relationship between social responsibility disclosures and increased income to the corporation. It was found that the highest return on equity was associated with a medium level of social responsibility disclosures. In a Swedish study of about the same period, Grojer and Stark (1977) were concerned with developing a goal-oriented report giving explicit consideration to several constituencies, particularly employees. Abbott and Monsen (1979) found no meaningful effect from a study of 450 corporations in the 1975 Fortune 500 list, when they compared a social involvement disclosure scale rating with total returns to investors over the period 1964-1974. Total returns to investors did not vary between high- and low-involvement firms.

Australian studies were quite advanced during the later 1970s and Trotman (1979) showed an increased incidence of social disclosures by the largest corporations listed on the Sydney Stock Exchange. Disclosures were analysed by categories and quantified. Anderson (1980) surveyed Australian accountants to find out their attitudes towards voluntary disclosure of social responsibility data in annual reports. In general there was support.

Belkaoui (1980) is an example of an experiment designed to test whether users of accounting reports react differently when provided with explicit disclosures of social information. Belkaoui found that bankers reacted more favourably to this stimuli than did accountants.

Normative statements
A limited number of models, which may be taken to be normative statements, were published between 1971 and 1980. Like the empirical studies in the previous section, most of these models did not concentrate solely on social or environmental issues, but included a wide variety of material. The most frequently cited contributions are those of Dierkes and Preston (1977), Dilley and Weygandt (1973), Estes (1976a, 1977), Linowes (1972), Ramanathan (1976) and Ullmann (1976).
Linowes (1972) offered a socio-economic operating statement which was intended to quantify, in financial terms, the interaction of the organization with people, product and the environment. This early attempt at model building and quantification is inconsistent with most of the literature dealing with externalities as costs or benefits to the future environment. Linowes (1972) is a modification of traditional historical financial accounting, which recognizes private but not public costs. There is no provision for recognizing or measuring the volume of discharges and their subsequent effects on the environment.

Dilley and Weygandt (1973) provided a statement of funds flow for socially relevant activities for a power station. Although perhaps of greater applicability than that of Linowes (1972) this model still concentrates on the past and present, rather than the future, and uses exclusively financial measurement. The future costs to the public are not calculated and benefits are not evaluated, except in terms of current costs (Mathews, 1993, p. 140) Once again, the environmental area is not separated from other social impacts.

Ramanathan (1976) is regarded as a seminal conceptual contribution to the literature, although, with hindsight, we can see that the contribution has been to the development of the concept, rather than the practice, of social accounting. He proposed a number of objectives and concepts for social accounting, some of which would also encompass the physical environment. Externalities affecting different social segments were to be identified and measured, and included in the periodic net social contribution from individual firms (p. 527). The concept of social overhead was developed as an offset against traditional measures of income, “social overhead is the measured value of a firm’s negative externalities, and social return is the measured value of its positive externalities” (p. 527). Unfortunately, Ramanathan did not provide (and has not since provided) more detailed suggestions on how these figures may be calculated.

Ullmann (1976) offered an early model devoted entirely to the environment. Called the corporate environmental accounting system (CEAS), it used a non-monetary measurement, known as an “equivalent factor”, in conjunction with physical measures of environmentally-relevant inputs and outputs to derive CEAS units. The CEAS units are presented in the form of a balance sheet which includes environmental impacts of the production process and those of customers for the product produced if not subject to CEAS, but less the impact of those products sold to customers which are subject to CEAS. The cost to third parties (the public) of discharges (externalities) is not included. This is an interesting model which represents one of the early attempts at a different form of accounting; non-financial disclosures aimed at reporting environmental impacts. It represented a new departure compared to Linowes (1972), which was based on historical financial accounting.

Estes (1976a) attempted to model systematically the impact of the organization on the environment, and to make disclosures via a social impact statement which listed social benefits and social costs. Environmental damage included damage to terrain, air, water, noise, visual and aesthetic and other
forms of pollution, and solid-waste production. The intention was to show a social outcome, cost or benefit at the end of the period. Cash flows were used as the basis of disclosure, while measurement necessitated valuations using surveys, avoidable and restoration costs, and surrogate valuations and shadow prices. Discount rates would have been needed to convert future costs of externalities to present values for use in the statement. Difficulties with the model appear to stem from the level of sophistication of information that was required and the availability of that information. Financial data were to be used to determine a surplus or deficit as an alternative to the traditional income statement, but the limitations of the process were perhaps not seen as clearly as they should have been.

Estes (1977) was a multi-column version of the 1976 model, with separate columns for customers, employees, etc. This modification only added to the complexity of the original statement. The ideas contained in the 1976 model were useful but perhaps unrealistic, in that historical financial accounting was to be stretched in an attempt to cover a wide area.

Dierkes and Preston (1977) reviewed several extant proposals but found most to be unsatisfactory, since they noted that any proposal for an accounting for environmental impacts needs to have a systematic framework, but not one which aims to bring all events to a common valuation (as in Estes (1976a), for example). The Dierkes and Preston (1977) model is based on inputs and outputs, and uses description and non-financial quantification rather than any attempt to put a financial quantification on externalities. A detailed examination is beyond the scope of this paper (refer to Mathews, 1993, pp. 145-8), but it should be noted that Dierkes and Preston (1977) were perhaps the first authors to identify three uses for environmental impact costs, if these could be obtained:

1. to inform taxation proposals;
2. as a basis for recognition between affected parties; and
3. as effluent charges to be levied against the source of pollution to force internalization and thus the removal of externalities.

Philosophical discussion
Although Mathews (1993) has attempted to argue that there are various justifications for the activities that are now described as social and environmental accounting, at the time, there seems to have been relatively little curiosity expressed about the motivation of those making disclosures.

The empiricists were trying to identify, measure and report what was being disclosed in annual reports and financial statements, with some attempt to find whether there were any causal relationships between volumes of data and firm characteristics; but not attempting to determine why these disclosures were being made in the first place. The social contract approach from politics and philosophy had not yet been borrowed for use in the accounting literature, although some of the normative statements were implicit users of these arguments, and the organizational legitimacy argument (Dowling and Pfeffer,
1975) had not been considered within accounting. The other area which was of major interest related to employees, either in the form of employee reports or value-added statements.

**Radical/critical literature**

There is an interesting contrast between the three parts of this review. During the 1970s, the radical/critical theory literature as we know it today was far less developed. Those who researched non-traditional disclosures or wrote in support of socially-related disclosures were regarded as both radical and critical, because they were explicitly or implicitly criticizing the current structure of the discipline: historical financial accounting reports for shareholders and creditors (Estes, 1976a; Linowes, 1972). It was later that some of these writers were themselves criticized for being prepared to modify rather than replace the system within which accounting was situated.

**Non-accounting literature**

The literature of other disciplines has always had a strong influence on accounting research since many accounting academics come from other disciplines, or use models from other disciplines in order to view accounting problems through a different lens.

Many of the early writers in the area of social accounting (as we now designate it) came from the management discipline, or published in management journals. For example, Bowen (1953) wrote about the social responsibilities of business and in contrast Friedman (1962) was concerned to remind readers that the main purpose of business was to maximize profits. Other relevant contributions included those of Davis (1973; 1976), Eberstadt (1973) and Parket and Eilbert (1975). Shocker and Sethi (1974) have been credited with bringing the social contract argument to the notice of those seeking a basis for extending the monitoring of private sector organizations as a legitimate aim of social policy development (Lindblom, 1983). In general, these authors did not attempt to prescribe courses of action, but served to stimulate interest and response by accounting academics already interested in extending the role of accounting.

The attempts by some economists to develop cost-benefit techniques in their search for solutions to public funding problems (Dasgupta and Pearce, 1972; Mishan, 1972, 1975; Prest and Turvey, 1965) could be argued to be a contribution to the social area, although the techniques employed were technicist and reductionist in nature (Churchman, 1971).

As noted in the sub-section above, the philosophical/political influence was not generally felt until after 1980. However, the influence of environmental economics was important to some of the normative statements which sought to value externalities in order to determine a more appropriate private cost of organizational activity. Of course, economists did not (and could not) agree on how to protect the environment. However, they have contributed ideas on how to generate shadow prices, determine the value of recreational activities, and
use subsidies, taxes and standards to influence environmental discharges (see Siebert and Antal (1979) for a readable account of the economists' view of environmental protection).

As detailed in Gray et al. (1987), this period was notable for extensive developments in the field of social audit, with studies by Social Audit Limited, Counter Information Services, and local authority social audits. In many cases, these audits were overtly political documents designed to apply pressure towards radical changes in industry and society.

Teaching programmes and textbooks
During the period 1971-1980, there were few if any documented efforts aimed at introducing students to the ideas of social and environmental accountants (Estes (1976b); Johnson (1979); and Livingstone and Gunn (1974) could have been used as graduate level readings). Although graduate students may have been aware of the research activities of their instructors, there does not appear to have been any attempt to publish information about the educational potential of these new ideas.

It should be noted that the extant outlets for accounting research did not regard education as a suitable subject for publication; it was a process which was thought to take place, but it was not part of the research activity of an academic!

Regulatory frameworks
There was much less regulation of financial accounting in the period 1971-1980, compared to 1995, and none in respect of environmental accounting, although common law provisions would have applied. The proposals contained in The Corporate Report (Accounting Standards Steering Committee, 1975) and the UK Government Green Paper (HMSO, 1977), could be said to offer some support to social accounting, but not enough to be described as regulation. The US conceptual frameworks (American Institute of Certified Public Accountants, 1973) did not provide assistance, and the American Accounting Association (AAA) studies of social accounting provided only mild persuasion and exhortation (AAA, 1975).

The development of social and environmental accounting has tended to follow that of financial accounting, with a reluctance on the part of the professional organizations to develop standards or regulatory frameworks.

Other reviews of the literature
The author is not aware of any reviews of the state of social and environmental accounting written during this time, other than those reviews which accompanied the literature survey at the beginning of an article or paper. This is not surprising, given the relatively small volume of literature at the time.
In summary, the period 1971-1980 was not one in which the environment was at the top of the list for accounting academics and policy makers. Those researchers and writers interested in the social dimension were generally more concerned with what would now be called “social accounting”, especially disclosure relating to employees and product. The empirical studies included environmental issues as part of a large portfolio of interests, and many of the studies were descriptive and relatively unsophisticated by later standards.

There were a number of interesting normative statements or models including those which were concerned with the measurement, valuation and disclosure of externalities and, therefore, with the protection of the environment. There were two main approaches: those which were attempts to modify historical financial accounting, and to find financial measures for new identities; and those which took a broader view of the task, and recognized that improvements were more likely to come from attempts to develop new measures, including those which were non-financial. With the benefit of hindsight, we can see that most of these models have been superseded by approaches based on regulations, standards, audits, taxes, permits and licences, as well as improved disclosure, often employing non-financial quantification.

As noted in the remaining sections, there was relatively little activity of importance to report, excepting perhaps the potential influence of the environmental economics literature, which appears to have been part of the next time period. The management literature contained timely reminders of the need for business to be concerned about social matters. The writers of this period did not appear to consider that the subject matter of social and environmental accounting was suitable for undergraduate students and specialized textbooks were not available. Regulatory frameworks were also largely absent since financial accounting standards had not been developed to any extent at this time, and early conceptual frameworks either did not accept the social dimension (USA), or these were not accepted by the wider body of accountants (UK).

The period 1981-1990

Introduction

The second period is complex, with the first part of the decade showing increased sophistication within the social accounting area, prior to an apparent transference of interest to environmental accounting in the second part of the decade. An increased interest in the educational aspects of SEAL was also noticeable.

Since 1980, there have been many changes to the focus of the social and environmental accounting literature, with increasing signs of specialization. For example, employee reports and value-added statements attracted a separate group of adherents in the early 1980s (Burchell et al., 1985). General social disclosures have become of less concern, in that they have been replaced by a concentration on environmental disclosures and regulation as an
alternative means of reducing environmental damage. Normative statements and model building have almost disappeared, except in the environmental area.

The development of teaching programmes which include an exposure to social and environmental accounting issues had its roots in this period. In some cases, textbooks on accounting theory have included references to social and environmental accounting issues. Conversely there are other texts, influenced by agency theory, which ignore these issues completely. There are also a small number of specialist texts. The increased regulation of accounting disclosures by means of conceptual frameworks, legally enforceable accounting standards, and legislation is a feature of this period and, in general, this will work towards the end desired by many social and environmental accountants when applied to these courses.

There has not been any great advance in the valuation of externalities and their internalization, other than through legislation and audit, but some of the literature is directed at the self-interest of business, by indicating the cost savings to be made by waste control and reprocessing, or the increased revenue which could be obtained with a "green" marketing strategy directed at products, services and processes. These various themes are continued in greater depth in the sub-sections which follow.

**Empirical studies**

Research conducted since 1981 has changed in both direction and sophistication. Those studies which continued to examine the incidence of social accounting disclosures (that is not separating out disclosures relating only to the environment) have paid greater attention to methodology in order to reduce subjectivity and increase the replicability of content analysis and, in many cases, have attempted some explanation of the source, direction and type of disclosures (Arlow and Gannon, 1982; Belkaoui and Karpik, 1989; Brooks, 1986; Freedman and Jaggi, 1982, 1988; Guthrie and Mathews, 1985; Guthrie and Parker, 1989b; Mahapatra, 1984; Rockness, 1985; Shane and Spicer, 1983; Trotman and Bradley, 1981; Ullmann, 1985, for example).

Attempts to explain the motivation behind any given level of information disclosure have not proceeded very far, being restricted to a limited foray into the area of organizational legitimacy (Guthrie and Parker, 1989a).

There are a number of criticisms of content analysis studies because, it is claimed, the work reports only what currently exists, or has existed, without reference to normative positions about what should be; often lacks a theoretical basis; and provides indirect support for disclosures which are concerned mainly with improving the image of the organization, and maintaining the status quo in terms of social structures (Burke, 1984; Wiseman, 1982). Furthermore, where it has been possible to check the information provided, the accuracy has been low (Rockness, 1985).

The author has some sympathies with the general concern about description, compared to the development of a theoretical basis for extending disclosures. Nevertheless, a limited amount of this type of research is necessary in order to
monitor the extension of accounting disclosures, otherwise there is the possibility of theorizing in a vacuum. The omission of studies which attempt to link concepts of motivation with organization characteristics and volume/type of disclosure is unfortunate. Obtaining data on the stated reasons why some management invest scarce resources in making additional disclosures, while others conform to minimal reporting requirements, would be useful in the further development of theories about motivation.

Normative statements
A feature of the period since 1980 has been the absence of model building of the type described in the corresponding section of the earlier time period. This may be partly a function of the type of analytical framework used, since it is often a subjective assessment whether an item is a normative statement, part of a philosophical discussion, or belongs as part of the radical/critical literature; in some cases more than one category might be appropriate.

The term is used here to identify those contributions which put forward specific proposals, rather than only discuss the issues or critique what others have done, or the context in which the work proceeds. The resulting list, which is an example only, is rather short, which may mean that the separation criteria are problematic. The main contributions listed here are Brooks (1986); Burke (1984); Mathews (1984); Logsdon (1985); and Wartick and Cochran (1985).

Burke (1984) and Brooks (1986) are Canadian contributors. Burke designed a detailed social accounting information system (SAIS), and a detailed empirical study of social disclosures in Canada by Brooks (1986) also recommended a corporate social performance framework. Mathews (1984) put forward a conceptual model for the categorization of various forms of socially-oriented disclosures, which may be familiar to some as the basis for Mathews (1993). One feature of this structure was the separation of social responsibility accounting from total impact accounting, an early proposal to separate environmental accounting from social accounting.

Logsdon (1985) put forward a model which predicted the responses of certain organizations to the evolution of a social issue. Although the specific study related to the oil refining industry in the USA, the author has always thought that there was an opportunity for generalization to other industries and situations. Wartick and Cochran (1985) attempted to develop a corporate social performance model.

Philosophical discussion
In this period, there appear to have been two main areas of philosophical discussion (in terms of the framework used here, that is not providing normative statements or being part of the radical/critical literature). These are exchanges about the extent to which accountants should be involved in the social and environmental accounting areas (Benston, 1982a, 1982b, 1984; Schreuder and Ramanathan, 1984a, 1984b), and attempts to borrow concepts such as the social contract and organizational legitimacy to justify
development of accounting disclosures which would benefit non-traditional user groups (Donaldson, 1982; Richardson, 1985, 1987; Richardson and Dowling, 1986).

Some of the best-known contributions would be Parker (1986) and Gray et al. (1988), and the textbooks referred to below. A recurring theme is the opportunity for the accounting discipline to adopt a different perspective, and assist in undoing some of the environmental damage caused by short-term policies, which were aided by traditional financial accounting which does not value externalities. Hines (1988) made an important observation on the process by which accountants make decisions which have far-reaching consequences. As our chronology moves closer to the end of this period (1990), the volume of published literature devoted to social accounting diminishes in favour of an expansion of that dealing with environmental matters.

The environmental accounting literature contains a range of views which may be categorized as light green to dark green, with the former suggesting that environmental problems are not potentially disastrous for the planet, and the dark green tending towards the radical ecologists' position that disastrous consequences are imminent. Another dimension runs from "accounting" to "economic" in orientation, from those environmental accountants who advocate a traditional "accounting" view (of regulation, standards, audit, enforcement, and penalties for non-compliance) through fiscal measures to those who would implement a more "economic" approach using inducements such as pollution permits and other market-oriented actions in an attempt to avoid regulations. There may be a correlation between "greenness" and a preference for regulation and prohibition, and a distrust of market-based measures, because it is argued that the unfettered market has caused many of the environmental problems in the first place.

Alternative and competing views on social and environmental accounting are presented by some contributors to the radical/critical literature, but seldom by other parties, except the Benston versus Schreuder and Ramanathan debate previously referred to, although Donaldson's view of the social contract is challenged by Den Uyl (1984).

The sheer volume of the contributions to the general advocacy of environmental accounting appears to ensure the continuation of activity in this area for some time. However, the majority of the interest continues to come from a limited number of participants and, therefore, at the expense of the development of the broader field of social accounting. A continuation of interest does not necessarily translate into research output or practice.

**Radical/critical literature**

Just as the environmental accounting literature has flowered since the late 1980s, so the last ten to 15 years have seen the development of a radical/critical theorist literature, which has addressed what the authors perceive to be the shortcomings of previous work in the areas of business ethics, the performance of the accounting profession, plant closures, control processes, and the
pervasive influence of accounting as a means of preserving the status quo by supporting capital over labour interests (Cooper and Sherer, 1984; Laughlin and Puxty, 1986; Tinker, 1985). Attention has also been drawn to what some see as the shortcomings of the emergent social and environmental accounting literature. In total, there is sufficient of these contributions to enable specialist journals (Critical Perspectives on Accounting; Advances in Public Interest Accounting) to expand after only a few years in existence.

The mainstream environmental accounting literature has benefited from an interchange of ideas and philosophies. For example, the exchange between Parker (1986) and Puxty (1986) provided insights into alternative views of a developing area.

Non-accounting literature
The non-accounting literature listed in the Appendix is related to three issues. First, a philosophical justification for non-traditional, socially-oriented accounting, such as the social contract. This was discussed at length in Donaldson (1982) and, although a relatively aged contribution, this may be seen as the start of a rich vein of philosophical material. Second, an explication of the basis for concern about the environment can be found in Elkington (1990) and similar works in the environmental/ecological/sustainability field. Third, there are the contributions from environmental economics represented by Pearce et al. (1989). It was the response to this work by Gray (1990) which could be said to be the start of the latest developments in the environmental accounting literature to be discussed in the next section.

The non-accounting literature appears to be of lesser importance than previously, excepting that which provides arguments in favour of sustainability and prevention of environmental degradation. The economics literature is perhaps accorded less standing than in the 1970s (Gray, 1990). The philosophical literature is important where model building is seen as important and, as noted above, this activity also appears to be accorded less weighting by social and environmental accountants than previously.

Teaching programmes and textbooks
Several specialist textbooks have been published since 1987. Gray et al. (1987) were almost certainly the initial leaders in this area; Parker et al. (1989) include social accounting as well as behavioural accounting; and Gray (1990) is most important in providing an appropriate introduction to environmental accounting. There have also been a number of journal articles advocating or describing teaching programmes which involve the study of social and environmental accounting. These include Blundell and Booth (1988).

Regulatory frameworks
The structuration of accounting and reporting has continued during this period, with increased use of conceptual frameworks, accounting standards, and legal provisions to reduce the degree of individual interpretation in
financial reporting. However, little of this accounting structuration applies to social and environmental accounting, which is largely independent of current conceptual frameworks for financial accounting and accounting standards.

Legislation related to environmental protection and case law has had some impact on the development of activities such as environmental audits. The most far-reaching piece of environmental legislation during this period was the US attempt to determine the financial responsibility for reclaiming contaminated land. The Comprehensive Environmental Response Compensation and Liability Act (CERCLA), which has now been strengthened by the passing of the Superfund Amendment and Reauthorization Act of 1986 (SARA), is an effort to force the present users of land to clean up contaminated sites, even though they may not be responsible for the contamination. To recoup the costs, the current owners may claim from those who are proved to be responsible for creating the problem in the past and, if this is not possible, from a “superfund” which has been contributed to by industry at large. This type of legislation has the potential for influencing other legislators, for example, in Canada, a 1990 standard related to the removal of contamination and the restoration of sites (capital assets) (CICA, 1990). In the UK, a register of contaminated land must be compiled under the provisions of the Environmental Protection Act 1990. In both cases, there have been delays caused by the scale of the problem and legal obstacles (Gray et al., 1993, pp. 218-9).

As noted elsewhere, social accounting has received progressively less attention during this period, as environmental accounting became increasingly in vogue. The regulatory frameworks that existed in the social accounting area tended to be concerned with employee-related reporting in Europe, including the Bilan Social and the annual report disclosure requirements in the UK. Although not part of any legislation, the structured reporting recommended for social accounting by the Union Europeene des Experts Comptables, Economiques et Financiers (UEC, 1983) could have been effective in leading corporations to make more social disclosures in an organized manner.

Other reviews of the literature
During the period under review, there were few attempts to review the entire literature in the manner attempted in this paper, except as part of specific papers, or in developing other ideas such as in Gray et al. (1987).

Summary
In summary, the period 1981-1990 produced different patterns of publication than in the previous period. The empirical research was more analytical and less descriptive; the normative models which were a particular feature of the 1970s were largely absent, but in their place was a significant development in the philosophical debate about the role of accounting in disclosing information about social and environmental accounting activities and, later, about the nature of environmental problems and the type of reporting which would assist a wider range of users.
The radical/critical literature made up a larger proportion of the output during this period, extending into many aspects of accounting research. A less encouraging view of the attributes of social and environmental accounting was offered by Tinker (1985). The possibilities of using social and environmental accounting in educational programmes have been explored by limited number of writers.

The period 1991-1995

Introduction

The last period (1991-1995) saw the advancement of environmental issues within accounting on a broad front, including interest from managers as well as accountants. This period was characterized by the almost complete dominance of environmental accounting over social accounting, with perhaps the exception of Gray et al. (1995a, 1995b). The concerns of employees, information about products and instances of community involvement may be documented in annual reports, but there do not appear to be many accounting researchers who now report on these matters, and any commentary about what should be disclosed has disappeared from the accounting literature. A new journal entitled Human Resource Accounting and Costing, based at the School of Business, Stockholm University, may indicate a change in this trend. The disappearance of interest in social, as distinct from environmental, accounting has been noted by other commentators (for example Gray, 1995b).

Empirical studies

The special issues of Accounting Auditing & Accountability Journal and Accounting Forum (1991 and 1995 respectively) previously referred to, provide opportunities for researchers in the environmental area to report their findings. Empirical studies to determine the extent of environmental disclosures were carried out by Adams and Roberts (1995); Blaza (1992); Deegan et al. (1993); Gibson and Guthrie (1995); Harte and Owen (1991), 1992; Roberts (1991, 1992). There have also been a number of extensions from environmental disclosure into environmental auditing (Tozer and Mathews, 1994). More recent work demonstrates the ability of some contributors to combine an account of development to date with details of disclosures and an appreciation of the need for theoretical underpinnings (Gray, 1995a; Gray et al., 1995a, 1995b).

Normative statements

Recently, a number of contributors have attempted to model European attempts to provide for sustainability (Gray, 1992) and the Bilan Social (Bebbington, 1992 Christophe and Bebbington, 1992) and, in Canada, the Canadian Institute of Chartered Accountants (CICA) has provided a framework to guide members in their approaches to environmental auditing (CICA, 1992, 1993). Burritt (1991) has produced a model of environmental accountants as an "epistemic community" assisting with the problem of ozone depletion. Hines (1991) argue strongly against moves to value nature as simply another asset. These
developments must be contrasted with the lack of interest in developing models of social accounting during this period.

**Philosophical discussion**

Much of the philosophical material in this period was included in the special issues already referred to, which makes them more accessible to newcomers to the discipline (Fiedler and Lehman, 1995) and in the literature developing the arguments in favour of environmental accounting (Owen, 1992). Other activities which have recently become of interest are sustainability (Batley and Tozer, 1993; Geno, 1995) and environmental auditing (Gray and Collison, 1991; Tozer and Mathews, 1994). Stone (1995) has contributed a discussion of the role of management accounting in assisting with sustainable development. Wildavsky (1994) provided one of the few contributions questioning environmental accounting, rather along the lines of Benston (1982a, 1982b, 1984) in respect of social responsibility accounting. Social auditing has been reappraised by Zadek and Reynard (1995).

**Radical/critical literature**

Radical contributions to the social accounting literature include Parker (1991) in “conversation” with Puxty (1991); Puxty et al. (1994), and Tinker et al. (1991). One message, promoted by many critical accounting researchers, is that the social and environmental area must guard against absorption by the accounting profession which would “institutionalize” them (Power, 1991) and recognize that attempts to keep to the middle ground are themselves problematic (Tinker et al., 1991). These issues have been incorporated into radical environmental contributions (Maunders and Burritt, 1991). Gallhofer and Haslam (1995) offer a critical view of environmental auditing.

**Non-accounting literature**

The main contribution to environmental accounting from other literature during this latest period was from the field of management and control and strategic planning – in particular, the development of environmental management systems (EMS). Gray et al. (1993, p. 49) noted once again that changes in policy and outlook are much more likely to occur when supported from the higher reaches of the organization – the “tone from the top” approach which will incorporate appropriate resources and structure, leading to the development of an EMS. Elkington and Jennings (1991) outline the processes involved in developing such a system, which may be seen as part of total quality management (TQM).

One conclusion that may be drawn from this literature is that accountants cannot initiate the development of an EMS approach from inside their discipline nearly as easily as they could from a managerial perspective. Ultimately it is the managers who make the policy and strategic decisions, and not the accountants who design and administer the systems.
During this period the strategic management literature included some material related to both social responsibility and environmental issues, although heavily weighted towards the latter. In particular, *Long Range Planning* published a number of articles, including a special issue dealing with environmental matters in 1992.

Vyakarnam (1992) reported on an examination of the annual reports of the top 100 UK-based companies. Although the approach is not exactly the same as that in the accounting literature, the results are generally similar.

In a critical examination of corporate environmental policy (CEP) in practice, Shimell (1991, p. 11) stated that, at that time, there were no more than "a dozen British companies with a total, structured CEP", and also comments that "the conference scene is dominated by the same 'green' roadshow of eloquent speakers with little experience of having actually worked with industry". This theme of "practical (and for specific organizations) versus theoretical" is found in other articles (Einsmann, 1992; Tuppen, 1993; van Engelshoven, 1991).

The importance of developing a strategy for corporate relations with the environment is argued by Azzone and Bertele (1994); Bhat (1992); Hutchinson (1992a); and Tuppen (1993). The role of the chief executive in developing environmental strategies and policies has been discussed by Hutchinson (1992b).

Technical issues appear to be of more importance in the strategic management/planning literature than in the accounting and related literature, for example, value-chain collaboration to assist recycling (Roy and Whelan, 1992) and value:impact assessment to reduce the impact on the environment (Hindle et al., 1993).

**Teaching programmes and textbooks**

In recent times, there have been several textbooks and journal articles covering both social and environmental accounting. These include Mathews (1993); Owen (1992); and Perks (1993) which is a composite text addressing the role of accounting in society, and Mathews and Perera (1995), one of the few accounting theory texts which includes a chapter dealing with social and environmental accounting issues. Macve and Carey (1992), Gray *et al.* (1993), and Rubenstein (1994) concentrate on the environmental issues. Reviews of these books may be found in Bebbington (1995) and Owen (1995).

Lewis *et al.* (1992), and Mathews (1994a) consider the problems associated with incorporating new ideas into the accounting curriculum, while Gray *et al.* (1994), and Puxty *et al.* (1994) offer suggestions about the need for additional programmes to correct perceived problems in current accounting education. Owen *et al.* (1994) have reported on the state of social and environmental accounting education in British universities.

**Regulatory frameworks**

There is still little regulatory framework affecting social and environmental accounting disclosures, which are not recognized and included in either
statutory requirements or conceptual frameworks designed to provide for disclosures in general-purpose financial statements. To date, conceptual frameworks for accounting do not extend to non-financial quantification and social or environmental issues.

However, legislation has provided for increased regulation of discharges to the environment, for example, in New Zealand the Resource Management Act 1991 is only one of a large number of relevant Acts detailed and discussed by Milne (1992). In Australia, Bates (1992) has outlined the extensive legal requirements relating to the environment. The US “Superfund” legislation remains in force and has influenced the Canadian profession to develop an accounting standard which relates to the removal of contamination and site restoration costs (CICA, 1990). Although Gray et al. (1993) were concerned with the slow progress of environmental regulation in the UK and Europe (p. 217), Ball and Bell (1994) have reported in depth on UK legislation in this area, and the profession in the UK appears to be providing members with guidance on environmental matters (Collier et al., 1993). Professional bodies in the USA and Canada are now providing members with assistance in dealing with accounting and auditing problems related to the environment (CICA, 1992; Specht and Buhr, 1994).

The development of a clear regulatory framework is getting closer in several countries. The regulation is not coming through the development of clear conceptual frameworks and standards by the accounting profession, except in Canada, but by way of legislation which is adapted and interpreted by the accounting profession in order that reports may be prepared and audited. The progress is uneven but, compared with that in the area of social accounting disclosures, it has been rapid during the past five years.

Other reviews of the literature
Gray et al. (1995a, 1995b) have provided a lengthy review of corporate social and environmental reporting as part of an empirical paper and a number of other contributions do the same thing. The texts referred to in the Appendix have a measure of historical review (especially Mathews, 1993). Mathews (1994b) was a limited and tentative attempt at reviewing activities over about a five-year period.

Summary
The period was one where publication interest in environmental accounting has outstripped that related to social accounting. One difference between the active period of empirical studies in social accounting and the corresponding period for environmental accounting is that the latter appears to generate a stronger personal commitment to the subject of the research. There may be less objectivity and detachment about research into environmental issues compared to the content of social accounting. This may be defended on the grounds that environmental issues are more fundamental to species survival!
There has been a relative lack of normative/philosophical work with accounting during this period, for example, in environmental accounting. Models of the 1970s have not been revived and adapted to the more receptive climate which might be more accepting of discussions about the valuation of externalities. Teaching and curriculum issues have been far more prominent over the last five years and, in most cases, both social and environmental matters are included in the discussion.

Discussion
This paper has recorded the results of a systematic examination of the published research literature in social and environmental accounting over a period of 25 years.

A number of trends were evident. In the first period, 1971-1980, the majority of contributions related to social and not environmental accounting and, in many cases, subsumed the one within the other. The empirical studies were mainly descriptive and not particularly sophisticated compared to later work in the area, and to studies in areas favoured by the mainstream journals. The were several models and similar normative statements, providing materials which was a feature of the 1970s, whereas philosophical discussion was not widespread, with only a few contributions which attempted to direct attention towards organizational legitimacy as a basis for the development of new forms of accounting. The radical/critical theorist group had not emerged in SEAL at that time; the radicals were those academic accountants advocating social accounting. Teaching materials and programmes in environmental accounting and regulatory frameworks were conspicuously absent in this period.

In the second period, 1981-1990, the attention given to environmental matters increased dramatically, empirical studies were more thorough, there were few normative statements being made, but many more articles discussing philosophical issues, although the discussion of the basic motivation for the development of non-traditional disclosures was not extensive. The limited radical/critical literature provided an alternative view of developments, and a number of contributions were made towards the teaching of social and environmental accounting. The non-accounting literature, including that related to environmental economics, was used to develop and inform the philosophical discussion on the development of environmental accounting.

The developments of the period 1991-1995 were a continuation of the late years of the previous decade. In particular, the continued growth of environmental accounting, which has driven the research agenda and brought some new researchers into the field, has been quite spectacular. There has been a cost in terms of work in social accounting, which almost ceased during this period.

Writers in the field of critical theory have noted that the new developments do not often challenge the status quo, in that considerable attention is devoted to reporting what is disclosed, but not to actions which could change the underlying system. The normative/philosophical literature has not been strong
in environmental accounting, and teaching programmes, while they have been put forward, do not appear to have made inroads into the space available for the overall undergraduate programme.

Additional developments in this period have included environmental audit. Unfortunately, most of this work has been outside of the accounting literature and discipline, particularly with the use of scientists and technologists. Once again the reluctance of accountants to move away from traditional attitudes and paradigms is limiting the advance of the discipline into new fields of endeavour. Strategies for meeting environmental problems from the perspective of management have been discussed in the strategic management and planning literature. As might be expected, in this literature, the view of the problems and solutions is more pragmatic, and driven by different imperatives than most other SEAL.

**What is the current position of SEAL?**

Twenty-five years of social and environmental accounting has produced a prodigious volume of literature, with further contributions in each issue of the less conventional/traditional journals (or those willing to experiment every now and again). Without *Accounting Auditing and Accountability Journal*, *Accounting Forum*, *Accounting Organizations and Society*, and more recently *Critical Perspectives on Accounting*, and *Advances in Public Interest Accounting*, the coverage would be much less developed, which leads to a fundamental question: why has social and environmental accounting not yet been accepted by mainstream accounting academia?

There could be at least five responses: first, the normative/deductive paradigm is not currently fashionable. Indeed, it has not been so since about 1970 and, at one point, social accounting advocates were given to producing models which could not be tested empirically and were somewhat ambitious in attempting to cover all possible/actual problem areas. Second, the methodology employed in attempting to answer empirical questions is underdeveloped and, therefore, the results are trivial and/or unreliable. This might have been so at one time, but is not the case today. A clearer statement of the generalizability of some of the findings might assist, but this is not always possible or even desirable. Third, the empirical question of what disclosures of social, and more recently environmental, information can be found in annual reports - type, location, quantification, reliability, veracity - is not the type of empirical work currently favoured by conventional/traditional journals. It does not test responses to hypotheses based on agency theory and is not directly connected with capital markets. The concept of usefulness of information to stakeholders acquires new meaning when additional stakeholder groups are recognized. Fourth, the empirical work currently being undertaken does not fit with the “scientific paradigm” demanded of research in many major academic institutions and, therefore, the majority of research journals. A final response is that academic
accountants involved in social and environmental accounting research are often critical of the status quo, and not content to merely report on what exists. Therefore, their work is characterized as either normative/deductive or radical/critical. Neither paradigm is currently acceptable to many conventional/traditional research outlets.

It is worth noting that, despite the reactions of professional accounting bodies which, with some exceptions, have ignored the area, individual reporting entities have developed new forms of reporting. Although social accounting has been downplayed in the overall research agenda for several years, an examination of the annual reports of the larger corporations would reveal many disclosures recognizable as social accounting information. Similarly, larger organizations are also producing environmental reports, despite the lack of interest in these developments by most of the professional accounting bodies. The reasoning behind the acceptance by some managerial groups of the need to provide additional, socially-oriented, disclosures should be an important research area.

In view of the lack of acceptance of social and environmental accounting (SEA) by the accounting profession and by mainstream researchers, some would argue that a more radical approach is the only way to make an impact. Increasingly, the radical/critical theorists have examined the various areas within accounting to expose the value systems and partialities which lie within and behind existing practices. The outcome of this work has been intellectually stimulating and a major contribution to the literature of the discipline. However, do these approaches assist in a world where the accounting profession was developed to do no more than assist particular groups (that is providers and managers of capital)?

Although Tinker (1985) and Tinker et al. (1991) are powerful statements about the problems created by a narrow view of accounting as a value-free, technical discipline, which readers of Accounting Auditing and Accountability Journal will recognize is not the case, these well respected contributions do not offer alternative ways forward. In any evolution versus revolution debate, revolution does not suggest how we might proceed! Evolution suggests that those who wish to change the extent to which organizations report on social and environmental matters need to keep doing what they have been doing, only do more of it! Annual reports now include more SEA material than ever before, even though there are no statutory or regulatory frameworks relating to this material in most countries, and despite many professional bodies avoiding statements or measures of support. Clearly some within corporate management are taking notice. Alliances with other disciplinary areas may also be appropriate. Accountants have tended to argue that the content of the annual report should be left to them to decide and yet this has not proved to be a sustainable argument; some compromise of this position may now be necessary.

At the end of 25 years, a great deal has been achieved, although much more in the last 15 than the first ten years, and we do have something to celebrate.
However, there is no room for complacency, as indicated in the following observations.

The emphasis on environmental accounting in SEAL is frequently at the "very light green" end of the range of possible involvement. This position does not reflect the views of a large number of environmentalists and their supporters, but is probably a true reflection of the views of accountants and managers, who wish to modify the way the system works without seriously altering it. The possibility of "capture" by the current professional structure must be of concern to those who see environmental accounting as an opportunity to make fundamental changes to the way in which developed economies function.

The lack of support for environmental accounting from much of the accounting profession means that other groups are establishing themselves in this area, to the probable future detriment of the accounting discipline and profession. Corporate environmental management systems and related control systems are proliferating without much assistance by accountants. Once these groups are firmly established, they may resist a belated interest from the accounting profession.

There are still too few academics and institutions involved in social and environmental accounting, and many have been in the field for a long time; new blood is needed if the area is to take advantage of opportunities for interdisciplinary co-operation. It is difficult to see how this situation can be changed except through the educational process. The Centre for Social and Environmental Accounting Research (CSEAR) has increased the number of potential academics and institutions involved, through their annual summer school; and other bodies are beginning to follow suit, such as the Australian National University, with the symposium for which the original version of this paper was prepared.

The teaching/educational aspect has not reached a satisfactory level of activity and is needed if the next generation of academic accountants are to carry on the work, and if the professional arm is to be reformed. A satisfactory educational programme would be one where accounting theory and alternative forms of accounting received a level of emphasis equivalent to that given to conventional corporate accounting. Unfortunately there is no evidence of this occurring. Indeed, it is possible that the reverse is the case.

The emphasis on environmental accounting has tended to reduce activity in the field of social accounting. This is an undesirable situation since social accounting has a powerful agenda, much of which remains unfinished. In particular, the position of employee-related disclosures has been greatly reduced over the period since 1981.

Certain areas of interest have not received appropriate attention. For example, research is needed into the motivation of management for organizing/authorizing disclosures, as well as further work on the valuation of externalities of varying types.
Future directions

The author suggests that future directions for SEAL research could include the following, not necessarily in order of importance:

(1) First, continuing with the tradition of empirical research aimed at documenting and analysing what is disclosed in the areas of social and environmental accounting should be one of the future directions for SEAL. This work, although perhaps not accepted by conventional/ traditional journals, is valuable as a record of the current state of organizational disclosure and, therefore, of the distance that remains to be travelled along the path to full accountability by economic actors.

(2) Second, by attempting to reactivate an interest in social accounting, preferably without taking away the current concern with environmental issues, researchers would provide a balance to research programmes. This should include all forms of research, including normative-deductive work in the field of human resource accounting theory and the recognition of various types of externalities.

(3) A third direction for future research would involve attempting to discover the reasons why management authorizes the accounting function to produce social and environmental information, even when the accounting profession does not show any interest. Some of the possible reasons include the social contract, organizational legitimacy, and attempts to impress the capital markets, but we do not know whether there are other motivating factors, or the relative importance of any particular influence.

(4) Fourth, reactivating the normative/philosophical research which led to the model-building attempts of the first period; it is now time to reactivate this type of research, particularly since there are now more journals to publish this type of work. It is also an area to which critical theorists may contribute, since they are unlikely to take up the other suggestions made above.

(5) A fifth direction could be to link research with teaching, and teaching with practice, through the development of the curriculum. Bebbington (1995) has provided an excellent review of the lack of connection between curricula and the services which accountants provide. Research is needed to investigate the extent to which curricula are determined by the profession, the academic institution, the individuals teaching the programme or various combinations of these groups.

(6) Sixth, by recognizing the contribution of other disciplines to SEAL. Much research by accountants will need to be of an interdisciplinary nature, developments which will provide challenges and opportunities different from those of the past, but also lead to a much richer set of data, or more comprehensive models for the solution of problems of social disclosures. The contribution from strategic management specialists and
the technical expertise required to address the technical problems of recycling and re-engineering will be necessary in the development of strategies for reducing impacts on the environment.

(7) Finally, in this list of suggestions, researchers in the social and environmental accounting field could co-operate with other groups of professionals in developing regulations, standards, policies and strategies for problem solving, particularly in the environmental area. The activities underlying SEAL are dynamic and very important and must not be seen as part of an esoteric, isolated and “academic” activity. Of all forms of accounting, the social and environmental is of paramount importance to a majority of stakeholders and, in the longer term, to all stakeholders.

Concluding comments
This paper has attempted to construct a classification for reviewing SEAL in order to provide an answer to the question given in the title. As part of this process, developments and trends in the literature have been observed, and strengths and weaknesses of past and present research patterns identified. The paper concludes with an examination of the present position and some suggestions for future directions. An extensive, though not exhaustive, bibliography has been provided as an appendix.

Fashions exist in accounting research, as in other areas of human activity, and the interest in social accounting, which took some time to develop, was rapidly swept aside by environmental accounting from the late 1980s. There are signs that social accounting may be about to make a comeback, but the evidence may be a year or two off.

The position of the critical theorists is changing (or perhaps has changed) from a time when attempts to develop social and environmental accounting were regarded simply as additional forms of legitimation by capitalist interests to a point where attention is being given to alternative forms of accounting. Once again, these contributions fall outside the time limits of this review.

Despite the clear success of the Centre for Social and Environmental Accounting Research (CSEAR) at the University of Dundee, in terms of developing networks and preparing future researchers, the failure to get social and environmental accounting into the undergraduate curriculum is a major disappointment. In general, the next generation of accounting professionals are almost as poorly prepared to evaluate new developments (and embrace them where appropriate) as were past generations. Accounting theory is too often simply the knowledge required to understand the pronouncements of the standard-setting bodies and is, therefore, an inadequate basis for considering new developments, including social and environmental accounting.

This situation is all the more regrettable since the interest in environmental issues has extended beyond accounting and accounting academics to include government agencies, the management and directors of corporations, and
politicians, some of whom regard the issues as too important to be left to accountants. This last point may be the most important of all; accountants, whether academic or professional, must redirect their efforts before it is too late and they find themselves to be experts in a shrinking area of diminishing importance. One way to prevent this happening is to broaden the field covered by accounting to include social and environmental data, including environmental audit.

References and further reading


Canadian Institute of Chartered Accountants (1990), ICA Handbook Section 3060, CICA, Toronto.

Canadian Institute of Chartered Accountants (1992), Environmental Auditing and the Role of the Accounting Profession, Research Report, CICA, Toronto.


Ernst and Ernst (1972-78), Social Responsibility Disclosure Surveys, Ernst and Ernst, Cleveland, OH.


Friedman, M. (1962), Capitalism and Freedom, University of Chicago, Chicago, IL.


**Appendix**

Note that, in the interest of saving space, only work that has been published has been included: conference papers, including those reported in proceedings, and newsletters have been excluded. Items may appear under several headings as appropriate.
Social and environmental accounting 1971-1980

Empirical studies


Ernst and Ernst (1972-1978), Social Responsibility Disclosure Surveys. Ernst and Ernst, Cleveland, OH.


Schoenfeld, H.M. (1978), The Status of Social Reporting in Selected Countries, Contemporary Issues in International Accounting, Occasional paper No. 1, University of Illinois, Urbana, IL.


**Normative statements**


Philosophical discussion

Robertson, J. (1976), "When the name of the game is changing, how do we keep the score?", Accounting, Organizations and Society, Vol. 1 No. 1, pp. 91-5.


Radical/critical literature
During this period, the material contained in the section headed "Normative statements" would have been regarded as radical literature.

Non-accounting literature


**Textbooks, monographs and teaching programmes**

**Regulatory frameworks**

**Other reviews**
None known for this period, other than those given as part of literature reviews in individual papers.

**Social accounting 1981-1990**

**Empirical studies**


Normative statements


Philosophical discussion


Radical/critical literature


Non-accounting literature


Textbooks, monographs and teaching programmes


Regulatory frameworks


Other reviews


Environmental accounting 1981-1990

Empirical studies


Normative statements


Philosophical discussion


Radical/critical literature

Non-accounting literature


Textbooks, monographs and teaching programmes


Regulatory frameworks


Canadian Institute of Chartered Accountants (1990), *ICA Handbook Section 3060*, CICA, Toronto.

Other reviews


Social accounting 1991-1995

Empirical studies


Normative statements


Philosophical discussion


**Radical/critical literature**


**Non-accounting literature**


**Textbooks, monographs and teaching programmes**


**Regulatory frameworks**


**Other reviews**


Environmental accounting 1991-1995

Empirical studies


Normative statements
Canadian Institute of Chartered Accountants (1992), "Environmental auditing and the role of the accounting profession", Research report, CICA, Toronto.
Canadian Institute of Chartered Accountants (1993), "Reporting on environmental performance", Discussion paper, CICA, Toronto.

Philosophical discussion


Radical/critical literature


Non-accounting literature


Textbooks, monographs and teaching programmes


Regulatory frameworks


Canadian Institute of Chartered Accountants. (1992), Environmental Auditing and the Role of the Accounting Profession, CICA, Toronto.


Other reviews


DEVELOPING A MATRIX APPROACH TO CATEGORISE THE SOCIAL AND ENVIRONMENTAL ACCOUNTING RESEARCH LITERATURE

Reg Mathews*

ABSTRACT

This paper attempts to improve on the framework used by Mathews (1997a) to organise the growing social and environmental accounting research literature by, firstly, using the philosophies perceived to underlie research studies in order to categorise contributions, and secondly, by combining the two approaches into a matrix structure.

It was found that underlying philosophies appear to range from critical theory, through the social contract of business and society and organisational legitimacy to the 'business case' at the other end of a possible spectrum. The models or operating systems loosely associated with these motivators included idealistic exhortation, mega-accounting theory, various forms of Triple Bottom Line reports based on GRI2002, AA1000, and SA8000, and environmental management accounting influenced by EMAS and ISO14000.

To illustrate the application of this approach examples have been drawn from a number of proposals or models that have been made to organise additional disclosures within reports to a range of stakeholders. The same examples would be classified under the framework used in Mathews (1997a) as either normative statements or philosophical discussion. The use of perceived underlying philosophy to categorise contributions can be combined with the other parts of the framework to create a matrix into which the literature may be organised.

INTRODUCTION

The social and environmental accounting research literature has developed at a rapid rate since 1970, leading to attempts at classification and codification. One attempt was that of Mathews (1997a) who classified the literature published between 1970-1995, both by time (two ten year periods and one five year period) and by content; “to provide a structure to enable readers and intending researchers to organize the literature” (Mathews, 1997a, p.481).

* Professor M R Mathews is at Charles Sturt University.
The latter was the most important, and was achieved by division of the literature into a number of (subjective?) categories:

The sub-headings are: empirical studies, normative statements, philosophical discussion, the non-accounting literature, teaching programmes and textbooks, regulatory frameworks and other views of the literature. Within this framework, contributions will be examined in chronological order (Mathews, 1997a, p.482).

This approach received a measure of support but also a certain amount of criticism because it was thought that it could be too subjective. Although it has been used since by Mathews (forthcoming, 2003) alternative approaches to the classification of the literature might be useful. In this paper an attempt is made, firstly to use the philosophical basis perceived to underlie a work to categorise the various contributions to the literature, and then in conjunction with the framework used by Mathews (1997a) to develop a matrix to refine further the categorisation of the social and environmental accounting literature.

Social and environmental accounting (and more recently accounting for sustainability), have attracted comments and proposals from a wide spectrum of opinion. These range from those of the critical theorists, who are concerned about managerial capture and the perpetuation of what they regard as dysfunctional social and commercial structures, to the proponents of the ‘business case’, who argue that business should only respond to these challenges where there is an opportunity to increase returns on capital. It is argued in the business case scenario, that the way forward is to convince business to make changes to procedures and processes because it is profitable to reduce waste, and beneficial in terms of organisational legitimacy, and not because it is right to do so. Other underlying philosophies, which are not attached to either of these extremes, but fit along a spectrum, include the social contract of business with society and organisational legitimacy.

Historically, corporate performance has been measured by means of limited financial disclosures aimed at a restricted readership. Over time the readership has widened, the disclosures have become more structured and both wider and deeper, through the implementation of both legislative and professional requirements. More recently, social and environmental reporting has been advocated, and the future is likely to include more detailed reporting, to a broader range of stakeholders.

The paper is structured as follows. After the introduction, underlying philosophies leading to further disclosures are discussed including critical theory, the social contract of business with society, organisational legitimacy, and the ‘business case’. This is followed by an examination of a number of exemplars of responses ranging from exhortation (the 4P’s of ethical business; Spiller, 1999) and triple bottom line reporting, to reporting structures such as
EMAS 2003, ISO 14000, GRI2002, SA8000, and AA1000. The framework approach used by Mathews (1997a) is then combined with the perceived underlying philosophy approach to produce a two-dimensional matrix in section four. The last section provides some concluding comments.

Underlying Philosophies

In this section the four underlying philosophies identified in Figure 1 are considered. There could be other underlying philosophies than those discussed here, however, the social and accounting literature includes all four with some frequency, and there are plentiful examples of the use of most of these philosophies.

FIGURE 1
Relating Underlying Philosophy to Extensions to Social and Environmental Accounting

<table>
<thead>
<tr>
<th>Underlying Philosophy</th>
<th>Critical Theorists</th>
<th>Social Contract</th>
<th>Organisational Legitimacy</th>
<th>Business Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normative</td>
<td></td>
<td></td>
<td>Wide</td>
<td>Positive</td>
</tr>
<tr>
<td>Direction of Action</td>
<td>Little or none not supporting the status quo</td>
<td>Idealist, Exhortation</td>
<td>All Stakeholders</td>
<td>Limited Stakeholders</td>
</tr>
</tbody>
</table>

* The example used in the table and in this paper is the generation of models to aid further disclosure, either to stakeholders outside the organisation or in some cases those within the organisation. These models would fit the categories of normative/philosophical in Mathews (1997a). Other categories could be substituted, including those used in Mathews (1997a).

Critical Theory

The critical theorists have not made major contributions to the model building aspects of the social and environmental accounting literature. Although critical theory has a powerful underlying philosophy (usually informed by Marxism, Foucauldian thought and other sociological theories) which leads to strong rhetoric, critical theory does not normally lead to the development of
models or programmes of incremental improvement. Thus, in terms of the Mathews (1997a) framework they produce philosophical discussion rather than normative statements.

The reasons for this condition have been suggested by Mathews (1993, pp.51-52) and Mathews and Perera (1996, p.374), in particular a desire not to aid in maintaining the social status quo.

Some critical theorists have made significant contributions to the social and environmental accounting literature, normally from a philosophical or normative perspective. A good example of critical theory as an underlying philosophy is Everett and Neu (2000) who offered a radical critique of the development of environmental accounting (EA) and the varied responses to what they term 'ecological modernization'. They argued that the direction of any causality could be either way; media attention encouraging additional disclosure or additional disclosure leading to added attention by the media. Their critique extends from those who clearly advocate elements of the 'Business Case' (for example Rubenstein, 1992; Herremans et al., 1993) to those who might themselves be considered towards the radical end of the spectrum (Gray et al., 1996; Owen et al., 1997). Everett and Neu (2000) also carried an important message about the dangers inherent in the capture of environmental accountants. Although it may be argued that all parties to the debate about the evolutionary nature of accounting in general are in danger of capture, by preparers, regulators, auditors, or government agencies, Everett and Neu (2000, p.955) are concerned about capture of the EA agenda by first-world corporations to the exclusion of weaker parties.

The Social Contract of Business with Society

The social contract of business with society is an underlying philosophy, which motivates those authors who argue from moral or exhortatory positions. Mathews (1993) argued that social accounting (which incorporated environmental issues until about 1990) could be justified by various arguments including those related to market performance, the social contract and organisational legitimacy. The social contract originated in political philosophy and describes the process by which members of a society accept an overriding influence over their individual freedoms in order to achieve collective goals.

The existence of the corporation ultimately depends upon the acceptance of the constraints imposed by society upon the actions and performance of that organisation. There must be a purpose or set of purposes to justify the existence of the corporation, which are seldom revisited but nevertheless exist. Donaldson (1982) has argued that corporations do not have an unchallenged right to exist, and Shocker and Sethi (1974, p.67) expressed the notion of the social contract. Corporations have been described as moral agents (but not moral persons) if they conform to a process of moral decision-making as outlined by Donaldson (1982, p.30).
The social contract argument may be seen as rather deep and esoteric by some, partly because we are surrounded by apparently long lasting legal fictions with great power, that influence us by advertising and public relations, and provide products, services and employment which we can not easily do without. Nevertheless, in theory these corporations exist at the will of the legislative system, which can choose to regulate them more closely, or less closely as has been the case over the last decade or so. One justification for giving attention to a more complete reporting, including social and environmental information, is because of the existence of the social contract. However, it seems more likely that most Chief Executive Officers (CEO's) will have increased coverage of social and environmental reporting in the annual report in response to the arguments about organisational legitimacy discussed below.

Organisational Legitimacy

Organisational legitimacy as an underlying philosophy for, or explanation of, social and environmental disclosure has been debated for some time. As noted by Mathews (1999, p.69); “For an organisation such as a corporation to have the quality of legitimacy, it must demonstrate a value system which is generally that shared by the wider community”.

Dowling and Pfeffer (1975) have been widely cited with the following definition/description of organisational legitimacy:

Organizations seek to establish congruence between the social values associated with or implied by their activities and the norms of acceptable behavior in the larger social system of which they are a part. Insofar as these two value systems are congruent we can speak of organizational legitimacy. When an actual or potential disparity exists between the two value systems, there will exist a threat to organizational legitimacy (Dowling and Pfeffer, 1975, p.122).

It may be argued that organisational legitimacy is likely to be a powerful philosophical underpinning encouraging management to make additional voluntary, non-traditional, social and environmental disclosures in annual reports and other media in order to develop, maintain or increase the perceived legitimacy of the organisation. There are many organisations where management has increased the flow of social and environmental information, although perhaps with a view to presenting a focused or particular rather than a general view. The studies summarised below have revealed the tendency of many organisations to adopt a narrow rather than a wide view of organisational legitimacy.

Deegan and Gordon (1996) analysed the environmental disclosure practices of Australian corporate entities, finding a positive correlation between environmental sensitivity and the level of disclosure, and in some sensitive industries, between environmental disclosure levels and firm size. Deegan and
Rankin (1996), using legitimacy theory as their theoretical basis, analysed environmental disclosures made by firms successfully prosecuted by the Australian Environmental Protection Authority (EPA). The authors concluded (p.62) "in the absence of disclosure regulations pertaining to environmental issues, that Australian companies will only provide environmental information, which is favourable to their corporate image". The key phrase is probably "in the absence of disclosure regulations" which raises once again the subject of standards and environmental audits and of the means of providing them with authoritative backing.

Brown and Deegan (1998) examined the public disclosure of environmental performance information in terms of media agency setting theory and legitimacy theory. Nine industries were reviewed across the period 1981-1994. In the majority of industries studied, higher levels of media attention were significantly associated with higher levels of environmental disclosures in the annual report.

Neu et al. (1998) studied Canadian public company annual reports in the mineral extraction, forestry, oil and gas and chemical industries between 1982 and 1991. Their research focused on three concerns; the influence of external pressure on environmental disclosures in annual reports, including the amount and strategies used in disclosure; the characteristics of environmental disclosures compared to other disclosures; and the association between environmental disclosures and actual performance. The authors suggested that organisations would use "a combination of acquiescence, compromise and defiance strategies within their environmental disclosures to respond to the concerns of relevant publics; further, the strategy adopted is influenced by the relative power of these publics" (p.279).

Deegan and Rankin (1999) explored the issue of a potential information supply/demand imbalance resulting from differing 'perceptions' between report users and report preparers about the relative importance to users of various disclosures about environmental performance. The authors concluded that an expectations gap existed, and that the users of annual reports are more likely to:

- Consider environmental information as important to their decisions than is perceived to be the case by the annual report preparers;
- Rank various items of social information as important, relative to annual report preparers;
- Disagree with a view that environmental disclosures should be voluntary, relative to annual report preparers;
- Consider that the accounting profession and Government should provide environmental reporting guidelines, relative to annual report preparers. (Deegan and Rankin, 1999, p.341).
The authors concluded that in order to close the gap, initiatives may have to include raising the awareness of members of professional accounting bodies, and the development of reporting standards relating to environmental and social performance.

Deegan et al. (2000) examined the manner in which large Australian corporations reacted to five major social incidents through their annual report disclosures. The results of the study indicated that after four of the five incidents, the sample firms provided more social information in their annual reports than they did before the incidents. The authors argued that the results of the study “are consistent with legitimacy theory and show that companies do appear to change their disclosure policies around the time of major company and industry related social events” (p. 127).

The importance of these, and other, studies lies in the finding that corporate disclosures may be no more intended to satisfy wider stakeholder groups now than they were in previous periods. The acceptance of the need to publish information about environmental impacts in annual reports by major corporations appears to be directed towards a limited number of publics which are perceived to be influential (sometimes called the confirming publics) and often prompted by specific events or issues. This is a long way from the ideal of universally available information, the disclosure of which is intended for all parties and motivated by the acceptance of the social contract of business with society, or the need to conform to regulations and strategies favouring wider stakeholder groups. A review of the literature pertaining to organisational legitimacy supports the view that this underlying philosophy is somewhat elastic. This is represented in Figure 1 as a continuum from ‘wide’ to ‘narrow’ to indicate that the view of organisational legitimacy as an argument for wider/universal disclosure to all stakeholders differ from a narrow view of disclosures to inform the confirming publics.

The Business Case

This is the term used to describe an approach to social and environmental accounting characterised by a drive to enhance profitability and not necessarily to satisfy the information needs of wider stakeholder groups or because management accepts some moral imperative to change the way in which business operates.

The business case as an underlying philosophy appears to be a limited response to social and environmental issues, and attempts to keep all initiatives in the hands of management. Accountants, professional accounting bodies, and regulatory agencies are excluded so far as it is possible to do so, with management exercising control over additional external disclosures (if any) and the use of internal reports. The business case is supported by environmental management accountants and the use of environmental management systems (see for example Epstein, 1996; Schaltegger et al., 1996; Schaltegger and
The business case is at the opposite end of the scale from critical theory and gives rise to some of the concerns about managerial capture expressed by Everett and Neu (2000), Owen et al. (2001) and others.

Models and Operating Systems (philosophical discussion/normative statements)

Figure 1 attempts to tie the underlying philosophy to the direction of the action and offers examples to show the application of this approach to the categorisation of the literature. This section describes a number of models and operating systems, which have been proposed by advocates of a broader system of disclosures. In Mathews (1997a) models would be grouped under either 'philosophical discussion' or as 'normative statements' and the two approaches are combined in Figure 4.

Critical Theory

The first model or operating system put forward is one that may be influenced by critical theory, and certainly owes a great deal to the notion of the social contract. Despite the strong differences of opinion between Owen et al. (1997) and Everett and Neu (2000), there are strong radical positions adopted by the authors of Gray et al. (1996) [which has two authors in common with Owen et al.]. In this present discussion the model advocated by Gray et al. (1996) appears to be motivated by a philosophy quite close to that of the critical theorists. The last chapter refers to an emerging 'new paradigm' of sustainability. The authors proceeded to explain what this would mean to society as a whole, including a series of recommendations which would “move organisations onto a more accountable and transparent path towards a less unsustainable future” (Gray et al., 1996, p.298). The model involved is reproduced as Figure 2 below:

FIGURE 2
Summary of Recommendations for Developing a Mandatory CSR
(Source Gray et al., 1996, p.298)

- Disclosure of detailed eco-balance and social balance statements;
- Disclosure of a detailed policy statement itemising the laws, codes and additional issues which govern the organisation;
- Disclosure of a detailed Compliance-with-Standard report;
- Additional descriptive analysis of remaining accountability issues;
- Detailed eco-justice statement;
- Detailed sustainable cost calculation;
Developing a Matrix Approach

- Restatement of the financial statements to highlight social, political and environmental costs;

And, as a first step
Bring together all currently disclosed social, environmental and employee information into a single social and environmental report within the existing conventional annual report.

Social Contract of Business with Society

Spiller (1999) introduced the concept of the ‘Four Ps of ethical business’ (EB); purpose, principles, practices and performance measurement. He stated:

*The principles that guide the EB include fairness, caring, honesty and courage. EB practices address stakeholder concerns – such stakeholders include the community, the environment, employees, customers, suppliers, and shareholders. EB performance measurement involves accounting for environmental and social as well as financial performance. This involves qualitative as well as quantitative measures and utilising both stakeholder perceptions and company data to determine performance in terms of the triple bottom line (Spiller, 1999, pp.78-79).*

The purpose of the EB is to ‘create environmental and social’ as well as financial wealth. Spiller (1999) argued that profit maximisation fails to recognise other goals such as assisting other people and the planet. The principles Spiller (1999) argued include honesty, fairness, caring and courage. The free enterprise model with individual choice and liberty, informed choice and a functioning market requires honesty and a willingness to enter into arm’s-length binding agreements. Practices reflect the application of purpose and principles. Practical examples taken from the annual reports of major NZ corporations include innovative community giving, recycling, employee-benefits, customer benefits, interactions with suppliers and corporate governance issues. The last of the four Ps is performance measurement. Spiller (1999) did not pay much attention to the conventional role of accounting in his section on performance measurement for ethical business. Spiller also referred to an ‘ethical scorecard’, analogous to the concept of the balanced scorecard in management accounting. The ethical scorecard extends beyond issues of concern to shareholders and customers to include employees, suppliers, community and environment; all stakeholders.
An alternative approach was that of Mathews (1997b) who provided an example that could fit under either the social contract or a broad version of organisational legitimacy. The essential parameters are given in Figure 3:

**FIGURE 3**
The Basic Underlying Principles of the Model

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Information is made available to all stakeholders in recognition of the SOCIAL CONTRACT OF BUSINESS WITH SOCIETY. This implies a willingness to supply information to stakeholders who do not have a direct financial relationship with the preparer.</td>
</tr>
<tr>
<td>2.</td>
<td>The annual report is a COMPREHENSIVE INFORMATION SYSTEM, which includes separately reported economic, social and environmental position statements.</td>
</tr>
<tr>
<td>3.</td>
<td>STAKEHOLDERS are defined as potentially all members of society who have RIGHTS TO INFORMATION (Corporate Report, 1975) about those entities that are deemed to be significant and liable to publicly report on their performance and condition.</td>
</tr>
<tr>
<td>4.</td>
<td>A CONCEPTUAL FRAMEWORK would be required for each area (until integration is possible).</td>
</tr>
<tr>
<td>5.</td>
<td>LEGALLY BACKED STANDARDS would be mandated for each area (until integration is possible).</td>
</tr>
<tr>
<td>6.</td>
<td>The three statements would have equal status in terms of AUDIT requirements.</td>
</tr>
<tr>
<td>7.</td>
<td>THREE SEPARATE POSITION STATEMENTS together make up the ANNUAL REPORT of the entity to account to the other parts of the social and economic system in which the organisation is situated.</td>
</tr>
<tr>
<td>8.</td>
<td>Each report would contain appropriate financial data, and non-financial data would be used in the social and environmental position statements. Furthermore, raw data could be available as advocated by Wallman (1997, p.108) under the rubric of “access accounting”, thus avoiding the problems of too great a degree of aggregation.</td>
</tr>
<tr>
<td>9.</td>
<td>Any transfer of financial information from one position to another would be made outside of the three individual statements; for example if the impact of the organisation on the social structure of the area or the environment could be reliably determined in financial terms, this could be shown as an offset to the income earned, and vice versa.</td>
</tr>
</tbody>
</table>

Mathews (1997b) argued that the acceptance of social and environmental reporting is likely to lag behind the financial dimension unless progress is also made in developing conceptual frameworks, standards and an audit process for social and environmental accounting.
Developing a Matrix Approach

**Triple Bottom Line Reporting (TBL)**

Until the 1970s, the corporate annual report was a vehicle for the presentation of limited financial information. Over the past 30 years, the annual report has been extended to include not only additional mandatory and voluntary financial information, but also some (mostly voluntary) social and environmental information (Mathews, 1997a). This combination of financial (economic), social, and environmental disclosures is frequently referred to as the Triple Bottom Line (TBL). The term has been used by several authors, and is normally attributed to Elkington (1997). Thus, the term ‘Triple Bottom Line’ is not definitive excepting insofar as it refers to conjoint reporting of financial, social and environmental information. There does not appear to be any agreement about the purpose of this approach to reporting, or the content of the three components. The main driver of the TBL approach since 2000 has probably been the Global Reporting Initiative (GRI) discussed below. However, the GRI does not involve accounting-type standards as proposed by Mathews (1997b) or include all of the data advocated by Gray et al. (1996).

The Global Reporting Initiative Sustainability Reporting Guidelines (hereafter GRI, 2002) is a major structured programme aimed at ‘standardised’ disclosures of economic, environmental and social information in annual reports and the media. The GRI was established in late 1997 by the Coalition for Environmentally Responsible Economies (CERES), with the mission to design globally applicable guidelines for preparing sustainability reports, in contrast to environmental reports. A draft of the guidelines was released in March 1999, and the final sustainability reporting guidelines in June 2000. GRI (2000) has been replaced by GRI (2002), which also consists of an introduction and four parts. Part A ‘Using the GRI Guidelines’ sets out what the GRI is attempting to achieve, the background to the development of the GRI, and the relationship of the GRI to other initiatives. Part B ‘Reporting Principles’ outlines the principles and practices underlying the GRI including qualitative characteristics, classification of performance reporting elements, ratio indicators and the disclosure of reporting practices. Part C ‘Report Content’ details the content of the GRI report including a CEO statement, profile of the reporting organisations, an executive summary and key indicators, vision and strategy, policies organisation and management systems and performance. Part D ‘Glossary and Annexes’ consists of four annexes. There are three sets of indicators in the GRI framework; economic or direct impacts, environmental covering environmental impacts, and social, which are divided between labour practices and decent work, human rights, society and product responsibility.

Overall the GRI 2002 Guidelines are an advance upon the 2000 version but they still suffer from two main defects. Firstly, GRI 2002 is presented as a set of guidelines when, if the recent history of financial accounting is taken as a model, what is needed is a set of rigorous legally backed standards, with the resulting disclosures appropriately audited (Mathews, 1997b). The GRI
provides a conceptual framework, but does not provide the standards, the legal backing or perhaps the auditing requirements. The second limitation refers to sustainability when this concept has not been generally defined.

The first standard for building corporate accountability and trust was issued in November 1999 by the Institute of Social and Ethical Accountability (ISEA). The ISEA stated that the AA 1000 standard “... provides both a framework that organisations can use to understand and improve their ethical performance and a means to judge the validity of ethical claims made.” The AA 1000 standard is described as ‘best practice’ as agreed by world-wide experts and would give both internal and external stakeholders greater reassurance that the disclosures were not merely public relations ‘puff’.

Another model that appears to be motivated by organisational legitimacy is the SA8000 Social Accountability Standard. The social accountability standard was published in 1998 and differs from AA1000 because the focus is on labour issues only. It is divided into purpose and scope, normative elements and their interpretation, definitions, and social accountability requirements.

The Business Case

Environmental management accounting and environmental management systems are the operational basis for much of the business case, together with attempts to influence or capture the process of increased disclosure. Two models dealing with environmental management systems are EMAS (Eco-Management and Audit Scheme) and ISO 14000 (International Organization for Standardization).

The Eco-Management and Audit Scheme (EMAS), dating from 1996, is a European Community initiative whereby industrial companies are invited to participate voluntarily in an environmental management scheme. A review, started in 1997, has led to the adoption of regulations for EMAS II, which is intended to promote the use of an Environmental Management System (EMS) as a ‘problem identification and problem solving tool’ (EMAS, 2003). The EMAS should contain several core elements including environmental policy, an environmental programme or action plan, structure and documentation. EMAS I was for industrial organisations, however, the new EMAS II encourages participation by public authorities and institutions, small and medium sized organisations and those in the service and financial sectors. The organisers claim participation by representatives from all sectors ranging from industrial to primary production, the service sector, the public sector, and non-governmental organisations (NGOs) (EMAS, 2003). EMAS II and ISO 14001 have greater similarities, however, EMAS II has legal status within Member States and can be more prescriptive than ISO, which is voluntary. In addition to the difference over legal status, it is argued that under EMAS II, organisations are required to have continual improvement of environmental performance, a need to
demonstrate an open dialogue with stakeholders, and employee involvement in the process of continued improvement in environmental performance.

ISO14001 gives the following definition of an environmental management system that part of the overall management system which includes organizational structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing, achieving, reviewing and maintaining the environmental policy (ISO 14001, 1996).

It should be noted that ISO 14001 specifies a particular type of management system and is not a scheme for product certification, or for evaluating company environmental performance. This is a comprehensive EMS model and allows for the participation of any organisation, and begins at any level. This may also be considered a major drawback to the ISO 14001 standard. An additional criticism is that each organisation sets its own targets and objectives. Thus, an organisation with less than desirable environmental performance can in fact be ISO registered. Rather than meeting an externally designated minimum requirement, each organisation can start at their current level, identify their environmental aspects and set their programme for continual improvement.

Development of a Matrix Approach to Classification

Section three provides examples of models associated with underlying philosophies, which under the Mathews (1997a) framework would be categorised as philosophical discussion or normative statements. Combining the Mathews (1997a) structure with the notion of underlying philosophies can be used to produce a matrix as a modification of Figure 1. The philosophies perceived to underlie a particular work are placed on the x axis and the possible types of contribution on the y axis. This potential matrix is shown in Figure 4.

**FIGURE 4**

A Matrix Approach to Classification of the Social and Environmental Accounting Literature Combining Underlying Philosophy and Type of Contribution

<table>
<thead>
<tr>
<th>Underlying Philosophy</th>
<th>Critical Social</th>
<th>Organisational Social</th>
<th>Business Case</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Empirical Studies</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normative Statements</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AA1000 (2003)</td>
<td></td>
<td></td>
<td>ISO14000 (2996)</td>
</tr>
<tr>
<td><strong>Philosophical Discussion</strong></td>
<td></td>
<td>Elkington (1997)</td>
<td></td>
</tr>
<tr>
<td>Spiller (1999)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The examples used in explaining Figure 1 can be relocated in Figure 4 to make use of both dimensions. However, the space occupied by a specific contribution will vary depending upon the subjective evaluations of the reader. For example, the EMAS requirements may be viewed as managerial and therefore philosophically at the business case end of the spectrum because the disclosures are intended more for management than for any other group. In terms of the position occupied on the y axis, readers might view EMAS as a normative statement, a philosophical discussion or even as part of a regulatory framework.

**Concluding Comments**

This paper has attempted to extend the uni-dimensional framework used by Mathews (1997a) to categorise the social and environmental accounting literature based upon content, by incorporating the perceived philosophical basis underlying the work. The examples used to show the usefulness of the philosophical basis are also representative of two categories in the content framework. A combination of underlying philosophical basis and content framework has enabled development of the matrix shown in Figure 4. It is argued that the use of two dimensions is clearly superior to one when categorising the extensive social and environmental literature published over the last 30 years.
REFERENCES


INTRODUCTION

One of the most notable developments of the last 5 years has been that the discussion of accounting education has become respectable. New journals dealing with research in this area have sprung up, providing further proof of the new status of accounting education. Specialized topics are also being catered for, including social and environmental aspects of accounting (Gordon, 1992; Mathews, 1992; Lewis, Humphrey & Owen, 1992).

The objective of this short comment is to make suggestions about the location of specialized accounting topics, to suggest the theoretical preparation needed before students can successfully undertake the study of social and environmental aspects of accounting, and finally, to offer an alternative (complementary) view of the syllabus. This comment is not intended to be critical of Lewis, Humphrey and Owen (LHO) rather to supplement their position as pioneers in this area of pedagogy.

LOCATING SPECIALIZED ACCOUNTING TOPICS

The majority of 3-year accounting programmes are structured to become more flexible after a relatively rigid beginning. First-year Accounting Principles courses tend to be black/white, right/wrong procedural affairs, with not much discussion of alternative views of accounting (social) objectives. Second-year subjects such as Corporate Accounting and Cost and Management Accounting continue the procedural emphasis but at a higher level. Corporate Accounting often concentrates on accounting standards (perhaps without covering

M. R. MATHEWS
Massey University
tented in some cases by the study of Business Finance. In many
is only in the final year that perhaps some discussion of
al or philosophical perspectives takes place as part of
Theory, Advanced Financial Accounting or elective
article under review, Lewis, Humphrey and Owen (hereinafter
indicate that without the flexibility of approach and thinking
ded via appropriate preparatory discussion, an elective dealing
counting and the social can become hard work for both
ors and students. When students have not been made aware
et failures and externalities, their appreciation of unintended
ental impacts is greatly reduced.
emainder of this comment is intended to provide support for
rough an examination of the need for a theoretical basis and
of the authors’ parallel approach to the same sub-disciplinary

THE NEED FOR A THEORETICAL BASIS

ing is a discipline which has been strongly influenced by 19th
neo-classical economics with an emphasis on the role of private
and the use of the market mechanism to assign individual
(W and Perera, 1993, Chapter 2). The development of the
in this century has reinforced these features by means of formal
ns of what does and what does not constitute accounting, and
of accounting standards, which perversely can sometimes
the technicist role of accounting even though they are intended
other problems. The introduction of accounting theory and
environmental accounting material, whether as part of
courses or on a free-standing basis, is intended to ameliorate
the existing system.
blems of introducing social and environmental accounting
to advanced students who have been conditioned by a
background in their first 2 years is illustrated by the following
from IHO (p. 228):

- establishes the socially constructed and constructing n
accounting through a study of historical development (W
and Perera, 1993, Chapters 1–3);
- examines the range of conceptual frameworks, contrasti
which are narrow and backward looking (for example SFA
from those which are expansive and forward looking (for
ASSC, 1976), (Mathews and Perera, 1993, Chapter 6);
- ensures that students are aware of alternative views of acc
by a brief introduction to international and cultural acc
structures (Mathews and Perera, 1993, Chapters 16–18
- reminds students of the deficiencies of other discipline
contribute to the decision making mechanisms of mana
n particular, market failure and the creation of extern
Economics.

A COURSE OF SOCIAL AND ENVIRONMENTAL
ACCOUNTING

An alternative approach to teaching social and environmental acc
is outlined below.

The official course prescription is:

An examination of the deficiencies of current accounting p
in respect of wider social issues and the arguments in fa
non-traditional techniques. The study of a number of acc
techniques which may be applied in the search for wider di
and accountability.

Prerequisite or co-requisite studies in accounting theory are n
expected, including coverage of the development of accoun
t knowledge of conceptual frameworks and the political n:
accounting standard setting, and an appreciation of the ma
which accounting is both socially constructed and socially const
The course is divided into two main sections. In the first
arguments in favour of expending scarce resources on additio
traditional disclosures are reviewed. These include market
studies, the social contract and organizational legitimacy. Stud
leads naturally into a study of organizational legitimacy (Pfeffer, 1975). Literature from the area of critical theory includes Tinker (1982), Merino & Neimark (1986) and Lehman (1987), Cooper & Laughlin & Puxty (1986). The second section of the course is based on Mathews (1984). A section is used to divide social accounting into smaller sub-groups. These include social responsibility accounting, total accounting and socio-economic accounting.

Social responsibility accounting (SRA) sometimes called corporate responsibility disclosures (Gray, Owen and Maunders, 1987) a large proportion of the non-traditional voluntary information organizations provide in annual reports. Typically, the content is made up of descriptive, unaudited, statements about employees, community service, energy usage, and the environment. This type of information has been disseminated by many organizations Anglo-American and Continental European accounting (Ernst & Ernst, 1972-1978; Guthrie & Mathews, 1985; 1986, for example). There are many examples of attempts to use such disclosures which may be used in class to illustrate difficulties involved in evaluation, as well as the strengths and uses of different approaches.

Impact accounting (TIA) is put forward as a means of finding the full cost of operating an entity. It is necessary to find out both private and public costs. To determine public cost mean charging back externalities to their origin. To deal with the classroom means engaging in discourse about the objectives of the motivation behind corporate decisions to make non-traditional disclosures, although this could be masked by the abbreviated description provided by LHO makes no reference to any of the course outline. LHO make use of a major project for assessment purposes, which by itself may have an effect on enrolments and self selection of students.

CONCLUDING COMMENTS

This brief note has been intended as an addition to the paper on the pedagogy of a social accounting course. Although there exist in the emphases placed on various aspects of the discipline, there are many similarities in structure and operating expenses.
a time when even the most technically driven accounting programmes are being encouraged towards conceptual and mechanical approaches (AECC, 1990) the initiatives outlined by represent important developments. It is hoped that further ones will be forthcoming, to reinforce the point that:

perhaps apposite to recall here Mathews’ (1986) argument, that further research scholarly publications will achieve little in terms of the development of a socially sensible and relevant accounting, unless they are accompanied by the production professionals with a basic knowledge and acceptance of the issues and claims for social accounting (LHO, 1992, p. 230).

REFERENCES


TEACHING ENVIRONMENTAL ACCOUNTING: A FOUR-PART FRAMEWORK

Julie A. Lockhart and M. R. Mathews

ABSTRACT

The development of environmental accounting across the world has led to a need for education in accounting programs to complement this emerging trend. A recent article by Sefcik, Soderstrom, and Stinson (1997) provides an important contribution to the dialog on the educational role of environmental accounting in the undergraduate curriculum. However, their recommendations fall short of a rich opportunity to encourage students to go beyond the traditional boundaries of accounting. This chapter provides recommendations for an expanded view of environmental accounting education. In particular, we recommend a four-part framework for environmental accounting education that allows students to examine environmental accounting within both the conventional model of accounting and the expanded model represented in numerous research articles and books on the subject. This framework encourages students to examine accounting’s role in society, consider the moral imperatives of environmental accounting issues, analyze objectives of reporting and alternative reporting formats, and expand their definition of stakeholders. This study intends to present an alternate curriculum to Sefcik et al.’s (1997) recommendations and to spur a continued dialog on the role of environmental accounting in accounting education.
INTRODUCTION

In recent years, the pressures that businesses face regarding their treatment of the natural environment have become an emerging concern of management. With this trend, the accounting profession has also needed to come up to speed on environmental issues. For example, in the United States, environmental legislation, such as the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) and the Superfund Amendment and Reauthorization Act of 1986 (Superfund), has driven the Financial Accounting Standards Board (FASB), the Securities and Exchange Commission (SEC), and the American Institute of Certified Public Accountants (AICPA) to address issues of environmental reporting and disclosure.

The development of the environmental accounting literature in recent years (Mathews, 1997a, 481) has spurred a need for the development of environmental accounting education to complement this trend. Thus far, the changes in accounting education required to complement the development of environmental accounting have not been vigorous enough (Bebbington, 1995, 263; Lewis et al., 1992, 220; Mathews, 1994, 93). The shortage of material covering the educational role of environmental accounting (Gray et al., 1994, 64) makes the recent contribution by Sefcik et al. (1997) potentially important.

Sefcik et al. (1997, 129–130) recommend ways to incorporate environmental accounting issues into existing courses in the accounting curriculum, or alternatively, that an instructor can develop a whole elective course on the topic. Their recommendations take a restricted view of accounting and of the definition of environmental accounting: "... understanding, recognition and incorporation of the impact of environmental issues upon a firm's traditional accounting sub-systems" (Sefcik et al., 1997, 129). We believe that their recommended approach to environmental accounting is too narrow, given the growing importance of environmental issues and the volume of accounting research and publications in the area. Thus, we propose a broader definition of environmental accounting and a course of study that reflects this definition.

We define environmental accounting as "accounting for the environment" (Gray et al., 1993, title), which is therefore part of the broader corporate social reporting (Mathews, 1993, 61; Gray et al., 1996, 293). As such, the subjects covered in Sefcik et al. (1997) reveal only a part of environmental accounting. Our definition includes accountability and extends beyond the conventional model of accounting to include accounting for sustainability. The World Commission on Environment and Development (1987, 8) defines sustainability as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." This definition
encompasses meeting the needs of the world’s poor population while maintaining environmental resources for the future.

We propose a course of instruction based on a four-part framework that covers macro and micro issues, under both the conventional model and an expanded model of accounting. The recommended course of instruction encourages students to go beyond the traditional boundaries of accounting and explore the ways in which accounting interacts with and affects the rest of society.

The remainder of this study is constructed in five main sections. The first part argues the need for a separate environmental accounting course. The second introduces and describes the four-part framework. The third section covers the course design, using the four-part framework as a guide. The reader can also refer to the appendix for information on graded classroom assignments. The fourth section discusses student response to the course. The final section concludes the chapter.

WHY A FULL COURSE IN ENVIRONMENTAL ACCOUNTING?

We argue that a course in environmental accounting is a desirable component of accounting education for training professionals to meet the current and emerging environmental challenges that businesses and society will face. Flavin considers the United States to be one of the: “E8 . . . eight nations that disproportionately shape global environmental trends” (Flavin, 1997, 7). Thus, educational initiatives that prepare students to manage environmental problems are particularly important in the United States. The Business Council for Sustainable Development has called for “corporations to assume more . . . environmental responsibility in defining their roles” (Schmidheiny, 1992, xii). In other words, having businesses account for their environmental activities and communicating that information is important to a sustainable future. This implies that accounting can influence change in the state of the environment.

Among the reasons Gibson (1997, 585–586) gives for a course in environmental accounting are the opportunities to remedy the narrowness of accounting education and respond to changes in society, such as the increasing demands for environmental responsibility coming from communities and consumers. Gibson also reminds the reader that Mathews (1986, 9) asserted that “research will be fruitless in obtaining change in accounting practice unless the future practitioners produced by educational courses have a basic knowledge and awareness of the issues involved in social and environmental accounting” (Gibson, 1997, 584). Gray et al. (1994, 56) note that much
accounting education requires only shallow learning. Our experience with the course leads us to believe that an educational program requiring students to confront environmental accounting issues fosters deeper learning and the ability to think critically about environmental (and other) issues. The changes in accounting programs across the United States stemming from the fifth-year requirement provide an opportunity for programs to accommodate such a course.

A FRAMEWORK FOR AN ENVIRONMENTAL ACCOUNTING COURSE

In our framework we discuss environmental accounting under the conventional accounting model at both the macro-societal and micro-firm levels. In addition, we introduce the expanded model of social change. At the macro level, the expanded model challenges many of the assumptions underlying the conventional accounting model, and questions whether conventional accounting requirements are adequate for addressing environmental issues.

This framework described below (see Table 1) serves as the basis for the content and organization of the course. Students learn many of the technical aspects of environmental accounting existing in the United States (e.g. reporting for Superfund liabilities) and abroad. More importantly they delve into the broader issues of accounting's role in society and how changes in the traditional role can affect change in the way firms treat the environment. Because of the breadth of coverage in our approach, the students can develop critical thinking skills that will be an important part of their professional development.

The Conventional Model: Macro Level

Conventional accounting is based upon the 19th Century neo-classical economic model, where it is assumed that "we all come to economic exchange equally able and free to express our personal economic choices" (Gray et al., 1996, 16). As an integral part of the free market system, corporate activities include the use of available "free goods," such as air and water, where the pollution effects are externalities rather than the internal costs of the enterprise. This situation has changed somewhat in recent years as governments have made efforts to reduce current environmental impacts and remediate past damage by using laws and regulations as the primary method for controlling environmental damage. Government intervention can assign a "price" to externalities if the polluter is required to pay for damage and/or remediation.
### Table 1. Teaching Environmental Accounting

#### Four-Part Framework

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Conventional Model of Accounting</th>
<th>Micro Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level of Analysis</strong></td>
<td>Macro Approach</td>
<td>Society</td>
</tr>
<tr>
<td>Assumptions</td>
<td></td>
<td>Neoclassical economics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Free market system</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pollution is considered an externality</td>
</tr>
<tr>
<td>Objectives</td>
<td></td>
<td>Maximization of shareholder wealth</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Laws and regulations for environmental damage and control</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Market instruments to price environmental damage (externalities)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GAAP</td>
</tr>
<tr>
<td>Stakeholders</td>
<td></td>
<td>National Society</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Expanded Model of Accounting</th>
<th>Micro Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level of Analysis</strong></td>
<td>Macro Approach</td>
<td>International Society</td>
</tr>
<tr>
<td>Assumptions</td>
<td></td>
<td>Broader ecological system</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Market system is inadequate for environmental protection</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Profits affected by externalities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Profits reflect sustainability</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Economic, moral and environmental issues are the concern of management</td>
</tr>
<tr>
<td></td>
<td></td>
<td>'Less is more'</td>
</tr>
<tr>
<td>Objectives</td>
<td></td>
<td>Accountability for use of 'free' resources and for loss of ecosystem/biodiversity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sustainable development</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transparency in annual report, environmental report</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Conceptual framework of accounting modified to address environmental issues</td>
</tr>
<tr>
<td>Stakeholders</td>
<td></td>
<td>Global/socio-ecosystem</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Future generations</td>
</tr>
</tbody>
</table>

- Financial reporting of economic events and transactions
- Short-term profits
- Internalization of environmental costs only in response to laws and regulations
- Decision making to minimize environmental costs and liabilities
- Contractual, e.g. investors
- Proactive protection of the environment beyond laws and regulations
- Long-term perspective for environment and profitability
- Decision making for inter- and intragenerational equity
- Financial and nonfinancial reporting of environmental damage
- Decision making considers use of 'free' resources
- Performance reflects environmental concern of management
- Sustainability reporting (Lamberton 1998)
- Mega-accounting (Mathews 1997b)
- Visible and invisible (Rubenstein 1994, 60)
Market instruments, such as tradable permits and environmental taxes, also can assign a price to externalities.

The dominant objective of the conventional model is maximization of shareholder wealth in the belief that society at-large also will benefit. Accounting has followed the assumptions and objectives of the conventional model in its treatment of environmental issues under generally accepted accounting principles (GAAP). The financial reporting process ignores damage to the environment or use of "free" environmental resources that are not priced in the marketplace. The market-driven focus on short-term profits often deters companies from voluntarily investing in costly environmental protection measures that adversely affect the short-term financial position.

The Conventional Model – Micro Level

The micro level of the conventional model assumes that firms will report environmental events and transactions according to GAAP. Because the recognition and realization of environmental damage adversely affects short-term profits, firms will internalize environmental costs only in response to laws and regulations. Company management also will make efforts to minimize future environmental liabilities in their decision making processes. The primary stakeholders of interest include those with a contractual interest, e.g. investors.

The Expanded Model – Macro Level

According to Rubenstein:

Traditional accounting is based on our current concepts of private property and stewardship for the interests of the shareholders. In contrast, accounting for environmental obligations requires accounting for common use property, or shared resources, as well as accounting for stakeholder stewardship . . . (which) involves the rights and obligations of shareholders, customers, local communities affected by environmental degradation, and the electorate, as well as recognition of the "being" rights of other species (1992, 504).

Thus, the expanded model of accounting is consistent with the need to treat environmental issues differently. The macro approach includes the global society and the broader ecological system in its level of analysis. The expanded model assumes that the free market system is inadequate for environmental protection. For example, the "price" assigned to environmental damage by tradable permits and taxes may not reflect the true cost to the environment. Also, profits should reflect externalities and sustainability. Ideally, management should concern itself with moral and environmental, as well as economic,
Teaching Environmental Accounting: A Four-Part Framework

issues. Decisions that bring in less profit, but protect the environment, benefit society in the long-term.

The objectives of the expanded model at the macro level include accountability for the use of "free" resources and for loss of biodiversity in the ecosystem; sustainable development; transparency in reporting; and a conceptual framework of accounting that is modified to adequately address environmental issues. These objectives serve a broad definition of stakeholders that includes the global/socio-ecosystem and future generations.

The Expanded Model – Micro Level

At the firm level, the expanded model assumes that corporate management makes decisions with a long-term perspective and with the impact on future generations in mind, including inter- and intragenerational equity. Firms would practice proactive protection of the environment, going beyond what laws and regulations require. Also, firms would recognize both visible and invisible stakeholders, e.g. future generations, (Rubenstein, 1994, 60) as important.

The objectives include financial and non-financial reporting of environmental damage and sustainability reporting. In addition, decision making should consider the use of free resources. It follows that corporate performance should reflect the environmental commitment of management.

COURSE DESIGN

The vast international literature on environmental accounting has influenced the framework for this environmental accounting course. Thus students get exposure to both U.S. and international developments throughout the course. We have selected a list of readings from the worldwide community of environmental accounting researchers, which we regularly update for new materials.

General Course Information

We have designed the environmental accounting course as a seminar-style, senior-level elective for accounting majors only. Our program is part of an AACSB accredited, U.S. business program. The three-hour elective (on a quarter system) meets two days per week for 75 minutes each. Prerequisites include completion of our three-quarter junior-level intermediate financial accounting series, the first income tax course, and cost accounting. The first two courses of the intermediate series focus on practical applications; the third
foci on theory. Generally, the students take the environmental course in
their senior year. However, a few have successfully completed the course while
at the end of their junior year, with concurrent enrollment in the theory class.
While environmental accounting has important implications for accounting
information systems, time does not permit enough detailed coverage to require
systems as a prerequisite. In addition, including auditing as a prerequisite
would preclude most students from taking the class since they take auditing
toward the end of their undergraduate program. The accounting department
shares our philosophy that this course should be available to accounting majors,
whether or not they choose to get a master’s degree.

The most current set of course materials includes a reading packet of articles
on the subject, *Tax Shift* (Durning & Bauman, 1998) and two cases. We rotate
cases for each offering to prevent students copying work from previous
quarters. The number of good quality, relevant readings exceeds what students
can read in one quarter. Thus, while the primary style of teaching the class is
through discussion, we regularly summarize other reading materials relevant to
the discussion in the form of brief lecture materials. In previous quarters, we
used either *Measuring Corporate Environmental Performance* (Epstein, 1996b)
or *Environmental Accounting for the Sustainable Corporation* (Rubenstein,
1994) with the reading packet. Each of these books has individual strengths and
weaknesses, but we dropped them from the reading list primarily because of
the large selection of journal articles available that meet the course goals better.
While we have changed many of the readings each time we offer the course, the
four-part framework for the course has consistently guided its content.

To date, we have offered the course four times. The class limit is 25;
however, approximately 15 students have taken the class at each offering, a
number that appears to be ideal for the type of class interaction expected.
Students majoring in accounting at this university must take four electives,
from a selection of nine, to graduate. Therefore, while some of the students
have indicated a prior interest in environmental issues, most enroll because the
class fits into their schedule or looks the most interesting from the available list.
As a result, we view the introduction to the class as crucial for drawing the
students into the issues relevant to the course.

*Introductory Materials for the Course*

In introducing this course, we have four main objectives: to cover basic
definitions of environmental accounting; to alert students to the need for
environmental accounting; to introduce the profession’s potential role in
Teaching Environmental Accounting: A Four-Part Framework

environmental accounting; and to introduce the conventional and expanded models of accounting. We accomplish the first goal through lecture materials that pull definitions of environmental accounting from the literature, e.g. Ditz et al. (1995, 4), and Gray et al. (1993, 6), and we include an expanded definition of accounting for corporate impacts on the natural environment in a broad societal context. From these introductory materials, the students can appreciate that environmental accounting has a range of definitions, from narrow to broad, many of which will be covered in depth during the class.

We have successfully accomplished the second objective of alerting the students to the need for environmental accounting by assigning Durning and Ayers (1994), "The history of a cup of coffee." In this article, the students follow the life cycle of a cup of coffee, from the clearing of the rain forest to consumption, with details on the environmental impact at each step in the cycle. We ask them to determine which aspects of the life cycle are recorded in accounting records and which are not. This assignment leads to an introductory discussion of corporate accountability for externalities and sustainability reporting. Perhaps because the article covers the environmental impact of such a popular product, we have found students to be amazed and shocked at how little they know about the impacts of their consumption and the implications for accounting.

As an enhancement to the introductory reading, students must also choose a recent newspaper article on an environmental issue, write a short summary, and include potential implications for accounting. We ask them to share their article with the class as a way of encouraging discussion and interaction. The students have shown surprising insight in preparing this initial assignment.

For the third objective, the students read Medley (1997) as an overview of the profession's potential role in environmental accounting. This article, which was written by a practitioner, covers the pressures for change, pointing out some specific areas that the accounting profession needs to address, including that of measurement and recognition. The article has served an important role in helping students understand the underlying issues of the subject.

To accomplish the fourth objective, we discuss the contents of Table 1. Each student gets a copy of the table, to which we periodically refer throughout the quarter. The table gives them a direction and structure for the course that the syllabus reinforces, with its course objectives (Table 2) and scheduled topics.

We have tied the course objectives with specific learning outcomes to the four-part framework (Table 2). For the remainder of this section, second-level headings represent the four course objectives and third level headings represent the related learning outcomes.
<table>
<thead>
<tr>
<th>Objectives</th>
<th>Specific Learning Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Understand environmental issues under the conventional model of accounting, including the macro and micro perspectives.</td>
<td>a. Develop a fundamental knowledge of laws, regulations and market instruments for handling environmental issues.</td>
</tr>
<tr>
<td></td>
<td>b. Understand how environmental issues affect the various sub-disciplines of accounting.</td>
</tr>
<tr>
<td>2. Understand environmental issues under the expanded model of accounting, including the macro and micro perspectives.</td>
<td>a. Evaluate the role of accounting in society vis-à-vis the environment.</td>
</tr>
<tr>
<td></td>
<td>b. Develop moral thought processes about environmental issues.</td>
</tr>
<tr>
<td></td>
<td>c. Develop an appreciation of the needs of various stakeholder groups.</td>
</tr>
<tr>
<td></td>
<td>d. Understand potential effects of including externalities in decision making and reporting.</td>
</tr>
<tr>
<td></td>
<td>e. Understand sustainability and the implications for accounting.</td>
</tr>
<tr>
<td></td>
<td>f. Examine and evaluate alternative reporting formats.</td>
</tr>
<tr>
<td>3. Ability to critically evaluate businesses' approaches to environmental accounting.</td>
<td>a. Understand and evaluate specific company approaches to environmental accounting.</td>
</tr>
<tr>
<td></td>
<td>b. Make recommendations for improvements to company approach under the expanded model.</td>
</tr>
<tr>
<td>4. Understand trends and potential future directions for environmental accounting, both nationally and internationally.</td>
<td>a. Develop a working knowledge of national and international trends.</td>
</tr>
<tr>
<td></td>
<td>b. Ability to critically evaluate the accounting profession's role in environmental matters.</td>
</tr>
</tbody>
</table>

**Table 2. Course Objectives and Learning Outcomes**

1. **Teaching Materials for the Conventional Model**

The course objectives related to the conventional model include students' understanding of environmental issues under both the macro and micro perspectives. Specific learning outcomes related to the macro level involve developing a fundamental knowledge of laws, regulations and market instruments for handling environmental issues. At the micro level, we expect students to understand how environmental accounting affects the various sub-disciplines of accounting. Table 3 shows the schedule of coverage. Note that we have experimented with various ways to organize the material and have settled on coverage of the macro approaches to both the conventional and expanded
### Table 3. Schedule for the Fall Quarter 1999

<table>
<thead>
<tr>
<th>Day</th>
<th>Topic</th>
<th>Readings</th>
<th>Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction</td>
<td>Durning and Ayres (1994), Medley (1997)</td>
<td>Short Writing Activity 1</td>
</tr>
<tr>
<td>2</td>
<td>Introduction, cont.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Conventional model – macro level</td>
<td>Lockhart (1997), Tax Shift, pp. 5–51</td>
<td>Discussion questions</td>
</tr>
<tr>
<td>4</td>
<td>Conventional model . . .</td>
<td>Munter et al. (1996), Tax Shift, pp. 51–89</td>
<td>Discussion questions</td>
</tr>
<tr>
<td>8</td>
<td>Further challenges to the conventional model</td>
<td>Rubenstein (1992), Mathews (1997b)</td>
<td>Discussion questions</td>
</tr>
<tr>
<td>12</td>
<td>Firm-level . . .</td>
<td>Epstein (1996c)</td>
<td>Discussion questions</td>
</tr>
<tr>
<td>13</td>
<td>Firm-level approaches – the state of financial reporting</td>
<td>Kreuze et al. (1996), Azzone et al. (1996a)</td>
<td>Case 2 – write-up</td>
</tr>
<tr>
<td>16</td>
<td>Looking to . . .</td>
<td>Rikhardsson (1996), Stead et al. (1998)</td>
<td>Project Due – Stage 2</td>
</tr>
<tr>
<td>17-19</td>
<td>Project presentations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Final class – summary</td>
<td></td>
<td>Comprehensive essay exam</td>
</tr>
<tr>
<td>21</td>
<td>Final exam</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
model prior to covering the micro approaches. Many of the readings cross over more than one area of the framework. Therefore, the schedule of topics is a general guideline for implementing the four-part framework.

a. Laws, Regulations, and Market Instruments
Exploring the macro level of the conventional model involves looking at laws, regulations and market instruments. We focus on those related to the U.S. economy. Students get a general overview of laws and regulations, including GAAP, from Munter et al. (1996) and Hochman (1998). In addition, Epstein (1996b, 251–265) provides a good summary. While we do not intend for the class to focus heavily on technical rules and regulations on financial reporting, students should spend some class time on the status of GAAP rules for environmental issues so that they are aware of current trends. Several developments have added clarity to the interpretation of Statement of Financial Accounting Standards (SFAS) No. 5 (1975) on contingent liabilities and Financial Interpretation No. 14 (1976). The Emerging Issues Task Force (EITF) has issued four abstracts we see as relevant to the class: EITF Issue No. 89–13 (1990) on accounting for the cost of asbestos removal; EITF Issue No. 90–8 (1991) on capitalization of treatment costs for environmental contaminants; EITF Issue No. 93–5 (1993) on treatment of potential recoveries from other parties and discounting of environmental liabilities; and EITF Issue No. 95–23 (1996) on the treatment of site restoration costs when testing a long-lived asset for impairment from environmental damage. In addition, the AICPA (1996) has published Statement of Position 96–1, on environmental remediation liabilities, with a specific focus on Superfund liabilities. The SEC also has separate, although not incompatible, requirements for environmental disclosures described in Financial Reporting Release No. 36 (SEC, 1989) and Staff Accounting Bulletin No. 92 (SEC, 1993). Lecturing on these financial reporting requirements has worked well to give students general background knowledge from which to draw in later discussions.

Market instruments include tradable permits and environmental tax policy. We briefly define tradable permits early in the quarter and explore them in more detail as a critique under the expanded model. We follow a theoretical approach to environmental tax policy as part of the macro level of the conventional model. A discussion of the role of taxes and the "polluter pays principle" advocated by the Organization for Economic Cooperation and Development (1993, 13), provides an important starting point. Durning and Bauman (1998) present a comprehensive, yet controversial, set of arguments for a tax shift from taxing "goods," such as income and employment, to taxing "bads," such as pollution. In addition, Lockhart (1997) provides evidence on the use of tax
Teaching Environmental Accounting: A Four-Part Framework

allowances and subsidies designed to combat environmental damage. Thus, there is an opportunity for a discussion of the role of taxes vs. subsidies to limit further pollution of the environment.

At this point, we have found it useful to emphasize the forces working against a tax shift, such as the political pressure from polluting industries and taxpayer revolts. A useful illustration of the impact on industry comes from a short case titled “Chlorofluorocarbon (CFC) Taxes at Distributor, Inc” (Stinson & Soderstrom, 1997, 1–2).

b. Environmental Accounting’s Effect on the Sub-Disciplines of Accounting

The students receive continual exposure to the implications of environmental issues for the sub-disciplines of accounting throughout the course. They have several opportunities to see firm-level approaches to financial reporting and disclosure. For example, we assign Krueze et al. (1996, 38–39), who conducted a survey of 645 companies, summarizing their environmental disclosures in the annual reports. We also have periodically assigned a case on Purity Oil (Cerf & Zechnich, 1994) where students get to analyze a series of events related to a Superfund site, discussing the disclosure, measurement and reporting issues involved. The project for the course (see Appendix) requires the students to analyze a real company’s reporting and disclosure choices in the 10K, annual report and environmental report. Students share their findings from the project with the rest of the class. We also take advantage of other opportunities as they arise to bring in current examples of environmental reporting and disclosure methods.

Environmental management accounting practices can lead to decisions that benefit the firm (Epstein & Roy, 1997, 26), particularly in the long-term relationships with stakeholders (Peters & Austin, 1995, 12–13). Specific assigned readings cover implications of current managerial accounting practices. These include Carrera and Iannuzzi (1998) covering examples of costs that are measured by various companies, Kreuze and Newell (1994) illustrating ABC and life cycle analysis, Epstein (1996a) covering trends in product take-back, and Epstein (1996c) looking at the application of full cost accounting to environmental costs. We add to the discussion of these articles by referring to Epstein’s (1996b, xxvii) corporate environmental performance scorecard with its ten components of environmental integration and measures of leadership. Epstein (1996b) also provides a good set of examples of current environmental practices in a large number of companies, including waste management, life cycle analysis of environmental impacts, and performance evaluation. Additional lecture materials come from Hughes and Willis (1995, 16–17) who apply quality control concepts to environmental expenditures.
Examples also exist where environmental problems can result from popular cost management techniques, as described in Nieuwenhuis (1994, 2-4). He discusses the increased transportation costs and resulting environmental damage from emissions of just-in-time (JIT) systems in Japan; in general, JIT has caused transportation methods to shift toward road freight and air from rail, further exacerbating the environmental impact of emissions (Peters & Austin, 1995, 15).

We have assigned case materials, two or three per quarter on a rotating basis, to enhance students' understanding of environmental impacts on managerial accounting. Specialty Glass (Stinson, 1998) generates lively discussion of environmental risks and the associated product costing and management decision making that should take place. The students also have enjoyed reviewing Polaroid's Toxic Use and Waste Reduction program (Stark et al., 1993). Multipaint, Inc. (Bowen et al., 1996) gives students a chance to evaluate various alternative, capital intensive treatments of a toxic site. A case on Bristol-Myers Squibb's (Datar et al., 1996) product life cycle review gives students an opportunity to see how this company has strategically managed and prioritized environmental projects and costs.

Although the environmental accounting course may come before a student's exposure to auditing, it is still important that they understand some basic issues surrounding the environmental audit. Ledgerwood et al. (1994, 3-6) discuss three types of environmental audits: environmental compliance audits, environmental management audits, and property transfer audits. We cover the definitions of each as a starting point in a discussion of environmental audits. We also point out that Superfund regulations can result in liabilities for owners of contaminated property even those not responsible for the contamination. While environmental specialists typically might carry out these audits, the auditor has an obligation to look for "red flags" for illegal acts regarding such transactions (Specht, 1992, 71). Although we offer limited readings in auditing, the discussion in class regularly turns to the role of auditing in environmental issues. Also, we alert the students to the guidelines of the International Federation of Accountants (IFAC, 1998) on the profession's role in environmental audits.

2. Teaching Materials for the Expanded Model

Regarding the course objective related to the expanded model (Table 2), five of the six specific learning outcomes (a.-e.) relate to the macro level while the last, f., relates to the micro level.
a. Evaluate the Role of Accounting in Society vis-à-vis the Environment

As Mathews (1994, 91) has noted, leading students into a social and/or environmental accounting program is more difficult when their preparation has been in technical accounting. Since his statement represents the type of preparation that many accounting undergraduates have received before coming to an environmental accounting course, the class helps students consider accounting's role in society. Should accounting remain a collection of techniques, designed to support the distribution of a limited amount of information to a restricted group, or should accounting be extended to report a wider range of data to an enlarged audience? We have found that broadening students' understanding of the societal function of accounting can encourage more creative thinking about the changes necessary to help mitigate environmentally damaging activities.

Hines (1988) creatively illustrates the way mainstream financial accounting shapes our reality. For example, because corporations traditionally do not measure damage from pollution and recognize it in accounting records since it is an externality, the organization and society do not often see damage from pollution as an important part of that organization (Hines, 1988, 254). This article has opened students' eyes to the role accounting plays in environmental issues. The assigned readings further illustrate the power of accounting to create reality in the forum on accounting for tradable permits, where Gibson (1996) criticizes the analysis and recommendations of Wambganss and Sanford (1996), who approach the accounting for tradable permits by attempting to use the conventional model as their guide. After an analysis of potential alternative treatments, Wambganss and Sanford (1996, 648–651) recommend that companies assign the EPA-distributed permits a market value and record them as “Donated Capital” in the accounting records to represent, “the full cost of pollution.” Gibson (1996, 659) argues against their recommendation, which she regards as indirect subsidies to corporations for reducing polluting behaviors. She also recommends that permits that corporations purchase in the marketplace be expensed rather than capitalized (Gibson, 1996, 658), a change in the “way of seeing” (Hines, 1988, 258) permits from that of investment to that of cost.

From this discussion students find that accounting can be part of the environmental problem since the way of accounting for the environment can affect attitudes and behavior toward environmental damage. Students can then explore possible changes in accounting that can make the discipline part of the solution. Because accounting is socially constructed (Hines, 1988, 257–8), the readings prepare students to consider ways in which the discipline can maintain organizational legitimacy (Mathews, 1993, 23). Do organizations that disclose
environmental information simply manage public impressions (Neu et al., 1998, 267–8), or does environmental performance match the types of disclosures they made? Fayers (1998, 79–80) argues that corporate environmental reporting can change corporate behavior towards the environment, citing the effects of the Toxics Release Inventory required in the United States.

b. Develop Moral Thought Processes about Environmental Issues
With the powerful effect that the accounting and reporting process can have on society, we argue that giving students an understanding of ethical theory as it relates to the environment might assist in the evolution of environmental accounting. In addition, such coverage can accomplish three of the goals of accounting ethics education set forth by Loeb (1988, 322): recognizing issues "that have ethical implications"; developing "a sense of moral obligation' or responsibility"; and "'[setting] the stage for' a change in ethical behavior." In other words, students can find ethical grounding for the way in which corporations manage environmental resources, the importance of corporate accountability to society, and the importance of balancing economics with ecology.

We cover three ethical perspectives: the egocentric (maximization of individual self-interest), the homocentric (individuals guided by broader social needs), and the ecocentric (individuals as part of the broader ecosystem) models (Miller, 1991, 25–28). Alternatively, seven classification levels covered in Gray et al. (1996, 56–61) provide greater depth for the ethics discussion. The levels span the conventional, e.g. "pristine capitalists" to the radical, e.g. eco-feminists. Students discuss additional ethical positions in the context of sustainability from Lamberton (1998, 188–191), who chooses the eco-humanist approach (similar to the homocentric position discussed in Miller, 1991) in order to support his recommendations regarding accounting for sustainable development. Further opportunity for discussion of various ethical positions and the implications for management accounting arises in Milne (1996, 141–153), such as the conservationism position which is consistent with accounting for externalities through environmental impact and cost-benefit analyses (Milne, 1996, 143).

c. Develop an Appreciation of the Needs of Various Stakeholder Groups
The importance of the topic, to whom are corporations accountable, appears throughout the course. Gray et al. (1996, 38) defines accountability as "the duty to provide an account (by no means necessarily a financial account) or reckoning of those actions for which one is held responsible."
groups have become more inclusive in recent years, and no longer are shareholders the sole focus of attention (AARF, 1990, 7; NZSA, 1993, 3). The FASB also has recognized that stakeholder groups include more than investors (FASB, 1995, 12).

Rubenstein (1994, Ch. 6) initially divides stakeholders into two groups: visible and invisible. He further divides visible stakeholders into contractual (traditional) and interdependent (e.g. customers) and the invisible stakeholders into current generation (e.g. community members) and future generation (e.g. spokespersons from environmental organizations). Each group would have unique reporting and disclosure needs that students can discuss. We also explore the issue of transparency of information (e.g. the visibility of environmental impacts in the financial reports), bringing out the inherent tension between the needs of the various stakeholders and the best interests of the company. Schaltegger et al. (1996, 7) state that the accounting information publicly reported will be the “result of the actual distribution of power between the relevant stakeholders and management.” Analyzing the power relationship between each of Rubenstein’s (1994) stakeholder groups and management, including the potential “rights to information” of parties other than those directly involved with the organization, (Fayers, 1998, 79–80) can enhance the student’s understanding of current and alternative accounting practices.

Additional discussion of stakeholder groups surfaces as part of the topic of sustainability since the common definition of sustainability includes eco-justice for current and future generations (Gray, 1996, 9; Lamberton, 1998, 200–202). We encourage the students to draw their own conclusions on stakeholders and their respective rights to information.

d. Understand Potential Effects of Including Externalities in Decision Making and Reporting

Although students get exposure to a discussion of externalities in an economics course, they usually do not have an opportunity to explore the significance of externalities to accounting. Society and the accounting profession have defined accounting in a way that excludes externalities from the definition of accounting (Hines, 1988, 254). The negative externalities associated with environmental damage suggest a reexamination of corporate accountability. For many companies caught by the Superfund legislation, what was once external to these companies has been internalized by the legal system.

The discussion of externalities becomes enhanced by introducing an expanded definition of full cost that includes both internal and external environmental costs over the life cycle of the product. Boone and Rubenstein
(1997) explore the possibility of monetizing external impacts and reporting these estimates in an environmental equity account on the balance sheet. Milne (1996, 143–146) also reviews internal analysis tools that monetize known environmental impacts. For example, cost-benefit analysis should include non-market benefits and costs for the commercial use of recreational resources, such as national forests (Milne, 1996, 144). Students also can explore the integration of externalities in product costing and pricing decisions, as well as other management accounting decisions.

Rubenstein (1992, 504) examines the failures of the conceptual framework of accounting in handling externalities, specifically as regards the underlying principles of matching, conservatism and going concern, acknowledging that "accountants do not really know how to account for these clean-up costs and the related liabilities". Addressing the failures of the conceptual framework helps students to understand that the current accounting model may need to change to accommodate environmental issues. For example, Rubenstein (1992, 506) suggests that a "natural asset trust account" be set up which represents the "free" resources of the company that are shared with the rest of society, such as air and water. Students can explore questions of how to value the resources in this account and whether the concepts of matching, conservatism and going concern are appropriately met. At this point, we encourage a discussion of whether it is the conceptual framework itself that needs to change or the way in which corporations handle environmental issues that causes the problem.

e. Understand Sustainability and the Implications for Accounting

Throughout the course, we address accounting for sustainability. Early in the quarter, students read Gray (1996), who makes a distinction between environmental reporting and sustainability reporting and explores several theoretical models for sustainability reporting (Gray, 1996, 10–15). As described previously, the students also read Milne (1996) and Lamberton (1998). Both articles emphasize the interaction of social, ecological, and economic goals in defining sustainability vis-à-vis accounting. Milne (1996, 148) from an internal decision making perspective, and Lamberton (1998, 198) from an external reporting perspective. In particular, Lamberton develops a model of financial and non-financial sustainability reporting based on five objectives of sustainable development: eco-efficiency, sustainable financial performance, ecological sustainability, intergenerational equity, and intragenerational equity (1998, 193). This article provides a potentially viable alternative reporting format for companies to apply at the micro level.
f. Examine and Evaluate Alternative Reporting Formats

The micro level of the expanded model encompasses numerous alternative reporting formats, in addition to that discussed in Lamberton (1998). An increasing number of companies across the globe, particularly those with significant environmental impacts, are publishing environmental reports (Azzone et al., 1996a, Lober et al., 1997, 61), the content of which often varies significantly by company. Denmark introduced a law in June 1995 requiring certain companies to publish annual environmental reports that include both qualitative and quantitative non-financial information on environmental performance. The law leaves room for an audit requirement in the future and allows the public to get involved in the process if the reports are not deemed reliable (Rikhardsson, 1996). Azzone et al. (1996b) also cover a broad definition of environmental performance indicators. Students have an opportunity to analyze and evaluate an environmental report as part of their project (see Appendix). Because each student chooses a separate company, class presentations give students a chance to see other examples as well as their own.

Aside from looking at examples of the state of the art in environmental reports, we also expose the students to numerous creative, hypothetical, reporting formats developed by environmental accounting researchers. Boone and Rubenstein (1997) propose the use of an environmental equity account that captures the environmental value of resources consumed under “an implied social contract between the reporting entity and society” (Boone & Rubenstein, 1997, 22). Mathews (1997b, 284–5) explores a mega-theory of accounting where corporations would join the current financial data with non-financial social and environmental accounting information in the annual report. Under mega-accounting each set of data would have equivalent status within conceptual frameworks, standards and attestation. Students can discuss who the various stakeholders would be for each set of data. They also can consider that financially based reports are one way to communicate information – but not the only way. Lecture materials on the triple bottom line (Elkington, 1999, 19) have added additional ideas on expanded sustainability reporting in firms.

Inevitably, a discussion of alternative reporting formats leads to several questions that students can discuss and debate. For example, what is the cost of information? Do the various users have the sophistication to interpret the information provided? How much demand for information is created through providing that information? Should society call for such information before the accounting profession responds, or should alternative reporting formats be devised ahead of societal pressures? Is voluntary environmental reporting preferable to direct government regulation of environmental activities?
3. Encouraging Critical Evaluation of Businesses’ Approaches to Environmental Accounting

Many of the students have shown growth in their critical thinking skills because of the level of readings and discussion in the class as well as the assignments. Although we teach the course with a bias in favor of the expanded model of environmental accounting, we encourage students to find and express their own opinions through the readings, discussion and debate in class. They soon realize that there is no one “right” answer to the questions and issues addressed. The course materials and activities facilitate their understanding of, and ability to, evaluate specific company approaches to environmental accounting. Their project contributes to this process by requiring that they make recommendations for improvements to the specific company approach to environmental issues under the expanded model (Appendix).

4. Trends and Future Directions for Environmental Accounting

Throughout the course, students learn about national and international trends and future directions for environmental accounting. We attempt to pull this knowledge together toward the end of the class so that students can leave with a comprehensive understanding of trends and potential future directions under both the conventional and expanded models. Beets and Souther (1999) set the stage for discussing the following questions. Should environmental reporting beyond current contingent liability standards continue to be voluntary, or should standards be developed? Are the conceptual frameworks of accounting adequate to meet current and future developments in environmental reporting? If standards are developed, who should take the lead, e.g. promulgating bodies, such as the FASB? Corporations? Self-regulating organizations? Government? If increased accountability becomes the norm, what are the potential impacts on resources. What are the trade offs? Should the accounting profession become more involved in audits of environmental reports? What are the risks of not doing so?

As part of this discussion, we review the standards and guidelines developed by associations and self-regulating organizations around the world that have influenced environmental reporting. Among these are the International Organization for Standardization’s ISO 14000, the Association of Chartered Certified Accountants (ACCA, 1997) in the United Kingdom, the government-sponsored Eco-Management and Audit Scheme in Europe, the Coalition for Environmentally Responsible Economies, the Global Reporting Initiative, and the Responsible Care Program of the Chemical Manufacturers Association.
Several of these enter the class discussions earlier in the quarter, but we bring them back at this point to summarize trends.

Additional readings assigned include Label and Tandy (1998), who review the implications for internal auditing of ISO 14000. Although not assigned reading, we refer to some of the materials from Tucker and Kasper (1998, 349) on their recommended changes in the role of internal auditing, including environmental auditor certification. Students also look at an empirical study that addresses whether U.S. firms are institutionalizing environmental performance rhetoric and actions within their companies (Stead et al., 1998).

Throughout this set of materials, we challenge the students to critically evaluate the accounting profession’s role in environmental matters thus far and to come to their own conclusions about directions for the future. In addition, students must write a short essay as part of the final exam which summarizes and supports their conclusions.

STUDENT RESPONSE TO THE CLASS

Formal evaluations and informal feedback indicate that the students have responded very favorably to the course. The formal course evaluations cover a number of categories, including an evaluation of the course overall; in two of the most recent offerings, scores in this category were both 4.33 out of five. Many of the students have expressed gratitude to have a course that stimulates discussion and critical analysis of accounting’s role in environmental matters. One student wrote in the course evaluation, “I feel that this class was successful in challenging my thought process ... [and it] expanded my opinion on the role of accountants with respect to accounting issues.” Another student wrote, “this course has been one of the most thought-intensive classes that I have taken.” The process of looking critically at the assumptions of the conventional model has proved useful to the development of their critical thinking abilities.

The students also have articulated positive feedback on the class atmosphere. Individual students said they appreciate that they can express their opinions freely. The high course evaluation results provide further indication that we encourage student self-expression. This feedback is particularly important, given that we have endeavored to achieve such a result. In the two most recent offerings, we received evaluation scores of 4.73 and 4.58, respectively, in the category for “encouragement of student self-expression.” Another similar category, “instructor’s openness to student views,” showed scores of 4.87 and 4.75, respectively. One student wrote in the course evaluation that he did not want to take the class because he was afraid that the purpose was to turn him into a “tree hugger.” Instead he was “more than pleasantly surprised by ...
[the] openness and character of the class.” He then recommended that the class be continued as part of the accounting program, as have a number of other students.

In general, the readings and graded class activities (see Appendix), including discussion questions on the readings, short writing assignments, cases, and the project, have elicited positive feedback. The students found some of the readings difficult, but they generally appreciated the challenge, particularly because the discussion often clears up their questions. The readings in Table 3 represent those that have worked best in the course. The discussion questions from readings that are due three hours prior to the class have added depth to the discussions in class because the students actively engage with the readings. One student commented in the course evaluation that she appreciated being “forced” to be prepared to discuss the articles in class. In earlier quarters, the writing requirements seemed excessive for both the students and instructor; thus we have reduced the case write-ups to one and the short writing assignments to two per quarter. The students have overwhelmingly enjoyed the project for the class because it gives them an opportunity to examine a real company and apply the concepts and ideas from the class. By paying attention to their concerns about parts of the project, we have been able to make changes over time, improving the overall results and response. For example, we recently added the class presentation of project results, which allowed students to learn about other companies as well as their own.

CONCLUDING REMARKS

Offering an environmental accounting course as part of the elective curriculum can provide students with a rich opportunity to explore accounting in a broader societal context. This chapter has offered classroom-tested materials for teaching environmental accounting beyond the recommendations offered in Sefcik et al. (1997). The conceptualization and debate encouraged in the suggested course should assist graduates when challenging issues need to be addressed in their careers. Thus deeper learning and an ability to question the status quo will go hand in hand.

As environmental accounting becomes increasingly recognized as an important part of the curriculum, changes to other parts of the curriculum can enhance the student’s learning experience. Open discussion of pedagogy will facilitate the development of environmental accounting education in the future. The authors hope that this chapter represents one step in creating that dialog.
ACKNOWLEDGMENTS

The authors acknowledge the helpful suggestions of Dr. Jean Harris in respect of the framework used in this chapter. We also appreciate the helpful suggestions of the two anonymous reviewers and the editor.

REFERENCES


Teaching Environmental Accounting: A Four-Part Framework


**APPENDIX**

**Graded Classroom Materials**

We assign a mixture of short writing assignments, discussion questions, cases, and a project. In addition, class participation is a significant part of the student's grade. Further explanation of the components of student grades follows.

*Short writing assignments* (10% of the final grade). These assignments give the students an opportunity to improve their writing skills and to think through issues before coming to class. Each writing assignment should be 250–300
words in length. We rotate assignments by quarter. These have worked particularly well.

1. Students find a newspaper article on a current environmental issue. Then they must explore whether and how accounting could mitigate the problem.

2. Assigned with Durning and Ayres (1994). Students follow the life cycle of a cup of coffee, from clearing of the rain forest to consumption, to determine which aspects are recorded in accounting records and which are not. This assignment often leads to a discussion of corporate accountability for externalities.

3. Assigned after Gray (1996), Hines (1988), and Rubenstein (1992). Students explore whether accounting is part of the problem or part of the solution to environmental problems.

4. Assigned with Rikhardsson (1996). Students determine whether the reporting requirements implemented in Denmark would be possible and appropriate in the United States.

**Discussion questions (10% of the final grade).** We ask students to submit via e-mail two well-developed discussion questions from the readings prior to class. These questions then become the basis for much of the discussion in class.

**Cases (10% of the final grade).** We discussed several cases in the text of this paper. Currently we require the students to formally write up one case for a grade. We often assign at least one other case for class discussion. Successful cases include: Specialty Glass (Stinson, 1998); Polaroid: Managing Environmental Responsibilities and their Costs (Stark et al., 1993); Multipaint, Inc. (Bowen et al., 1996); Bristol-Myers Squibb: Accounting for Product Life Cycle Costs at Matrix Essentials (Datar et al., 1996); Purity Oil sales – Superfund site: A case on accounting for environmental matters (Cerf & Zechnich, 1994); and Chlorofluorocarbon (CFC) Taxes at Distributor, Inc (Stinson & Soderstrom, 1997).

**Project (40% of the final grade).** We give students an opportunity to explore, in detail, environmental accounting and management issues for a specific company. This involves looking at financial and environmental reports, current information from the internet, newspapers and periodicals, and other sources of information.

The students must choose a publicly traded, U.S.-based company that has a website, which includes a recent environmental report. Each student must research a different company. They also must find the phone number of the
company on the web or using Compact Disclosure and call for the reports – 10K, annual report, environmental report.

The students complete the project in two stages. The first stage involves an analysis of what the company is doing regarding environmental matters. They first assess the potential environmental risks of their firm, and then analyze and report on the quantitative financial and nonfinancial information as well as qualitative environmental information in all three published reports. In addition, they determine what portions of the information in the annual report and 10K are voluntary, rather than required by GAAP. Research in periodicals also may help them to determine what environmental initiatives are going on at the company. Stage 2 of the project requires the students to evaluate the company’s environmental reporting and disclosure under both the conventional and expanded model of accounting. In particular, we ask them to make recommendations for change using Lamberton’s (1998, 193) five objectives of sustainable development and the related reporting suggestions. Companies that students have used successfully include Mobil, Xerox, Clorox, Georgia Pacific, and Dow. Students present their projects at the end of the quarter.

Class participation (15% of the final grade). We grade students on the level of contribution to the class discussion, roughly as follows: Outstanding (90%–100%) – student is regularly very well prepared and makes a major contribution to class discussion on a regular basis; Good (80%–89%) – student is prepared, contributes to class discussion often, and may have missed one or two classes; Adequate (70%–79%) – student appears prepared occasionally, participates once in a while, and may have missed less than five classes; Inadequate (0%–69%) – student is rarely prepared, does not contribute to class discussion, and/or has missed five or more classes.

Final Exam (15% of the final grade). The final exam serves to lead the students back through the major themes of the course. We have assigned between three and five essay questions. Generally, we either allow the students to see a list of possible questions ahead of the final exam time to guide their studies, or we give them a “take-home” exam, which they complete and turn in during final exam week. Both methods have worked well.
Some thoughts on social and environmental accounting education

M.R. MATHEWS*

Charles Sturt University, Australia

Abstract

Although there are probably more academics interested in the social and environmental dimensions of accounting than previously, there is still relatively little discussion of curricular and pedagogical issues in this branch of the accounting domain. This paper attempts to raise the structure of social and/or environmental dimensions within accounting education for debate. This is done by proposing the qualitative background to a social and environmental accounting course, and then suggesting curricular materials and assessment approaches that have been used in this area.

Keywords: social and environmental accounting education; curriculum development; qualitative education.

Introduction

Despite the large volume of material published on the subject of environmental accounting, and some on social accounting (Mathews, 1997a), relatively little has been written on the subject of social and environmental accounting education, in spite of the growing number of academics interested in these areas. Gray et al. (1994) advocated a programme of social and environmental accounting education as a mechanism for overcoming short term, shallow learning processes, which they argued were part of the typical undergraduate accounting syllabus. Other authors have commented on the same issue in terms of social and environmental accounting education in British universities (Owen et al., 1994) and also in more general pedagogical terms (Lewis et al., 1992; Mathews, 1994; Puxty et al., 1994 and Bebbington, 1995). Much earlier and rather inconclusive discussion may be found in Mathews (1984, 1986) and Blundell and Booth (1988).

More recently, attempts have been made to argue the case for a limited social and/or environmental accounting education programme as a part of other conventional accounting courses (Sefcik et al., 1997; Gordon, 1998; Grinnell and Hunt, 2000). Sefcik et al. (1997) took existing accounting structures as given, and grafted on to ‘standard’ Anglo-American external reporting some additional disclosures in the environmental field. Whilst acknowledging that this may be better than no consideration at all, Lockhart and Mathews (1997, 2000) argued that there was a missed opportunity within an academic setting for a more thorough examination of underlying principles and philosophies of contemporary accounting. Consequently, the recommendations put forward by Sefcik et al. (1997) did not provide an exemplar from which to move forward. Gordon (1998) provided an interesting view of the effect that the inclusion of a module on social responsibility/
sustainable development had on a group of undergraduate students taking an accounting theory course. Whilst such developments are to be encouraged, it may be argued that they are no substitute for a full length course or a more substantial exposure to alternative systems of reporting, even though there were a total of three modules out of 13 in her programme, where some of the qualitative material proposed below may be included. Grinnell and Hunt (2000) described the development and structure of an integrated course in accounting including support for an environmental strategy. Lockhart and Mathews (2000) provided a detailed model and description of a successful undergraduate environmental accounting programme.

The intention of this paper is to extend the existing literature on social and environmental accounting education by outlining a number of qualitative goals for a social and environmental accounting course (hereafter SEAC), and only then to refer to a selection of curricular materials that might be considered for inclusion. The course-specific material discussed within the paper is not based upon any particular course of study, but on the authors' general experience of teaching accounting theory and non-traditional accounting. The paper is, therefore, normative-deductive rather than empirical or descriptive in character. The combination of the qualitative goals, plus the curricular suggestions, should assist in the production of not only a useful and stimulating course of study for students, but also one that meets the aspirations of the US Accounting Education Change Commission (AECC) and similar attempts at curriculum redesign in other Anglo-American accounting countries, in terms of a broader education for entry level accountants, and a desire for continued learning on the part of recent graduates.

The remainder of the paper is divided into four parts. In the second section the literature already referred to will be examined in more detail; the third section examines the curricular goals related to fostering deep learning (Gray et al., 1994) and motivating life long learning. To do this, the SEAC is organized around five main questions: How can social and environmental issues be used to develop moral thought processes? What is the role of accounting in society with regard to social and environmental issues? What alternative reporting formats might be relevant to social and environmental issues and sustainability? Who are the relevant stakeholders in respect of social and environmental information? Should social and environmental reporting be standardized and what are the implications for social and environmental audit? The fourth section provides a discussion of additional considerations in teaching the SEAC. A section of summary comments concludes the paper.

Previous contributions to the literature

As indicated in the introductory section, there is a small but, perhaps, growing group of individuals who have contributed to the literature of social and environmental accounting and education in the English language, through the publication of journal articles and conference and working papers. There are also several books, which serve multiple purposes, informing those wanting access to information for professional development, as well as for formal education.

During the period 1971–1980 there were few attempts at introducing even graduate students to what was then called the social dimensions of accounting. Books by Livingstone and Gunn (1974), Estes (1976) and Johnson (1979) have been cited as having been used for graduate courses in accounting. During the period 1981–1990, there was
Social and environmental accounting education

more attention paid to this area, with an early proposal for a course of study by Mathews (1984, 1986), and the 1987 text by Gray, Owen and Maunders was used as the basis for a course of study as reported by Blundell and Booth (1988). Parker et al. (1989) was also a useful book, which provided source material for the study of social as well as behavioural accounting. Most of these references did not distinguish between the social and the environmental aspects of accounting. The monograph authored by Gray (1990) was very influential in providing the basis for environmental accounting developments, including some in education, and since then there has been a reasonably clear separation between the social and environmental accounting literature (Mathews, 1997a). However, this situation may be changing with more recent developments within social accounting (ISEA, 1999; Copenhagen Charter, 1999; GRI, 2000).

Since Gray (1990) there have been numerous books and journal articles covering both social and environmental accounting. These include Owen (1992) on environmental accounting, Mathews (1993) which encompassed both social and to some extent environmental accounting, Perks (1993) which was concerned with the role of accounting in society, and Mathews and Perera (1996) which is one of very few accounting theory texts with a chapter on social and environmental accounting issues. Macve and Carey (1992), Gray et al. (1993), and Rubenstein (1994) are sources of information on exclusively environmental accounting issues, especially Gray et al. (1994) which is extremely detailed in its coverage. Reviews of all of these works may be found in Bebbington (1995) and Owen (1995). In addition, Epstein (1996) studied a number of companies’ environmental practices (primarily in the USA) and has provided, as a summary, a multifunctional approach to environmental accounting and management.

Articles intended to address pedagogical and curricula issues include Lewis et al. (1992) and Mathews (1994) which consider some of the problems associated with the task of incorporating new conceptual material into the accounting curriculum, especially where students do not have sufficient prior preparation in conceptualization (i.e. their background in theoretical matters is weak). Gray et al. (1994) and Puxty et al. (1994) examined issues underlying conventional accounting education and offered suggestions to overcome some of the problems they perceived as leading current accountants to avoid questioning the status quo. Owen et al. (1994) reported on the results of a survey to determine the status of social and environmental accounting education in British universities.

The publication of Gray et al. (1996) provided an updated source of material for educational programmes as well as arguments aimed at the extension of social and environmental accounting and reporting. Schaltegger et al. (1996) proposed the integration of environmental accounting into both the management accounting and financial reporting functions. Mathews (1997b) has put forward a proposal for a mega-accounting theory which would involve separate but related and equal financial social and environmental statements of position. Elkington (1997) has also written about his view of triple bottom line reporting, although without providing much detail of the accounting involved. Sefcik et al. (1997) is a US contribution to the environmental accounting education field. However, the authors employ a comparatively restricted definition of an environmental accounting course and, despite their support for the AECC goal of a wider education for accountants, they limit course development to technical issues ancillary to existing accounting courses. Their article does not address any of the qualitative goals to be addressed in the next section. For example, in the background section the authors stated that:
... in the past decade there has been a substantial increase in international, federal, state and even local environmental regulation, as well as a dramatic increase in the law suits arising from violation of environmental laws and regulations ... to examine how accounting practices respond to new legal, economic, regulatory and even ethical pressures (Sefcik et al., 1997, p. 130, emphasis added).

However, the plan put forward by Sefcik et al. (1997) makes no substantial reference to the moral and philosophical issues which other authors have used to drive social and environmental accounting (for example Gray et al., 1994; Gray et al., 1996).

In a recent review of courses in environmental accounting, Gibson (1997) covers a lot of the same material as has been discussed above, but in greater detail. Also, Gibson reminds the reader of a point made by Mathews (1986) that:

research will be fruitless in obtaining change in accounting practice unless the future practitioners produced by educational courses have a basic knowledge and awareness of the issues involved in social and environmental accounting (Gibson, 1997, p. 584).

In addition to a review of the literature, Gibson (1997, pp. 588–89) provides details of eight courses from Australia, New Zealand, the UK and the USA, dating from 1988 to 1997. This literature survey covers all of the main contributions over more than 25 years up to the mid 1990s.

Gordon (1998) reported a study of final year undergraduate students enrolled in a compulsory accounting theory course, where their reactions to social and environmental accounting issues were measured before, and after, they undertook a programme of study in these aspects of accounting. The results indicated that it was possible to induce changes in the attitudes of senior undergraduate students about to enter the workforce. This study has important implications for progressive accounting education.

Grinnell and Hunt (2000) described the development and structure of an integrated course in accounting, with an emphasis on how accounting information can be used to support corporate environmental strategy. The authors also discussed their experiences in running such a course, and summarized the perceived benefits and difficulties associated with such a course. The authors argued that the course, or one like it, would assist in meeting the objectives of the AECC and the American Institute of Certified Public Accountants (AICPA). However, it would not be seen as radical in comparison with related courses available outside of the USA. There are no challenges offered to the established social, economic and political order by Grinnell and Hunt (2000).

Lockhart and Mathews (2000) provided a detailed course of study in environmental accounting including a description of the structure of an actual course and the source materials used. However, the article is more descriptive and empirical related to environmental issues and does not discuss the qualitative or social accounting areas in any detail.

**Qualitative background to a SEAC**

As Mathews (1984), Lewis et al. (1992) and Mathews (1994) have noted, leading students into a social and/or environmental accounting programme is more difficult when their preparation has been in 'technical, value-free, accounting problems and procedures', where
accounting theory is apparently defined as 'what the standard setters have agreed it is'. Along these lines, Gray et al. (1994) stated that much of accounting education requires only shallow learning. An educational programme which requires students to confront the subject matter referred to in the following subsections will tend to encourage deeper learning. Deeper learning takes the student beyond passively accepting ideas to actively interacting with the learning process. This involves critical thinking, integration, organisation, logic, and 'learning for its own sake' (Gray et al., 1994, p. 55). Any SEAC course should assist the student in developing this approach to learning.

The profession of accountancy must maintain legitimacy with the whole of society (Reynolds and Mathews, 2000). The technical aspects of accounting have their place in both the educational process and also in professional life. However, there is much more required in both areas than is currently being provided. The next generation of accountants needs to be introduced to a wider theoretical basis, whether as part of a course in Accounting Theory, or an SEAC. Education, in its broadest sense, prepares the individual to be able to accept change, whereas training develops skills that may become outdated and require replacement by new skills. Much of the preparation of modern accountants is still in the area of skills training rather than education in the deeper sense. The SEAC is a means of fostering the deeper learning necessary for the profession of the 21st Century, and of encouraging the next generation of professionals to become lifelong learners, in line with the stated intention of a number of professional accounting bodies and most academic institutions.

If undergraduate programmes included theory courses of the type envisaged by the authors of Mathews and Perera (1996), much of the qualitative preparation discussed below would have been addressed. However, most programmes do not treat theory in this manner. Where students have a stronger background in the theoretical and social foundations of accounting, a shorter SEAC may be considered. This may to some extent have been the basis for the initiative described by Gordon (1998). As stated earlier, the qualitative issues selected as providing an appropriate basis for an SEAC include: developing moral thought processes about social and environmental issues; examining the role of accounting in society; examining alternative reporting formats; expanding the definition of stakeholder groups, and addressing the need for the standardization and audit of social and environmental reporting.

HOW CAN SOCIAL AND ENVIRONMENTAL ISSUES BE USED TO DEVELOP MORAL THOUGHT PROCESSES?

While the majority of graduates from accounting programmes have had exposure to the codes of practice issued by the professional accounting bodies, usually through an introductory course in auditing, this has generally not been sufficient to ground them in an understanding of broader philosophical matters. A social and environmental accounting course is seen as an appropriate place for a remedial course of study in ethics (Gray et al., 1994) and can accomplish three of the goals of accounting ethics education set forth by Loeb (1988):

- recognizing issues 'that have ethical implications' (Loeb, 1988, p. 322), e.g., the way in which corporations manage social and environmental resources;
- developing "a sense of moral obligation" or responsibility (Loeb, 1988, p. 322), e.g., understanding the importance of corporate accountability to society; and...
• '“[setting] the stage for” a change in ethical behavior’ (Loeb, 1988, p. 322), e.g. becoming aware that other living things have importance, and thus potentially ‘rehumanising’ (McPhail, 1999) the student’s view of accounting.

Lockhart and Mathews (1999, p. 21) argued that a greater understanding of ethical and environmental theory ‘might assist in a reorganization of professionalism in the face of social and environmental issues.’ Because accounting is commonly seen and taught as the process of reporting only financial information to a limited group of stakeholders for their restricted, short-term decision-making interests, accountants may be reluctant to accept social and environmental accounting in its broadest definition unless the educational process expands their ability to analyse issues from various ethical perspectives.

Environmental matters have not been treated with equal concern, even by environmental accountants, since the ‘greenness’ of the individual will affect his/her position on regulation compared to voluntary action and also his/her attitude toward corporate responsibilities. The three basic approaches (egocentric, homocentric, and ecocentric) to thinking about the environment from an ethical perspective suggested by Miller (1991) can be integrated into the curriculum and augmented with other perspectives.

The egocentric approach is based on the assumption that, if the individual’s self-interest has been maximized, then the whole of society benefits. This viewpoint is consistent with neoclassical economic theory which has had a major influence on traditional accounting. For example, where environmentalists are concerned that the growth spurred by economic development is rapidly destroying the earth, perhaps the egocentric view would say that technology can make up for the loss of biodiversity. This idea that technological capital can replace natural capital is consistent with the anthropocentric perspective discussed in Lamberton (1998) where nature has no intrinsic value outside of its use for human consumption. The short-term perspective of financial reporting also fits within the egocentric approach. As stated in Gray el al. (1996, p. 17), in the dominant economic system actions are judged by their consequences, and thus ‘a profitable action is a good action.’ The effects of corporate actions on those who are not financial constituents are generally not seen as part of the responsibility of management. Implicitly, profitability and growth are assumed to benefit the whole of society.

Miller’s (1991) homocentric approach represents a middle-of-the-road environmental perspective in its collectivist view which recognizes that humans are part of an interactive culture, and that ethical action must consider the needs of, and consequences for, other humans, now and also for future generations. Including information about corporate social and environmental responsibility in accounting reports is an example of expanding relevant constituents to include society as a whole. Lamberton (1998) presented a related eco-humanist perspective as one that can be actualized in sustainability reporting. Attempts to internalize externalities, and thus include them in the cost structure (Boone and Rubenstein, 1997), and perhaps thereby reduce further externalities, would also be part of a homocentric environmental ethic. Another hybrid moral perspective related to the homocentric approach is sustaincentric, also reviewed in Lamberton (1998), where ecology, economy and society are interdependent, population growth is stabilized, and poverty is reduced, among other things. Sustaincentrism is consistent with the naturalist-preservationist approach described in Milne (1996a) where sustainability is an essential component of management decision-making. These perspectives are found in the substantial works of Epstein (1996) and Elkington (1997), although both authors may be
Social and environmental accounting education

criticized as being too easily persuaded by technology, and therefore possibly belonging to
the egocentric category.

Rawls' 1971 theory of justice also takes environmental ethics beyond the egocentric
perspective to a middle ground, giving students a philosophical grounding in a moral
position that moves away from the mainstream capitalistic set of values. As interpreted by
Lehman (1995), the Rawlsian society should be constructed so that it 'explicitly recognizes
the relationship between people and the environment' (Lehman, 1995, p. 405); a shift in
consciousness towards this vision can happen within the capitalist society (Lehman, 1995,
p. 398). The environment can be considered a higher-order primary good about which
society should expect corporate accountability (Lehman, 1995). Milne (1996a) also points
to Rawls as a justification for the naturalist-preservationist approach to accounting for
sustainability. It is also argued that an understanding of justice will 'engender a sense of
sympathy for and moral commitment to the other' (McPhail, 1999, p. 3). Rawls (1971)
may also provide a basis for social accounting development.

Moving towards a more radical position on the environment is Miller's (1991)
ecocentric model, which expands responsibility beyond human life to other forms of life
and the ecosystem in general. Lamberton (1998) recognized that this model represents a
vast departure from the conventional market system. This perspective advocates that 'less
is more' because the biosphere is limited in its ability to support unobstructed growth.
Milne's (1996a) discussion of extensionist-preservationism seems to be related to
eccentricism in that ecological values are more important than economic values. This 'deep
green' position points out the problems associated with trying to integrate the economic,
social and environmental goals, but leaves little in terms of pragmatic solutions (Milne
1996a).

With some background in, or knowledge of, this broad range of perspectives on
environmental ethics, from mainstream to radical, students are better prepared to confront
the additional goals of the SEAC. Reynolds and Mathews (2000) applied most of these
concepts to the relationships of accountants to the environment.

WHAT IS THE ROLE OF ACCOUNTING IN SOCIETY WITH REGARD TO
SOCIAL AND ENVIRONMENTAL ISSUES?

Many students of accounting are not required to examine the role of their discipline in the
wider society; their consideration of the role of accounting is implicit or received:
'Accounting Does and Therefore Is'. Any consideration of the role of professional bodies
tends to be limited to a discussion of the codes of conduct produced by those professional
bodies. Students should be required to go beyond this position and consider concepts such
as the social contract of business with society (Donaldson, 1982; Shocker and Sethi, 1974),
and organizational legitimacy (Dowling and Pfeffer, 1975).

The role and status of the accounting discipline and profession may be threatened if the
needs of society (as perceived by that society) are not met. Gibson (1997, pp. 584–85)
noted that an important reason to develop an environmental accounting course is that it can
'endeavour to overcome . . . the narrowness of accounting education.' Broadening
students' understanding of accounting in its societal function can encourage more creative
thinking about the changes necessary to help mitigate socially and environmentally
damaging activities. Hines (1988) creatively illustrated the nature of the social construc-
tions inherent in mainstream financial accounting, encouraging readers to recognize how
much of accounting we take for granted without realizing that it shapes reality. Because
accounting is a socially constructed discipline (Hines, 1988), organizational legitimacy must be maintained, in part through the accounting function. The power of accounting to create reality can be further illustrated in the forum on accounting for tradable permits where Gibson (1996), Lehman (1996), and Milne (1996b) criticize the analysis and recommendations of Wambsganss and Sanford (1996).

Perhaps as a response to the needs of society and a way of managing public impressions (Neu et al., 1998), a number of companies are voluntarily publishing environmental reports. It remains to be seen whether the environmental performance of these organizations matches the environmental image for which the companies are striving. In other words, do the additional disclosures of information prompt corporations to 'practice what they preach' and encourage stakeholders toward 'critically investigating what corporations are doing to the natural environment' (Lehman, 1999, p. 218). Lehman (1999, p. 218) argued that liberal accountability frameworks which call for additional disclosures do nothing more than 'perpetuate the status quo.' Through the SEAC, students should be exposed to challenges to the traditional role of accounting and should be able to confront whether organizational legitimacy is maintained by expanding the role of accounting into new territory. Lockhart and Mathews (1999, p. 17) suggested that, if society expects an expanded role from the accounting profession, and if 'these expectations are not met, then society may sanction another professional group to fill the gap.' This is also the position of Reynolds and Mathews (2000). Students should also be introduced to the work of the critical theorists who have argued that accounting is not value free and favours the side of capital in disputes with labour (Tinker, 1985). This is not to suggest that the reverse should be the position, but as part of the educational process students should be required to look at both sides of an argument and to tackle difficult issues.

WHAT ALTERNATIVE REPORTING FORMATS MIGHT BE RELEVANT TO SOCIAL AND ENVIRONMENTAL ISSUES AND SUSTAINABILITY?

There is very little consideration in conventional financial accounting and reporting of alternative reporting formats, including sustainability and stakeholder accounting models. Conventional practice allows for a number of GAAP approved disclosure formats and, of course, accounting is assumed to be concerned almost exclusively with financial measurement. Non-financial quantitative and qualitative measurement and disclosure is currently excluded from the conceptual frameworks of the English-speaking accounting world. Yet, a great deal of unaudited non-financial information is included in annual reports, for which the accounting profession is assumed by the non-expert to have responsibility. Furthermore, given its responsibility for operating a communication and reporting medium, the accounting discipline should be prepared to consider using any means which is effective in sending messages.

Therefore, the SEAC should include the consideration of a variety of possible divergences from conventional accounting, such as non-financial quantitative and qualitative environmental information (Burke, 1984; Gray et al., 1996; Schaltegger et al., 1996; Mathews, 1997b). Also, Boone and Rubenstein (1997) suggested that qualitative and quantitative environmental impacts can be monetized and included in the regular annual report, consistent with double-entry bookkeeping. They proposed that a credit to an 'Environmental Equity Account' represented the necessary use of the environment for remaining a going concern. Mathews (2000) has proposed the further development of the environmental equity account. Sustainability reporting would include financial information
Social and environmental accounting education

(Gray, 1992; Lamberton, 1998) and non-financial information, which should consider the five rules for ecologically sustainable development, as summarized by Lamberton (1998, p. 197):

- Critical natural capital must be maintained intact.
- The use of non-renewable resources must be limited to the rate of creation of renewable substitutes.
- The use of renewable resources must not exceed the natural rate of regeneration.
- The discharge of waste into the ecosystem must be limited to the rate of assimilation.
- The scale of human activity must be limited to the carrying capacity of the planet.

Financially-based reports can be greatly enhanced with non-financial environmental information, such as that recommended by the self-regulatory Coalition for Environmentally Responsible Economies (CERES). Companies endorsing CERES must file an environmental report that conforms to the following principles (CERES, 1999):

- Protection of the Biosphere
- Sustainable Use of Natural Resources
- Reduction and Disposal of Wastes
- Energy Conservation
- Risk Reduction
- Safe Products and Services
- Environmental Restoration
- Informing the Public
- Management Commitment
- Audits and Reports

All of these potential alternative reporting formats can be analysed by students in the context of who the relevant stakeholders are.

WHO ARE THE RELEVANT STAKEHOLDERS IN RESPECT OF ENVIRONMENTAL INFORMATION?

An increasingly demanding and expanding group of stakeholders is gaining attention in accounting for the environment. This may have originated with the publication of the Corporate Report (ASSC, 1975). Certainly students should be encouraged to consider this interesting report and to gain an appreciation of the potential 'rights to information' of parties other than those directly involved with the organization. However, despite the increased coverage of other stakeholders in the literature, shareholders tend to be the most important parties at present. This is most unsatisfactory in the area of environmental accounting since emissions to the general environment will affect parties totally outside the economic nexus which is the corporation, i.e. they will probably not be exclusively shareholders, employees, or customers of the corporation discharging the material.

Rubenstein (1994, Ch. 6) discussed four groups of stakeholders which can assist the students in determining who is relevant in the reporting process: contractual (traditional owner and creditors), interdependent (e.g., customers, employees), current generation (e.g., community members), and future generation (e.g., spokespersons from environmental organizations). The first two groups, the visible stakeholders, have very different
information needs from the invisible stakeholders, the third and fourth groups. Schalte et al. (1996, p. 7) stated that the types of accounting information publicly reported were the ‘result of the actual distribution of power between the relevant stakeholders and management.’ Analysing the power relationship between each of Rubenstein’s stakeholder groups and management can enhance the student’s understanding of current accounting practices and the changes needed in the future.

SHOULD SOCIAL AND ENVIRONMENTAL REPORTING BE STANDARIZED AND WHAT ARE THE IMPLICATIONS FOR SOCIAL AND ENVIRONMENTAL AUDITS?

Increasingly, corporations are publishing environmental reports. While certain trends emerged (see for example, Azzone et al., 1996), consistency and comparability are lacking and companies can have difficulty distinguishing themselves (Beets and Souther, 1999, p. 136) from competitors without any standards for reporting. The SEAC should designed to include the issue of standard setting. Environmental reports have largely been voluntary in nature, yet they certainly have contributed to an evolutionary progression toward standard setting. For example, existing environmental reporting practices have influenced reporting guidelines such as those published by the Association of Chartered Certified Accountants (ACCA, 1997) in the United Kingdom. An ethical question students to ponder is whether the heavy polluters, who are more likely than non-polluters to publish environmental reports (Deegan and Rankin, 1999), should have so much influence in the development of best practices for environmental reporting. The research of Deegan and Rankin (1999) and Deegan et al. (2000) on the limited view of organizational legitimacy taken by some large corporations is also relevant to the standardization question.

Students can investigate and discuss the advantages and disadvantages of various options for standard setting. For instance, government regulation in Denmark required the 2000 of the largest, heavy polluters, to publish corporate environmental reports. No such function is required at this time, but regulators and the public can monitor the content of the reports. One of the advantages of standard setting at this level is that the companies may be motivated to embrace environmental matters” (Rikhardsson, 1996, p. 271). A disadvantage is that there is no underlying conceptual framework to ground the reporting requirements and accounting standard setting bodies have been reluctant to become involved. The SEAC should consider whether these groups could take the lead in developing a conceptual framework for environmental reporting. At this point in time most of the activity around the development of standards has come from a mixture of voluntary self-regulatory programmes such as the private GRI (2000), SA 8000 (CEP 2000), AA 1000 (ISEA, 1999), and the Copenhagen Charter (1999), the government-sponsored Eco-Management and Audit System (EMAS, 2000), and the ISO 14000 (1996) series of international management standards. Beets and Souther (1999) have called for environmental reporting standards as a necessary step toward external environmental audits of environmental reports. They also recommend that one avenue for standardization is to use the US Environmental Protection Agency (EPA) in the standard setting process in much the same way that the Securities and Exchange Commission is used to oversee financial reporting. A separate promulgating body would set standards and external verification of environmental reports would be required (Beets and Souther, 1999). Students can ponder whether the EPA is an appropriate government agency to take on this role.
task, especially given the criticism that it often receives. The proposal might not find support in countries where there is no equivalent body to the US EPA.

Suggested curricular materials and assessment alternatives

As noted in the first part of the paper, there have been relatively few contributions to accounting education which have developed social and environmental issues. Furthermore, the lack of an appropriate theory course in most accounting programmes is a problem, because students often lack an appreciation of the views expressed as qualitative goals in the preceding section. Once such introductory materials have been covered, either as part of an accounting theory course, or as the first part of a specialised social and environmental accounting course, the student may be introduced to more detailed subject matter as indicated below.


Philosophical bases: The following sources will be useful for students attempting to develop a philosophical approach to social and environmental accounting issues. Miller (1991) is often cited for the proposition that there are different philosophical positions which may underlie the views that individuals hold on environmental matters ranging from ‘light green’ to ‘ark green’. Reynolds and Mathews (2000) used Miller (1991) and the concept of organizational legitimacy in discussing the accountant as ethical actor. Lamberton (1998) explored the notion of an ecologically sustainable corporation. Lehman (1999) provided a fairly dense examination of philosophical issues related to social and environmental accounting and auditing, including a study of accounting and communitarianism. Gonella et al. (1998) provided a coverage of social and ethical accounting, and auditing and reporting and a concern for values.

Empirical studies: There are many empirical studies in both social and environmental accounting, although the former studies are now rather dated. Recent empirical work, which the author consider to be of particular importance, is Deegan and Rankin (1999) and Deegan et al. (2000). Deegan and Rankin (1999) examined the notion of the environmental reporting expectations gap, and Deegan et al. (2000) disclosed the limited view of organizational legitimacy which many large corporations appear to practice.

Sustainability issues: A good introduction to the notion of sustainability is available in Gray (1992, 1996) and Gray et al. (1996). Other references which assert that they are concerned with sustainability issues include Epstein (1996) and Elkington (1997). However, these sources tend to be rather too convinced that large organizations and advanced technology can solve sustainability problems. Epstein and Elkington may be more appropriately listed among references in the management accounting area.

Management accounting: As noted above, Epstein (1996) and Elkington (1997) probably fit into this area although the authors claimed to be offering comments on sustainability issues. Schaltegger et al. (1996) also expanded on the management
accounting and environmental accounting interface, but offered no insights into the soci
dimension.

Critical perspectives: As noted by Mathews (1997a), there were few contributions to
social and environmental research by critical theorists before 1995, with the cle
exception of Tinker (1985). Since that date there has been more interest. Neu et al. (1996)
and Everett and Neu (2000) are good examples for beginners to the study of social ar
environmental accounting. The papers published in a special edition of Critical
Perspectives on Accounting comprising Wambergans and Sanford (1996), Milne (1996b
Lehman (1996) and Gibson (1996) provide an interesting contrast of views contrasting
traditional financial accounting view with those of academics working in the field of
environmental accounting.

Academic structures and models: Four academic-sourced structures or models have b
published since 1996 in an attempt to advocate new forms of accounting and disclosure
social and environmental issues. Gray et al. (1996) make a number of suggestions in the
last chapter which, if implemented, would lead to a comprehensive reorganization of
accounting and reporting. Schaltegger et al. (1996) proposed a comprehensive mod
of the relationship between management accounting and environmental accountin
measurements. Boone and Rubenstein (1997) introduced the concept of the Environment
Equity Account as a means of accounting for externalities; unfortunately this was no
pursued beyond an internal reporting activity (but see Mathews, 2000). Mathews (19971
developed a model advocating the production of three annual reports for economi
financial, social and environmental disclosures, each based upon a conceptual framewor
and appropriate standards, with an audit or other means of attestation of the content.
Superficially this is similar to the triple bottom line of Elkington (1997). However
Elkington is writing from a management perspective and does not provide any accountin
details in his proposal.

Committee/organizational/legal structures and models: Since 1995 a number of
structures and models have been produced by a variety of bodies. EMAS (2000) is th
Eco-Management and Audit Scheme developed by the European Union to regist
industrial concerns which have an Environmental Management System meeting certa
criteria including a commitment to continuous improvement. A similar standard has b
promulgated by the International Standardisation Organisation (ISO). The ISO 1400
series of environmental standards has the support of over 100 national standard
representatives but does not have government support. The Global Reporting Initiative
(GRI, 2000) for Sustainability Guidelines is a comprehensive document intended to lead
disclosures in the economic, social and environmental dimensions. This is a priva
standard setting venture with the support of two professional accounting bodies, seven
non-governmental organizations and distinguished individuals in the field. However, it
present it lacks governmental and professional accounting backing. There are also the
specialized models in the areas of social and stakeholder accounting. These are the S
8000 and AA 1000 standards and the Copenhagen Charter (1999). None has governmen
or legal status, although the Copenhagen Charter has the support of major professional
accounting firms in Denmark. Although embryonic these and other models can b
expected to be important developments in the future. The models advocated by academic
and committees provide a major resource for a SEAC.

Taxation: Relatively little has been written in the general accounting literature abo
taxation in relation to social and environmental accounting issues. It is possible that th
SEAC can be developed without taxation as part of the programme. Two references which might be useful are Lockhart (1997) and Rousso and Shah (1994).

Auditing: The development of social and environmental audit and verification is a rapidly developing area, especially as required by models such as EMAS and ISO 14000. In addition, preliminary reading material to be incorporated in a SEAC might include Specht and Buhr (1994), Ledgerwood et al. (1994), Maltby (1995), Tozer and Mathews (1994) and Power (1997).

Clearly, the extent to which the references given can be incorporated in the programme will depend upon the time available, the level of the course, and the structure of the overall programme. They are provided for consideration by the course designer.

METHODS OF ASSESSMENT

A variety of different readings would need to be used in the course, as can be seen from the various citations in the previous section. Several methods of assessment would be needed including some/all of class participation, short writing assignments, cases, a project, essays and examinations.

- Class participation is an integral part of the SEAC. Students should be prepared to participate in all discussions of reading materials. This is a good opportunity for students to develop the communication skills essential for success in the profession and should be a forum for lively debate on the varying opinions related to the goals of the course.

- Short writing assignments give the students an opportunity to formulate their opinions on issues from the readings and class discussion. While the instructor could choose any length that is appropriate to the specific course, approximately 250–500 words focuses attention and keeps marking of these assignments manageable.

- Case analyses can be required. Students can be asked to complete answers to questions in writing and to be prepared to discuss the case in class. Suitable cases include Specialty Glass, Bristol-Myers Squibb, Polaroid, and 3M, although there might be a problem with terminology and a US bias.

- The project is envisaged as a detailed analysis of a specific company the management of which has consciously addressed environmental issues. Students might be asked to choose a company that is publicly traded and publishes an environmental report separate from the annual report. Each report is thoroughly analysed for its environmental information. This includes all information, qualitative and quantitative, financial and non-financial. Students should be asked to make recommendations for improving the reports using the normative ideas discussed in the class.

- Essays and written examinations have a major role to play in assessing the contents of the SEAC. Some examples of possible questions include the following: Should companies take the lead in determining what the standards are in corporate environmental reporting? Why or why not? List and discuss the forces of resistance to expanding the accounting model to include externalities in financial reporting. How does capitalism work against the environment? In what ways does accounting fit into the capitalist system?
What is the accounting profession’s responsibility in environmental matters? Refer to at least two authors’ opinions in your response. Describe any strengths and deficiencies in GAAP and the conceptual framework with regard to environmental problems. Are there any solutions to these deficiencies?

Neu et al. (1998) state that ‘Organizational legitimacy is often constructed and maintained through the use of “symbolic actions” ...’ Comment on this statement and its relevance to the future of environmental accounting.

Explain the concept of ‘stakeholders’ and indicate what implications such a concept could have for modern accounting.

How does organizational legitimacy differ from the concept of the social construct of business with society? What implications could these concepts have for accounting as a discipline?

Elkington (1997) refers to the use of ‘triple bottom line’ accounting and reporting as part of the way in which sustainability might be achieved. Explain what Elkington means by these terms. Comment on the apparent contradictions surrounding sustainability.

If EMAS and ISO 14000 continue to be adopted consider the likely impact on both management accountants and auditors.

A number of models have been advanced to facilitate the development of social and environmental accounting and reporting. Review those dealing with social and stakeholder issues. Are these likely to lead to changes in reporting?

For many generations the ethical behaviour of professional accountants has been based on adherence to a code of ethics. Does this code really guarantee that the public will continue to support accounting professionals? Explain your response.

Concluding comments

The intention of this paper has been to provide a number of qualitative curricular goals for a social and environmental accounting course and to provide some examples of how to carry out those goals in the design of such a course. The goals outlined in the paper reflect a broad view of accounting education. It is recommended that the SEAC develop moral thought processes, examine the role of accounting in society, examine alternative reporting formats, expose students to an expanded definition of stakeholders, and develop deep learning and a motivation for lifelong learning. In setting these goals, the SEAC attempts to fill the important role in accounting education of broadening students’ experience beyond the typical technical focus of most courses. To the extent that this role is filled by an accounting theory course, the SEAC would need to be changed, probably to encompass a more detailed treatment of the topics included in the fourth section of the paper.

Acknowledgement

The author would like to acknowledge the assistance of Professor J.A. Lockhart, Western Washington University, in earlier drafts of this paper.
References

http://www. CEPAA.org/sa8000.htm


Social and environmental accounting education


Rejoinder: Some thoughts on social and environmental accounting education

M.R. MATHEWS
Charles Sturt University, Australia

Introduction
My think-piece has produced six thoughtful and revealing Commentaries, for which I, and other educators interested in this field, should be extremely grateful. The editor has invited me to write a Rejoinder to each of the six Commentaries, with the ultimate aim of encouraging further debate on the original theme. In attempting to do this I shall address each in turn and then attempt to bring the common points to bear on the issue of curriculum reform.

The main points made by commentators
Commentary A (by Jan Bebbington and Ian Thomson) agrees with the aims of the original paper (hereafter referred to as ‘thoughts’) and describes them as providing a valid case. However, it is also argued that ‘thoughts’ ‘does not consider the potential resistance to these aims and objectives from students and faculty or the pedagogic implications of the class offered in the wider context of accounting education programmes’.

The hidden curriculum (Ilich, 1971) of conventional accounting and that of SEA and the conflict between them makes up a substantial part of the Commentary. The proposed programme of study ‘is not grounded in the “existential reality” of the student but rather in an academic world’. The remedy appears to lie in dialogic or problem-solving education, which should empower the student to engage with different subjects. Bebbington and Thomson contend that SEA education will only be effective if it is problem posing pedagogy. Clearly these commentators have provided a very important reality check for SEA education, but also for other attempts at innovation, such as the incorporation of ethics education into accounting programmes.

Commentary B (by Peter Booth) broadly supports the thrust of the paper in so far as there is a need to present arguments about getting better educational experiences for students. Two broad roles for SEA education are examined. It is suggested that the ‘thoughts’ paper does not directly confront educational design questions about the relevance of SEA to the learner, to professional practice and to society: is it an addition to mainstream (triple bottom line reporting for example) or a challenge to mainstream accounting (critical theory based for example)? Booth argues that there is no inherent superiority in using SEA material over conventional in terms of fostering deep learning despite Gray et al. (1994) and concludes that ‘Qualitative goals can only have a full impact on educational design and delivery when they are put in context of a clearly articulated educational agenda. SEA is not yet achieving this.’

* Address for correspondence: Professor M.R. Mathews, Head, School of Accounting, Charles Sturt University, Bathurst, NSW 2795, Australia. E-mail: mmathews@csu.edu.au
Commentary B is not unrelated to Commentary A where reference is made to the hidden agenda and unstated position of the learner, instructor, profession and education programme.

Commentary C (by Irene Gordon) states that there is both optimism and pessimism regarding the implementation of a programme such as ‘thoughts’ when viewed against Albrecht and Sack (2000) report. It is noted that in Albrecht and Sack (2000) ten aspects of the ‘thoughts’ approach will be assisted by: not being technical, or rule based, incorporating professional examinations, having a global focus, being future-oriented which deals with values, ethics and integrity, using real world examples, and developing critical thinking skills. On the other hand ‘thoughts’ is unlikely to assist with increasing accounting enrolments by higher salaries, motivating students generally, or leading them professional as well as academic study. According to the Albrecht and Sack (2000) study previously initiated ethics courses have been dropped, which is less promising for SEA approaches. Gordon notes that additional information about the materials used might have been useful. One interesting comment relates to the placement of interesting and innovative (usually elective) subjects closer to the beginning of a programme to attract and retain students.

Commentary D (by Jacque Grinnell and Herbert Hunt) describes ‘thoughts’ as providing a convincing case for including SEA material in the continuum in line with commentators’ views and the analysis of Albrecht and Sack (2000). (Note ‘thoughts’ was written before Albrecht and Sack (2000) and has not been subsequently revised).

Grinnell and Hunt refer to a possible spectrum from the philosophical/normative to the adapting/mainstream view. There is strong evidence that such a spectrum or dichotomy exists. The positions expressed by Bebbington and Thomson, and Booth, in their Commentaries are more in tune with (but still critical of) the fit between SEA and the philosophical/normative end. Commentaries by Gordon, and Grinnell and Hunt, with their concern about where Albrecht and Sack (2000) fit into the picture, are likely to be at the adapting/mainstream end. This is also likely to be a UK/US dichotomy. Grinnell and Hunt make an interesting and appropriate comment about the lack of serious accounting theory in US undergraduate courses. Commentary on appropriate teaching materials makes useful contribution to the debate.

Commentary E (by Markus Milne) provides a very thought-provoking response, who clearly probes the motivation behind the possible SEIC. The motivation of students is challenged. Milne rightly identifies the proposed instruction as directed towards the moral and philosophical, but notes that the author has not been totally free from some of the ‘education as a product’ rhetoric. This point probably has to be conceded in part if clearly student numbers and overall programme integrity should be considered against employment outcomes if the programme is to be of service.

Milne addresses the question of whether a SEIC can assist moral development, noting that ‘most adults fail to move beyond moral reasoning that involves roles, authority and law abiding’. It is argued that students’ moral thought processes are extremely difficult to change, although SEA may be used to challenge traditional accounting and to foster social and ethical awareness. But will these effects last? More emphatic teaching methods may be needed to lead to individual student development. Course content from outside the accounting literature is recommended and this criticism is accepted as valid.

Commentary F (by David Owen) provides an interesting and immediately appealing approach of incorporating SEA material into an accounting theory course.
course, the way some educators attempted to bring their material into focus for students (Gordon, 1998). The danger of marginalizing SEA material as part of an elective taken by a minority of students is an important criticism. The structure put forward by Owen is quite promising although mainstreaming is also likely to produce an unsatisfactory blend of financial accounting theory and SEA rather than two clearly defined courses of study that are related but separated to allow the necessary class time for their full development.

Response to the commentators

Firstly, many thanks to the editor and the commentators for entering into this process with enthusiasm and thoroughness. I have definitely profited from reading the Commentaries and hope that all the readers have also.

Secondly, apologies for not having updated the paper after the appearance of GRI (2000) and similar materials and Albrecht and Sack (2000). These omissions may not have been particularly important, but one of the problems encountered in writing in this area has been keeping up with the expanding literature.

The editor has clearly found a varied group of commentators from Australia, Canada, New Zealand, the UK and the USA. Some have been involved in designing and/or teaching similar programmes and some who are reluctant to do so for well thought-out reasons. Some take a philosophical/normative position and others are much more concerned with developing teaching materials that fit into a vocational (or at least a problem-solving) dimension.

There are some reasonably wide differences in places. For example, Bebbington and Thomson, and Booth were concerned about deep issues of hidden or unseen agendas and the location of a SEAC in relation to social impact and an educational agenda. Quite reasonably, the lack of clear statements on these issues was questioned. The position of the author was exposed as perhaps ambivalent. Gordon adopted a more pragmatic approach based on the fit between a SEA programme and the recent criticism of US accounting education by Albrecht and Sack (2000). Grinnell and Hunt were supportive, whilst articulating clearly the potential existence of a spectrum of possibilities. Theoretically, programmes could fit against a philosophical/normative or a pragmatic educational requirement. Milne is doubtful that the main issue (as he saw it) of moral development is going to be affected by the SEA on a long-term basis but gives additional support recommending emphatic teaching methods. Owen is experienced in teaching SEA as part of a financial accounting theory course, and recommends inclusive rather than exclusive treatment of SEA.

Concluding Comments

Overall there was a fair measure of support for the concept of a SEAC, although the level of support for particular types of programme may vary.

There are very important limitations raised by at least two commentators relating to the hidden agendas of various parties and the extent to which the educational programme continues to maintain a critical perspective. Although no commentator referred to ‘capture’ of the educational programme by mainstream/professional/managerialist interests, it might be speculated that some might see that a SEAC which was attractive to a majority of students and university administrators, and which assisted the employment of graduates, as
having been captured by mainstream interests. In other words, there is a sense in which the success of the SEAC is inimical to the programme itself.

The perspective of one commentator may be employed to reorder the finance accounting theory course to include SEA material. Despite the limitations imposed by the theory and SEA material in the one course, this approach may be seen as being more acceptable by some than a separate course as proposed in 'thoughts'.

The stimulating discussion in response to 'thoughts' may lead to further debate and experimentation, which could lead to improvements in accounting education, is surely a point of agreement between author and commentators.

References


SOCIA LLY RESPONSIBLE ACCOUNTING

M.R. MATHEWS
Socially Responsible Accounting

M. R. Mathews

Faculty of Business Studies
Massey University
New Zealand
Contents

Preface viii

1 Introduction to socially responsible accounting
   Introduction 1
   General organization of the book 4
   The evolutionary position 6
   Summary 6

2 Justifications for additional disclosures
   Introduction 8
   Market-related justifications 9
   Socially related arguments 23
   The effect of culture on the philosophical bases of social accounting 37
   Social accounting and the radical paradigm 39
   Summary 53

3 The classification of social accounting: an introduction
   Introduction 56
   The basic outline 58
   Measurement 60
   Summary 63

4 Social responsibility accounting
   A general introduction to SRA disclosures 64
   Conceptual and operational models for SRA 66
   The role of management accounting in the preparation of social responsibility disclosures 84
   Employee reports 89
   Accounting and industrial democracy 92
   Human resource accounting 93
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Social responsibility accounting in practice</td>
<td>95</td>
</tr>
<tr>
<td></td>
<td>Introduction</td>
<td>97</td>
</tr>
<tr>
<td></td>
<td>A review of SRA studies from around the world</td>
<td>97</td>
</tr>
<tr>
<td></td>
<td>Limitations of these studies</td>
<td>119</td>
</tr>
<tr>
<td></td>
<td>Summary</td>
<td>126</td>
</tr>
<tr>
<td>6</td>
<td>Total impact accounting (TIA)</td>
<td>130</td>
</tr>
<tr>
<td></td>
<td>Introduction</td>
<td>130</td>
</tr>
<tr>
<td></td>
<td>The philosophical problem</td>
<td>133</td>
</tr>
<tr>
<td></td>
<td>Issues in the evaluation of externalities</td>
<td>137</td>
</tr>
<tr>
<td></td>
<td>Valuation and disclosure models</td>
<td>138</td>
</tr>
<tr>
<td></td>
<td>Social audit</td>
<td>150</td>
</tr>
<tr>
<td></td>
<td>The emergence of environment economics and accounting</td>
<td>153</td>
</tr>
<tr>
<td></td>
<td>Summary</td>
<td>167</td>
</tr>
<tr>
<td>7</td>
<td>Socio-economic accounting (SEA)</td>
<td>170</td>
</tr>
<tr>
<td></td>
<td>Introduction</td>
<td>170</td>
</tr>
<tr>
<td></td>
<td>Cost-benefit analysis (CBA)</td>
<td>170</td>
</tr>
<tr>
<td></td>
<td>Planned programmed budgeting systems (PPBS)</td>
<td>173</td>
</tr>
<tr>
<td></td>
<td>Socio-economic accounting</td>
<td>174</td>
</tr>
<tr>
<td></td>
<td>Evaluation models</td>
<td>175</td>
</tr>
<tr>
<td></td>
<td>Institutional performance evaluation</td>
<td>179</td>
</tr>
<tr>
<td></td>
<td>Value-for-money (VFM) auditing</td>
<td>180</td>
</tr>
<tr>
<td></td>
<td>Summary</td>
<td>190</td>
</tr>
<tr>
<td>8</td>
<td>Social indicators accounting (SIA)</td>
<td>192</td>
</tr>
<tr>
<td></td>
<td>Introduction</td>
<td>192</td>
</tr>
<tr>
<td></td>
<td>Goal indicators and data deficiency</td>
<td>193</td>
</tr>
<tr>
<td></td>
<td>Macro-social indicators - an international overview</td>
<td>196</td>
</tr>
<tr>
<td></td>
<td>The development of change indicators</td>
<td>198</td>
</tr>
<tr>
<td></td>
<td>Linking macro and micro indicators</td>
<td>199</td>
</tr>
<tr>
<td></td>
<td>Summary</td>
<td>200</td>
</tr>
<tr>
<td>9</td>
<td>Societal accounting</td>
<td>201</td>
</tr>
<tr>
<td></td>
<td>Introduction</td>
<td>201</td>
</tr>
<tr>
<td></td>
<td>The global view</td>
<td>201</td>
</tr>
<tr>
<td></td>
<td>Accounting and systems theory</td>
<td>204</td>
</tr>
<tr>
<td></td>
<td>Summary</td>
<td>205</td>
</tr>
<tr>
<td>10</td>
<td>Concluding comments and directions for future research</td>
<td>208</td>
</tr>
<tr>
<td></td>
<td>Concluding comments on Chapters 1–3</td>
<td>208</td>
</tr>
<tr>
<td></td>
<td>Concluding comments on Chapters 4–9</td>
<td>210</td>
</tr>
<tr>
<td></td>
<td>Towards reintegration</td>
<td>214</td>
</tr>
</tbody>
</table>
Preface

Modern accounting has roots which are firmly planted in 19th and 20th century industrial and commercial developments. The growth of accounting has, therefore, been concerned with reporting to investors (shareholders and creditors) on the stewardship of managers, while the interests of other groups in society have been largely ignored. If accounting is the language of business, then both the spoken and the written word have had a narrow vocabulary.

Social accounting (and more recently, environmental accounting) attempts to broaden the scope of the discipline by addressing the issues and audiences which have been neglected by traditional mainstream accounting developments. The issues addressed include employee- and product-related matters and externalities (market failures) and the environment; the audiences include employees, consumers and the general public.

We may justify the employment of alternative (additional) accounting disclosures in terms of attempts to influence the capital markets, but more properly in terms of the notions of organizational legitimacy and the social contract of business (and government) with society. The various types of social and environmental accounting are classified herein, in order to assist the reader to address the very wide dimension covered by the social view of the accounting function. Nevertheless, the ultimate unity of the discipline should not be forgotten.

Proponents of social and environmental accounting argue that eventually conventional financial and management accounting will be perceived as a subdivision of a wider approach to accounting; whereas the present position is that of social and environmental accounting being attached as an appendage to conventional accounting.

The problems to be addressed by socially responsible accounting are universal and international, as reflected by much of the content (and origin) of this book. The basic framework is that employed for a thesis presented to Loughborough University of Technology in 1987. The content reflects the author's residence in Australia and New Zealand and extensive visits to Canada and the United States, as well as his British origins.

I am pleased to acknowledge the long-term influence, through discussion and scholarly publication, which Professor R. H. Gray, now at the University of Dundee, has had on my thinking, and the assistance received from Mr Alan Nelson of Chapman & Hall. Extensive updating and revision has taken place during a period of study leave at the University of Montana in the United States. The opportunities provided by Dean L. Gianchetta and Professor B. P. Budge were very much appreciated.

The last and most significant acknowledgement is to my wife Rita who has spent countless hours on word-processing, proof-reading and general encouragement. It is to her that this book is dedicated.

M. R. Mathews
Massey University, New Zealand.
INTRODUCTION

The history of accounting and record-keeping may be traced for over 6000 years. From the clay tablet records of the Mesopotamians (Keister, 1965, pp. 18-24) through the government-centred accounting systems of the Chou dynasty (Fu, 1971), the temple and estate records of the Greeks and Romans (Chatfield, 1977), to the charge and discharge activities of manorial accounting (Goldberg, 1971), various accounting practices contributed to the smooth functioning of society (that is, to social welfare) in the ancient world and up to the Middle Ages. The advent of modern record-keeping systems in the Italian states, so ably publicized by Pacioli (Goldberg, 1971, p. 12), required a particular level of societal development as well as the incentive of trade (Littleton, 1966, pp. 13-21).

Despite some disagreement about whether double-entry bookkeeping may have caused the capitalistic form of societal structure (Sombart, 1924) or was the product of pressures and demands within the existing society (Yamey, 1949, 1964; Winjum, 1970, 1971), it is generally agreed that the relationship between the development of accounting and the society in which it is situated is close and continuing.

Subsequent influences on the development of accounting include the Industrial Revolution and the development of the railways (Chatfield, 1977; Crossman, 1953), the legislative changes of the 19th century (Baxter and Davidson, 1977), the imposition of taxation (particularly in this century) and the events of the depression years. The accounting principles and practices which evolved were subsequently codified during the period 1920-40. This process has continued into recent decades (Mathews and Perera, 1991).

The relationship between accounting and the host society has been summed up very well by Goldberg:
This evolution has followed the pattern of responses to external influences which is present in all organic development and, as in the growth of organisms, the essence of later developments has been present in earlier stages of existence. It seems most unlikely that this evolution has reached its end; as we work and study new phases of development appear to be arising. Thus, economists and statisticians are beginning to explore the social implications of the techniques of accounting and the economic influences of its concepts and procedures, and the social responsibilities of accountants are continually increasing. (Goldberg, 1971, pp. 36-7)

The purpose of this book is to show the directions which have to be followed to illustrate what these social responsibilities are.

Accounting is a social construct and the relationship between the stage of development of the accounting discipline and the needs and preferences of society cannot be allowed to get too far apart if accounting (and accountants) are not to lose the standing that they have gained over many years. The reputation gained by accountants as preparers and auditors of company accounts and advisers to management, on both internal and external matters, is well known. Taxation accounting, internal auditing, the control of the electronic data-processing function, strategic and operational planning using mathematical models and, for some, a role in government activities have all been added over the past few decades. There are a number of common themes running through most of these activities;

1. **Traditional reporting.** Shareholders and management are the main constituents involved in preparing traditional external reports, and management the normal target of internal reporting (FASB, 1970). A narrow view of users is adopted and groups such as employees, consumers and the general public are not given adequate consideration in the reporting process, although recent developments show that some accountants recognize the needs of other constituencies (ASSC, 1975; HMSO, 1977).

2. **Reporting in monetary terms.** The method of reporting traditionally uses monetary aggregates with relatively little concern for non-monetary accounting and socially related measurements.

3. **Public costs.** Probably as a result of historical developments and the difficulties inherent in measurement, the measures used to capture the costs of production and operations do not take public costs into account. Only private (internal) costs are currently of interest to accountants and the management of entities. Externalities have been ignored by most accountants. The situation cannot continue for much longer, not least because externalities in the form of pollution and industrial waste have now reached serious proportions in many industrialized societies (Galbraith, 1958; Beams and Fertig, 1971; Estes, 1972; Gray, 1990).

4. **The role of the accountant.** The involvement of accountants in government (at various levels) appears generally to have been limited to the traditional management and stewardship roles. However, recently introduced management techniques are now pointing the way towards the use of efficiency and effectiveness audits and performance measurements in non-traditional areas. Accountants must be part of these developments if they are to retain or extend their influence (Likierman and Creasey, 1985; Mayston, 1985).

These common themes are often associated with undisclosed values, including a belief in private property, the efficiency of capital markets to effect resource allocation and the transfer of resources between parties, and the limitation of government intervention to external and macro control activities. In total these values amount to support for the capitalist system of ownership of production and distribution, and a restricted view of the rights of parties not involved in the market place.

The four themes identified above are subject to change. Societal changes indicate that the accounting discipline will need to change. Accountants will need to recognize additional interests in the form of new constituents; allow for non-monetary aggregates and different reporting styles; consider the external costs of operations; and, when appropriate, become involved in aspects of performance evaluation of government activities and publicly funded projects.

These changes could be accomplished without discarding the traditional philosophical values underlying the accepted accounting systems, although some strains may become apparent, particularly when considering the inclusion of externalities. These themes are all included within this book under the general heading of social accounting. New constituents, non-monetary aggregates and different reporting styles; the external costs of operations, and the areas of more socially relevant government accounting and reporting form the substance of social responsible accounting. In each case an extensive literature was found to exist, although the extent to which this literature has influence practice is frequently minimal. However, when compared with the total history of the development of accounting, the period of development taken up by social accounting has been very short. Social accounting regarded by many academics and most practitioners as outside the general area of accounting, although support for some features of mo
socially responsible accounting has been found in a number of surveys (Barnett and Caldwell, 1974; Stiner, 1978; Mathews and Gordon, 1984).

GENERAL ORGANIZATION OF THE BOOK

The general stance taken in this work is that there is a case to be made for social accounting as a natural extension of the existing discipline, in line with changes in societal conditions and expectations. As such, social accounting may be considered as inevitable because as society changes, demanding greater and different degrees of accountability from managers of both public and private enterprises, accounting systems must evolve to satisfy these demands. If appropriate accounting systems do not evolve, other parties will organize themselves to fill the gap and thereby remedy the deficiency. This reaction would weaken the role and structure of accounting, perhaps with potentially serious and negative consequences for the discipline and the profession.

However, mere assertion of inevitability in the development of social accounting could be condemned as just normative theorizing which is currently out of favour. Clearly, we do not want to rely upon the sort of arguments that produced the following rebuke: 'Until recently, accounting theory largely consisted of a set of competing a priori arguments about the relative merits of alternative accounting measurements' (AAA, 1971, p. 77).

However, for some potential developments it is difficult to provide a case which is not at least partially normative. This point is considered by Gray, Owen and Maunders, who state that in relation to what they have termed corporate social reporting:

The normative deductive theories attempt to answer the questions: 'How well does accounting practice satisfy objective X?' (e.g. users' needs), or 'How might accounting practice be improved in order to satisfy objective X?' They are thus more evaluative and are deduced from our empirical knowledge of accounting practice and from some objective held for the accounting activity. As a result of being goal/objective-oriented, the normative-deductive theories are claimed to be more value-laden than the inductive theories in that they start from a value-judgement such as 'accounting activity should satisfy users' needs'. (Gray, Owen and Maunders, 1987, p. 65)

This study is mainly normative-deductive, although in many places reference is made to empirical work, where an understanding of the present state of the development of social accounting is required.

A case has to be made which justifies the development of social accounting (including the costs imposed on shareholders, customers, forms of accounting and establishing the case for social accounting, it is necessary to consider the organization and administration of the procedural aspects, since accounting theories cannot be meaningful if divorced from a practical context.

Chapter 2 deals with justifications for the interest shown in social accounting. These are divided into three groups. The first form of justification is to provide information of value to shareholders and financial markets. In other words, social accounting disclosures have information content and can affect the prices of securities in share markets. The second justification is by means of a philosophical argument resting on the social contract between business and society as recognized by business ethicists. The notion of a social contract is used to argue the case for the wider disclosure of socially related information to the general public and employees, rather than only to shareholders and capital markets. This section provides some interesting features not commonly found in the accounting literature. Similar arguments can be made in respect of citizens and government bodies. Indeed, the origin of the social contract lies in the relationship between the governed and the governed. The application of the social contract approach is complicated by the cultural differences which exist between national and sub-national groups. Considerable evidence for the existence and importance of cultural effects in accounting is considered at this point together with the importance of these developments for socially responsible accounting.

The third justification for social accounting research and development rests upon a radical paradigm. Social structures are seen as exploitative society consists of one social group oppressing another social group. Critical theorists argue the need for radical political change which, some argue, may be assisted by developments in social accounting. It is contended in this chapter that many of the arguments found in the literature of the radical paradigm are likely to be dysfunctional, in the search for a means of encouraging the acceptance and development of a more socially relevant accounting. This point is emphasized by showing that there is a basic lack of congruence between the radical paradigm and the political condition of current Anglo-American society. The fundamental value-systems of accountants would be violated by the radical paradigm. However, there is a place for radical paradigms in research and education, particularly to ensure that accounting does keep pace with the remainder of society and avoids simply conforming to the status quo.

Chapters 3 to 7 outline the development of social accounting across a wide spectrum. The dimensions covered include private and public sectors, the short, medium and long terms and the use of financial an
non-financial measurements. The five classifications used to facilitate consideration are: social responsibility accounting; total impact accounting; socio-economic accounting; social indicators accounting; and societal accounting. The literature relating to each area is considered.

The final chapter summarizes the area covered in the book and notes probable future developments in the field.

THE EVOLUTIONARY POSITION

One of the features of the radical literature is that scholars are urged to make clear their philosophical positions in order that their contributions may be fully evaluated. This imperative is accepted by the author and consequently it must be stated that this book is based upon existing socio-economic conditions of a managed mixed economy and is evolutionary rather than revolutionary in orientation. The position argued is that a more socially responsible accounting may be justified and should be implemented, not to radically change society but to modify and improve our present system, by including measurement and reporting relationships which are currently excluded.

The overall contribution to the discussion of socially responsible accounting lies in providing arguments to justify the development and implementation of many aspects of social accounting which would meet the deficiencies perceived in the traditional model. The market is accepted with modification, and property ownership is supported provided that the longer rather than shorter-term perspective is adopted.

SUMMARY

This introductory chapter has set out briefly the development of accounting over a lengthy period of time, in response to societal needs and changes. The position of accounting as a social construct means that changes in society should logically lead to developments in accounting and reporting.

A number of the limitations of current accounting systems were identified, including the restriction of most reporting to shareholders; reliance on the use of only monetary measurements; the exclusion of externalities; and the need to extend modern accounting developments into the government and non-profit areas.

The general organization of the book and the philosophical position adopted by the author were reviewed. The work is evolutionary rather
INTRODUCTION

A number of early writers in the area of social accounting attempted to establish a need for the development of this sub-discipline. Davis (1973) presented the cases for and against the involvement of business in matters of social responsibility, a process which he regarded as inevitable (1976). Prakash (1975) provided a framework within which corporate social performance may be analysed, and Spicer (1978b) compared and contrasted classical, managerial and activist views of social performance. Other attempts to examine the notion of corporate social responsibility have included Fitch (1976), Dalton and Cosier (1982), and Lawrence (1982). References to public-interest matters and the accounting profession can be found in Neubauer (1971), Zeisel and Estes (1979) and Skousen (1982).

During the 1970s a series of reports by committees of the American Accounting Association dealt with measures of effectiveness for social programmes (1972), environmental effects of organizational behaviour (1973a), human resource accounting (1973b), the measurement of social costs (1974), accounting for social performance (1976), and social costs (1975). This activity reflected the social climate of the period and the position of the US economy which could afford additional accounting reports. The National Association of Accountants (NAA) also set up a committee to look at accounting for corporate social performance. This Committee reported in February and September 1974 (NAA, 1974a, 1974b).

Perhaps as a result of the greater maturity of the subject area, it is now quite common for advocates of social accounting and its many variants to make two, often implicit, assumptions. These are, first, that revised systems of accounting are desirable, justified and would fill a demonstrated need, and second, that the reader knows what these newer forms of accounting are. After studying the literature it is clear that neither assumption should really be made. The first assumption, that the various forms of social accounting are desirable, justified and fill a demonstrated need, is examined in this chapter.

Three broad groups of arguments which may be used to justify the use of scarce resources in making further accounting disclosures are examined. These are market-related, socially related and radically related arguments. Market-related arguments are used to advance the case for additional disclosures on the basis that shareholders and creditors will benefit from a more responsive market which is influenced by the information content intrinsic in the disclosures. This aspect of the problem is discussed in the first section and consists of the review of a number of market studies which seek to associate social responsibility disclosures with changes in earnings or share prices.

Socially related arguments are used where additional disclosures would be made to establish the moral nature of the corporation, to satisfy the implicit social contract between business and society and to legitimate the organization in the eyes of the public. In this case, the groups for whom the information is intended include employees, customers, the general public and government agencies. Shareholders and creditors may also find this information of benefit but the primary motivation is not to report to those groups.

Radically related arguments are those put forward by critical theorists who believe in an alternative model for society, including a different role for accounting. As previously stated, the basis of this book is evolutionary rather than revolutionary. Nevertheless, it is appropriate to note the important literature of the radical theorists.

MARKET-RELATED JUSTIFICATIONS: THE ASSOCIATION OF SOCIAL ACCOUNTING DISCLOSURES WITH THE FREE MARKET SYSTEM

INTRODUCTION

Proponents of a free market system of economic exchange normally argue against the imposition of social responsibility requirements on corporations. Furthermore, any assumption of social responsibility objectives by the management of corporations would be regarded by some as an improper use of shareholders' funds. It is usual in these cases to quote a number of economists, from Adam Smith to Milton Friedman, on the benefits of the 'invisible hand' in the maximization of aggregate social satisfaction through the use of an open market system. For example, Friedman (1962, p. 133) objects to the notion that corporate officers have moral responsibilities:
It shows a fundamental misconception of the character and nature of a free economy. In such an economy, there is one and only one social responsibility of business – to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud.

There are at least two deficiencies in the view put forward by Friedman. First, there is no such thing as a free economy since all presently operating economic systems have constraints on freedom of action. Secondly, it must be recognized that the 'rules of the game' will vary between different time periods and economic situations. If the 'rules of the game' includes the existing legal framework, then it might be argued that a Friedmanite approach to corporate management would probably result in greater government intervention, the opposite of what is desired by the advocates of a free market approach.

In contrast to the Friedmanite position, there are a number of arguments which may be advanced in support of at least some social responsibility (and hence socially responsible accounting) by corporations in a relatively free market system. These are:

1. A free market will be more efficient if more information is available to participants;
2. Empirical research has demonstrated that a measure of social responsibility by management may correlate with higher corporate income;
3. There is some evidence that share prices may be influenced by the social responsibility disclosures of corporations.

The first argument may affect all market participants. The others directly concern the welfare of the shareholders towards whom management have a stewardship-reporting relationship. These positions, relating to general disclosure, corporate income and shareholder wealth, are discussed below.

It should be noted that the discussion in this section is not concerned with rights, duties, obligations or any other moral concern. These matters are discussed in a later section.

INCREASING THE FLOW OF INFORMATION TO THE MARKET

The increased quantity of information sought by those advocating socially responsible accounting could serve to make the market more efficient. The conditions necessary for the (unattainable) perfect market is costless to the recipient. If the modern Friedmanite free market is to approximate the ideal of perfect competition, then the more information that is generally available, the more efficient the market should be. This approach, together with the legal/stewardship arguments, can be applied to the financial disclosures required of all corporations.

The advocates of social accounting argue for increased financial, non-financial, quantitative and qualitative disclosures in respect of employment practices, environmental impact, product safety, energy usage and community relations. All these may be relevant to interested parties, such as actual and potential employees, customers, regulatory bodies, shareholders and debtholders.

The majority of the information that is currently produced relates to the internal costs of the firm. There is another class of disclosure called externalities which, although more difficult to measure and value, has considerable potential for changing market behaviour. Externalities, such as pollution, mean that private costs are being allowed to cross into the public domain. These costs are not being included in the total cost of the good or service. In most firms the cost of production bears some relationship to the desired selling price, and selling price affects demand for the product (and vice versa) through the market. Consequently, a failure to capture all the manufacturing costs results in a lower total cost and may lead to a lower price and a greater quantity sold in the market place. This may not matter, but on the other hand, if the externality which leads to the lower costs (because it is not counted) is going to cause environmental damage, then the consumer is gaining a lower-priced product at the expense of the whole of society (both consumers and non-consumers). From this perspective a free market for securities cannot function properly in the absence of additional accounting measurements and disclosures because resource allocation is disrupted. Firms with higher pollution costs to society may currently have higher returns to investors and vice versa, leading to a diversion of resources. The capital market is not as efficient as some would have us believe, because externalities are not included.

Arguments against the increase in information flow appear to rest on the grounds of confidentiality and the cost of producing and disclosing the information. Confidentiality arguments are concerned with the opportunities which competitors allegedly have to discover more about the organization than they already know. This is a weak argument since the disclosures are of material which would be known to most competitors if the market place is working efficiently. The cost argument may have more merit although, as demonstrated in the next section, the cost of the information may be considered as an investment by the
THE RELATIONSHIP BETWEEN SOCIAL RESPONSIBILITY ACCOUNTING DISCLOSURES AND MARKET PERFORMANCE

The relationship between social accounting disclosures in annual reports and measures of market performance has been examined in a number of studies. The results have been mixed, with some researchers, for example Bowman and Haire (1975, pp. 49-53), establishing an interesting positive relationship between the two variables. Other studies have found no relationship, or even a negative correlation. Tables 2.1 to 2.5, which are modelled on a survey article by Arlow and Gannon (1982, pp. 235-41), provide a summary of much of the relevant research.

The research making up the market studies part of the social accounting literature attempts to relate some measure of social responsibility to measures of market performance. The choice of a measure of social responsibility varies widely as shown in Table 2.1. The four groups are reported separately as Tables 2.2 to 2.5 respectively. A reasonable amount of detail is provided, sufficient to identify the main features of each study and the results obtained.

Sturdivant and Ginter (1977) examined the connection between the performance of organizations on both traditional (earnings per share) and corporate social responsiveness bases and the attitude of corporate management. The corporations selected came from the list of those cited by Moskowitz as 'best' or 'worst' in terms of social performance. A third group of 'honourable mention' companies was added, giving three groups. There were 18, 29 and 20 firms in each group respectively. A management attitude survey instrument was developed and tested. Factor analysis showed significant differences between the responses

Table 2.1 Choice of social responsibility measure

<table>
<thead>
<tr>
<th>Method</th>
<th>Studies</th>
</tr>
</thead>
</table>
## 2.3 Studies using quasi-objective ratings based upon annual reports or structural analysis. From Mathews and Perera (1983)

<table>
<thead>
<tr>
<th>Study</th>
<th>Sample</th>
<th>Indicator of social performance</th>
<th>Indicator of market performance</th>
<th>Outcome of study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bowman and Haire (1975)</td>
<td>88 firms in food processing in 1973 Moody’s and Standard and Poor industries indices</td>
<td>Percent of prose in annual report on social responsibility</td>
<td>Mean or median ROE, 1968–72 or 1969–73</td>
<td>Both mean and median ROE higher for firms with some discussion than none. Medium mention firms have significantly greater median ROE than either high or low mention</td>
</tr>
<tr>
<td>Vance (1975)</td>
<td>45 and 50 major corporations</td>
<td>Ratings by students and executives in 1972 Business and Society Review</td>
<td>Per share stock price 1/1/75 as percent 1/1/74 price</td>
<td>Average ratings of both groups negatively correlated with 1974 stock market performance. No significant relationships</td>
</tr>
<tr>
<td>Abbott and Monsen (1979)</td>
<td>450 corporations in 1975 Fortune 500</td>
<td>Social Involvement Disclosure Scale (number of social action disclosures in annual reports)</td>
<td>Total returns to investors 1964–74</td>
<td>No meaningful difference in total returns to investors for high and low involvement firms</td>
</tr>
<tr>
<td>Ingram (1978)</td>
<td>387 Fortune 500 companies (1970–6)</td>
<td>SRA Disclosures Annual Reports</td>
<td>Computstat price dividends earnings tape</td>
<td>Information content of firms’ social responsibility disclosures conditional upon market segment rather than a general cross-section of firms</td>
</tr>
</tbody>
</table>

---

## 2.4 Pollution measures as reported by companies. From Mathews and Perera (1993)

<table>
<thead>
<tr>
<th>Study</th>
<th>Sample</th>
<th>Indicator of social performance</th>
<th>Indicator of market performance</th>
<th>Outcome of study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belkaoui (1976)</td>
<td>Two groups of 50 US corporations from different industries</td>
<td>Pollution control expenses at least 1% of sales plus control group disclosures</td>
<td>Monthly closing stock prices 18 months before and after expenditures</td>
<td>Substantial but temporary positive effect on stock market prices for companies disclosing pollution data</td>
</tr>
<tr>
<td>Mahapatra (1984)</td>
<td>67 firms from six industries, 60 firms as control group</td>
<td>Expenditure on pollution control</td>
<td>Computstat PDE tape</td>
<td>Pollution control expenditure and high profitability not positively associated. Expenditures for pollution control do not automatically lead to higher market returns</td>
</tr>
<tr>
<td>Study</td>
<td>Sample</td>
<td>Indicator of social performance</td>
<td>Indicator of market performance</td>
<td>Outcome of study</td>
</tr>
<tr>
<td>------------------</td>
<td>---------------------------------------------</td>
<td>--------------------------------------------------</td>
<td>--------------------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Folger and Nutt</td>
<td>Nine paper companies</td>
<td>Government pollution indices</td>
<td>P/E ratio. Mutual fund purchases (in dollars). Common stock price. (Data from selected quarters 1971–2)</td>
<td>No positive relationships</td>
</tr>
<tr>
<td>(1975)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spicer (1978a)</td>
<td>18 firms in pulp and paper industry 1968–73</td>
<td>CEP studies of pollution control developed into a pollution index, related to productive capacity and plant numbers</td>
<td>Profitability, size, total risk, systematic risk, price/earnings ratio</td>
<td>Companies with better pollution control records tend to have higher profitability, larger size, lower total risks, lower systematic risks and higher price/earnings ratio than companies with poorer pollution control records. Relatively short-lived phenomena</td>
</tr>
<tr>
<td>Stevens (1982)</td>
<td>54 firms in four industries subject to CEP reports</td>
<td>CEP pollution reports</td>
<td>Effect of CEP reports of pollution status of corporation on earnings per share</td>
<td>Cumulative average excess returns for portfolios of firms with high estimated expenditures for pollution control are consistently below the returns for portfolios of firms with low estimated expenditures</td>
</tr>
<tr>
<td>Shane and Spicer (1983)</td>
<td>72 firms in four industry areas</td>
<td>CEP pollution reports</td>
<td>Share prices over a six-day period before and after publication of CEP reports</td>
<td>Sample firms' large negative abnormal returns on two days immediately prior to newspaper reports of release of CEP studies. Low rankings associated with more negative returns on publication</td>
</tr>
<tr>
<td>Freedman and Stagliano (1984)</td>
<td>27 weaving, finishing and knitting mills (1984)</td>
<td>OSHA dust disclosures through SEC 10K reports</td>
<td>Stock price movements</td>
<td>Disclosures on impact of new cotton dust emission standard do not have significant information content for investors</td>
</tr>
</tbody>
</table>
by managers of corporations in the various groups. The performance characterization of corporations, over a ten-year period, compared to the industry average, was set against the social performance rating, and the test results showed no difference between ‘best’ and ‘honourable mention’ firms. However, statistically significant differences were obtained at the 0.01 level between ‘best’/‘honourable mention’ and ‘worst’ performers.

Sturdivant and Ginter (1977, p. 38) concluded:

While the findings certainly will not support the argument that socially responsive companies will always outperform less responsive firms in the long run, there is evidence that, in general the responsively managed firms will enjoy better economic performance. It would be simple minded, at best, to argue a one-on-one cause-effect relationship. However, it would appear that a case can be made for an association between responsiveness to social issues and the ability to respond effectively to traditional business challenges.

Table 2.3 repeats the same general approach but utilizes measures of social responsibility performance which appear to be more objective, although still relying on judgement to a considerable extent.

In a 1975 study Bowman and Haire investigated the association between social responsibility disclosures and shareholder benefits in the form of increased income to the organization. The search for a relationship between these two variables was directed towards the development of a strategic posture by management. The sample consisted of the 1973 annual reports of 82 food-processing companies. The return-on-equity figure used was an average of the period 1969–73 (in a few cases 1968–72) taken from Moody’s or Standard and Poor’s published indices. The surrogate measure for social responsibility was the proportion of prose devoted to social responsibility matters in the annual report. This measure was investigated by comparing the disclosure of social responsibility items by companies accepted by critics as socially responsible with the performance of a random sample of companies. The results of this test showed the measure to be capable of separating these companies into two groups on the basis of their demonstrated social responsibility.

Using the proportional measure of social responsibility items reported as an indication of social responsibility, Bowman and Haire (1975) found a statistically significant relationship when associated with income. A medium ranking, on a scale of low-medium-high for social responsi-
In general, this study refutes the suggestion that the worst offenders in the reporting of social costs will be rewarded more in the capital market. In fact, on the basis of these results, managers may be advised to allocate a proportion of their resources to pollution control and to report these expenditures to the stockholders. (Belkaoui, 1976, p. 30)

Mahapatra demonstrated that the 'ethical investor' was not active at the time this study was undertaken, since the results were consistent with the existence of a 'rational economic investor':

The conclusion is that the investors view pollution control expenditure, legally or voluntary, as a drain on resources which could have been invested profitably, and do not 'reward' the companies for socially responsible behaviour. Thus an average investor is not an 'ethical investor' and industries and investors left to themselves do not have any incentive to spend for pollution and manifest socially desirable behaviour. (Mahapatra, 1984, p. 37)

The next group of studies are perhaps the most important in the series. They are generally more recent and more sophisticated in the analysis and have a uniform data base, namely, the reports on pollution activities of industries and companies supplied by outside parties, as shown in Table 2.5.

Results may be described as mixed since although Folger and Nutt (1975) did not find any positive relationships, Spicer (1978a) found that for a limited sample of pulp and paper companies the disclosures by an outside body (the Council on Economic Priorities) were associated with profitability, size of company, total risk, systematic risk and price-earnings. All associations were in the direction favouring disclosure. In other words, shareholders would benefit if companies worked towards better pollution-control records. This study was criticized by Chen and Metcalf (1980) on a number of methodological grounds. In his reply Spicer stressed the findings as associations between variables and not caused relationships:

My primary objective was to determine whether a perceived association between corporate social performance . . . and the investment worth of corporations' securities . . . was borne out by observation. (Spicer, 1980, p. 178)

Folger and Nutt (1975) used a reduced sample of nine companies (in order to obtain stable earnings histories and avoid the results of merger activity). They developed indices of pollution and related these to quarterly price-earnings ratios from March 1971 to March 1972. No significant relationship was found for either short- or long-run performance.

The citing of major paper producers as polluters did not affect the market price of their stock. The following explanation may still be important:

Yet, the results are in agreement with the expected results in an efficient capital market composed of a majority of 'return' conscious investors - that is, while socially conscious investors might sell the shares of less socially responsible companies, such sales would be viewed as bargains by the return conscious investors. (Folger and Nutt, 1975, p. 159)

The reaction of the investing public is likely to vary from time to time and from place to place in line with evolving social preferences. Gray (1990) has noted the potentially important development of investment for 'ethical investors' and Owen (1992) includes references to 'green investing'.

Stevens found that 'high' estimated expenditures for pollution control were associated with lower cumulative average excess returns, in comparison to 'low' estimated expenditure where the cumulative average excess returns were not reduced. The disclosures had information content but the current shareholders would suffer a loss of capital value as the information became available to the market. In the longer term, however, shareholders should benefit:

The data examined in this study represent a source of information which may have been previously unavailable to the market. As such, its publication could provide meaningful data for assessing the timing and magnitude of future cash flows. (Stevens, 1982, p. 25)

Shane and Spicer demonstrated that the use of externally produced and publicized environmental information may have an effect on the share prices of polluting corporations, when the disclosures are first made. In a manner similar to Stevens', this study demonstrated the information effect of the disclosures, although to the short-term discomfort of the present shareholders. However, given the importance of the efficient market and the manner in which the marginal investor reacts, it is interesting that:

The reported results also are consistent with investors using the information released by the CEP to discriminate between companies with different pollution-control performance records. (Shane and Spicer, 1983, p. 535)

In the longer term this should achieve environmental goals of lower pollution levels.

Freedman and Stagliano (1984) found no evidence of information
content since there was no positive or negative association of share prices with the particular pollution disclosures under investigation. The authors offered a number of possible explanations, including an efficient market which had already impounded the information before it was disclosed or a sub-market for particular firms that was not efficient at all (p. 318).

OTHER APPROACHES

Belkaoui (1980) conducted an experiment to determine the impact of socio-economic statements on an investment decision. Sets of accounts were prepared in which the treatment of pollution costs was varied from conventional (that is to say, none) to footnote exposure of pollution control costs to full disclosure of the costs and their effects. Professional groups of accountants and bankers were then asked to 'invest' in the two companies (that is, to vary the portfolio held). The investment strategy was also varied between investing for capital gains or for income. In conclusion Belkaoui reported that:

The findings attest to the general relevance of socio-economic accounting information for the bankers under any investment strategy, and for the accountants only under an investment strategy focussing on capital gains. (Belkaoui, 1980, p. 280)

and went on to make the important point that:

The significant interaction effects between the three examined factors provide a warning about any generalisations to be derived from a similar field experiment. In other words the informational content of any new information, e.g. socio-economic accounting information, is to be ascertained in terms of its relations to relevant environmental variables. (Ibid.)

SECTION SUMMARY

This section has considered the results of a number of studies which were aimed at establishing the existence of any relationship between social responsibility accounting disclosures and measures of market performance. The findings from a number of studies are conflicting, although it may be argued that the overall weight lies towards the view that disclosure of non-traditional information does have utility for shareholders and the security market because information content is established regardless of the direction in which share prices move.

because a concrete relationship between disclosure and share price effect was being established. This concrete relationship would assist managers and investors to make more rational economic decisions.

The market-related studies, as applied to accounting research, are concerned with the traditional relationship of managers and investors. Any justification for social accounting which falls within this approach must establish that shareholders could make better decisions and benefit economically in the long term from having the additional information. The results of the studies reviewed (a reasonable cross-section of the total number available) suggest that the issue is complicated by intervening variables and the need to employ sophisticated techniques in order to establish statistically significant relationships. The relationships detected are characterized as associations and not caused relationships.

Although potential benefits may have been indicated by the work outlined in this section the associated costs have not been determined and, therefore, a cost-benefit interrelationship cannot be established. Nevertheless, it is argued that social accounting may be justified to shareholders as an aid to market efficiency and improved decision making.

SOCIALLY RELATED ARGUMENTS; SOCIAL ACCOUNTING, THE SOCIAL CONTRACT AND ORGANIZATIONAL LEGITIMACY

INTRODUCTION

The arguments in favour of forms of social accounting that are derived from market studies will not necessarily be relevant to a wider audience. Share-market reaction to social accounting disclosures is less meaningful to non-equity holders, employees, customers and the general public than to shareholders and creditors. To interest these groups in social accounting disclosures it is necessary to look at the basic functioning of industrial and commercial activities, and to enter the moral debate surrounding the notions of a social contract between business and society. This approach to justify the expenditure of resources on social accounting falls within the area of socially related arguments.

The notion of the social contract has been expressed by Shocker and Sethi (1974, p. 67) as follows:

Any social institution – and business is no exception – operates in
Although it is not difficult to find references to the need for corporations to be accountable to a wider audience (Nader, 1973; Galbraith, 1974), the moral position of the corporation is much more difficult to establish. It is only after satisfactorily answering questions about the moral position of the corporation that the notion of a social contract can be considered.

THE MORAL POSITION OF THE CORPORATION

Several contrary positions may be examined, in particular the moral-person view and the structural-restraint view. The most simplistic approach is the moral-person view which argues that corporations are moral persons and therefore are moral agents: consequently corporations are morally responsible for their actions. There are clearly difficulties in establishing this case, since corporations cannot act intentionally by themselves or exercise the normal functions of persons. The legal personality of the corporation is a convenient fiction, the person-related functions are exercised by directors or managers on behalf of the corporation.

It has been argued that corporations cannot be held to be morally at fault because they are not physical persons (French, 1979; Ladd, 1970). Manning has made the point that if corporations are moral persons they have to be treated fairly, which may have an effect on the ability of society to find fault with the actions of the corporation:

If we accept the view that moral persons have a right to be treated fairly and corporations are moral persons, then they have the right to be treated fairly. The right to be treated fairly requires that we refrain from making moral fault attributions of the person who has the right, unless we can show that certain conditions are met. (Manning, 1984, p. 79)

These conditions are utilitarian, are not related to fairness and are associated with determining causal effect, compensation for those who may suffer injury and prevention of any recurrence of the action which caused the breach in the first place (ibid., pp. 82-4).

The opposite view is that corporations cannot be moral agents of any kind, because their actions are controlled by their structures and, therefore, moral freedom often cannot be exercised. If taken to an extreme position the structural restraint view would mean that the only way in which the actions of corporations could be controlled (in any moral sense) would be by extensive legislation. However, corporations vary considerably in size, type and public stance on many issues. These differences allow the specification of certain conditions by which a corporation may qualify as a moral agent.

Donaldson (1982, p. 30) outlined these conditions as follows:

In order to qualify as a moral agent, a corporation would need to embody a process of moral decision-making. On the basis of our previous discussion, this process seems to require, at a minimum:

1. The capacity to use moral reasons in decision-making;
2. The capacity of the decision-making process to control not only overt corporate acts, but also the structure of policies and rules.

Corporations may qualify as moral agents (but not moral persons) if they subscribe to the conditions above. If they do not, then there would seem to be support for a structural restraint view (which in turn may mean increased legislative control and restraint).

Donaldson (1982) suggests that one of the conditions for qualifying as a corporation (presumably as a legal entity) should be that an organization meets the conditions of moral agency. This view is reinforced by the rights and responsibilities which corporations possess and which point to conditions of moral agency being associated with conditions of corporate status. Corporate rights are granted in most developed industrial countries and include limited liability for the shareholders, and unlimited life, the ability to sue and be sued, and contractual rights for the corporation as of a natural person. In return, the responsibilities owed by corporations to the rest of society (including other corporations) include a number of direct and indirect moral obligations.

The direct obligations of corporations are specified explicitly by statute, case law regulation and contract and involve shareholders, employees, suppliers and customers. The indirect obligations are not formally specified and involve parties with whom the corporation has no direct contractual relationship, including competitors, local communities and the general public. Some parties will be included in both sets of obligations, for example, employees may be customers, employees and members of the general public.

Breaches of direct obligations are usually identifiable and may be
settled through legal action or by adverse publicity (probably leading to legislation), if not through the specified terms of the contract. It is the indirect obligations that cause problems, because they are not readily identifiable, may not be agreed between the parties to disputes, and frequently give rise to measurement and valuation problems, even where their existence can be agreed upon. The indirect obligations give rise to the notion of a social contract between business and society. These issues underlie many of the problems of accounting for externalities.

THE SOCIAL CONTRACT OF BUSINESS WITH SOCIETY

In a speech to the Harvard Business School in 1969, Henry Ford II is reported to have stated:

The terms of the contract between industry and society are changing . . . Now we are being asked to serve a wider range of human values and to accept an obligation to members of the public with whom we have no commercial transactions. (Donaldson, 1982, p. 36)

The notion of a social contract originated in political philosophy, where it is argued that society in general accepts an overriding control over individual freedoms in order to achieve collective goals. However, a social contract underlies the arrangement, and the failure to deliver the expected outcomes may justify a revolt on the part of the general society. Consequently:

- The political social contract provides a clue for understanding the contract for business. If the political contract serves as a justification for the existence of the state, then the business contract by parity of reasoning should serve as the justification for the existence of the corporation. (Ibid., p. 37)

The social contract would exist between corporations (usually limited companies) and individual members of society. Society (as a collection of individuals) provides corporations with their legal standing and attributes and the authority to own and use natural resources and to hire employees. Organizations draw on community resources and output both goods and services and waste products to the general environment. The corporation has no inherent rights to these benefits, and in order to allow their existence, society would expect benefits to exceed the costs to society.

There are a number of potential drawbacks to the operation of the

include the depletion of natural resources and increasing environmental pollution. A less easily recognized, but equally important, cost occurs because of the ‘diffusion of individual moral responsibility which sometimes occurs in productive organizations’ (ibid., p. 50).

Employees may feel responsible to their superiors within the hierarchy, but not to the end-user of the product or service. Profit-seeking organizations accumulate power as well as wealth, which enables them to interact with government in a manner which may be to the disadvantage of the ordinary consumer. The generation and enhancement of monopoly power may result from these interactions. Employees may suffer as a result of their work in productive organizations, including alienation and an inability (in the case of lower-level employees) to control their working conditions. Furthermore, in some cases the design of the productive system may lead to monotony and the dehumanization of workers.

In addition to the maximization of the benefits and the minimization of the problems outlined above, the social contract between productive organizations and the individual member of society would include an element of justice. As Donaldson has expressed the issue:

the application of the concept of justice to productive organizations appears to imply that productive organizations avoid deception or fraud, that they show respect for their workers as human beings, and that they avoid any practice that systematically worsens the situation of a given group in society. (Ibid., p. 53, original emphasis)

Some theorists would argue that the ‘ideal’ in respect of employees and the social contract would be a different relationship, that belongs in the next section dealing with the radical approach. However, the moral agency of the corporation and the social contract between a productive organization and the general public does not contain any imperative towards a change in the management or structure of the organization, beyond those necessary to reach the state of a moral agent and to maintain the contract.

THE STUDY OF BUSINESS ETHICS

The study of business ethics may be seen as the practical expression of philosophical discussions on the social contract between business and society. Henderson explored the differences between lawyers and business executives in their attitudes to business ethics which he defined thus: ‘Business ethics is the continuing process of re-defining the goals
clarify and defend the postures they select (ibid., p. 169). This is shown in Figure 2.1.

Grcic (1985) has put forward the notion of consumer and employee representatives on the boards of directors of public corporations to promote corporate moral behaviour.

THE CORPORATE REPORT AND THE SOCIAL CONTRACT

The Corporate Report (ASSC, 1975) was the most significant of the conceptual frameworks (for socially responsible accounting) produced by committees and working groups on behalf of major accounting organizations. This document was published on behalf of the Institute of Chartered Accountants in England and Wales. The significance of this report for the socially related argument is that there was an underlying philosophical position very similar to that of the social contract of business with society. Although the social contract basis was not formally acknowledged, it appeared to underlie such statements as are identified in the basic philosophy of the report, key points of which are reproduced below:

1.1 Our basic approach has been that corporate reports should seek to satisfy, as far as possible, the information needs of users; they should be useful.

1.2 In our view there is an implicit responsibility to report publicly (whether or not required by law or regulation) incumbent on every economic entity whose size or format renders it significant.

1.3 We consider the responsibility to report publicly (referred to later as public accountability) is separate from and broader than the legal obligation to report and arises from the custodial role played in the community by economic entities.

1.4 The reporting responsibility we identify is an all-purpose one, intended for the general information of all users outside those charged with the control and management of the organisation.

1.5 In this context public accountability does not imply more than the responsibility to provide general purpose information.

1.6 Corporate reports are the primary means by which the management of an entity is able to fulfill its reporting responsibility by demonstrating how resources with which it has been entrusted have been used.

1.8 Users of corporate reports we define as those having a reasonable right to information concerning the reporting entity.

1.9 The groups we identify as having a reasonable right to information and whose information needs should be recognised by corporate reports are: The equity investor group, the loan creditor group, the employee group, the analyst-advisor group, the business contact group, the government and the public. (ASSC, 1975, pp. 15-17)

CONCLUDING COMMENTS ON THE SOCIAL CONTRACT

The productive organization exists to satisfy certain social interests:

Productive organizations ... are subject to moral evaluations which transcend the boundaries of the political systems that contain them. The underlying function of all such organizations from the standpoint of society is to enhance social welfare through satisfying consumer and worker interests, while at the same time remaining within the bounds of justice. When they fail to live up to these expectations they are deserving of moral criticism. When an organization, in the United States or elsewhere, manufactures a product that is inherently dangerous, or when it pushes its employees beyond reasonable limits, it deserves moral condemnation: the organization has failed to live up to a hypothetical contract – a contract between itself and society. (Donaldson, 1982, p. 57)

If we accept this view then any techniques of data collection, analysis and disclosure that enables society to evaluate the performance of the organization are both legitimate and desirable. The socially related arguments for social accounting show how social accounting may be justified as the provision of additional information to audiences other than shareholders and creditors. However, if management is unwilling to consider
the social contract as a justification for additional disclosures, they may consider organizational legitimacy as an alternative position.

ORGANIZATIONAL LEGITIMACY

An alternative view of the relationship between the corporation and society is offered by Lindblom (1984). The social contract is an abstraction, a useful device for the analysis of the role of the corporation in relation to society. The social contract is ongoing and continually renewable; furthermore, the basis of a collectivity is one of a voluntary association of individuals, any or all of whom may decide to leave the collectivity if their needs are not receiving due attention.

Lindblom used the societal context (US) of the challenge to established patterns of responsibility and control during the 1960s and 1970s to analyse the notion of corporate social responsibility. Lindblom states that there has been a change from 'not doing harm' to 'doing something positive' in terms of the expectations of society towards business. At the same time, changes in the organizational structure of developed societies are making responses to changing societal needs more difficult and time consuming:

One interpretation of the corporate responsibility challenges of the mid 1960s to the mid 1970s might be that, as the environmental conditions of the original contract changed, the public expected business to be responsive to those changes. While business had undergone a structural change which made it less responsive to the public. (Lindblom, 1984, p. 15)

Lindblom went on to argue that the social contract leads logically to the concept of organizational legitimacy which has been defined in the following manner:

Organizations seek to establish congruence between the social values associated with or implied by their activities and the norms of acceptable behavior in the larger social system of which they are a part. Insofar as these two value systems are congruent we can speak of organizational legitimacy. When an actual or potential disparity exists between the two value systems, there will exist a threat to organizational legitimacy. (Dowling and Pfeffer, 1975, p. 122)

Neither making a profit nor observing legal requirements will establish organizational legitimacy. This quality can only come from a reference considerably in their visibility to society as a whole and some are more heavily dependent than others upon social and political support.

Organizational legitimacy has been summarized by Lindblom in the following terms:

1. Legitimacy is not synonymous with economic success or legality.
2. Legitimacy is determined to exist when the organization goals, output, and methods of operation are in conformance with societal norms and values.
3. Legitimacy challenges are related to the size of the organization and to the amount of social and political support it receives with the more visible being most likely to be challenged.
4. Legitimacy challenges may involve legal, political or social sanctions. (Lindblom, 1984, pp. 20-1)

The implications which the notion of organizational legitimacy has for the management of the corporation includes better communication with society. This enlarged accounting or accountability may be essential for the continued existence of the corporation in its present form:

To the extent, then, that the accounting profession wishes to continue to provide relevant information to external users, the legitimacy challenges serve as an indication of a need for change in the accounting function. (Ibid., pp. 30-1)

The arguments put forward by Lindblom connect the philosophical propositions of the social contract as put forward by Donaldson with the need for corporate social disclosures, through the notion of organizational legitimacy. This pragmatic justification may be used with managers who do not necessarily accept the social contract arguments, but recognize the need to influence the general public through additional disclosures. Some decision-makers may accept the need for social accounting even though it may be for the 'wrong' reasons.

ARGUMENTS AGAINST THE SOCIAL CONTRACT PRINCIPLE

The review which follows is drawn from a monograph which looks at corporate social responsibility from a Friedmanite viewpoint. Den Uyl argues that the corporate social responsibility debate is primarily a moral issue and that demands for change were directed at 'the very values inherent in a market oriented system of production, and that makes these challenges moral challenges' (Den Uyl, 1984, p. 3). He deplores the lack of rigour of the moral debate and what he sees as the
1. The fundamentalist theory (also called traditionalist or classical) made up of
   (a) functional theory (Levitt);
   (b) individual agreement theory (Friedman).

2. Social permission theory, which is made up of
   (a) constituency theory;
   (b) legal framework theory;
   (c) corporate citizenship theory.

The social permission school works in opposition to the fundamentalist school. The social permission approach is based upon the notion that corporation management must deal fairly with all constituents (constituency theory), be good citizens (citizenship theory) and recognize that corporations are creations of the state (legal framework theory).

The functional theory

The functional theory, which seeks to avoid dominance by any one section of society, is described by Den Uyl as conceiving of the debate in morally neutral or amoral terms:

It cannot be denied that the position has great short term pragmatic and rhetorical appeal. But in the final analysis, the functional view cannot offer any criteria for distinguishing the legitimate claim or offer any form of consistent guidance. (Den Uyl, 1984, p. 10)

and:

Ultimately the argument suggests that the whole issue of CSR reduces to a power game – with business currently on the losing end of the struggle. (Ibid., p. 12)

Den Uyl argues that because the functional theory is pragmatic and amoral there is no place for it in the discussion; which may account for his ignoring organizational legitimacy because the approach appears to be equivalent in moral status to the functional theory.

Social permission theory

In examining social permission theory Den Uyl rejected the arguments of those who see the corporation as created by the state (legal framework theory) although conceding that a modified view, 'the social creation approach', would make the theory stronger. His major attack was reserved for Donaldson and the social contract approach. The notion that the corporation is permitted to operate by society is rejected unless the corporation is only a trustee for societal resources and not an owner of those resources. Donaldson, it was argued, began with an assumption 'that individuals (corporate or otherwise) are entitled to their goals and holdings only so long as those goals or holdings service the interests of society' (ibid., p. 17). Den Uyl rejected this view as oppressive, and ignored many of the limitations which both individuals and corporations face when relating to the authority of the modern state. For example, restrictions on transfers of property (sales of goods) to foreign states, transfers of funds subject to exchange control regulations and the compulsory purchase of property (land) by the state for roads, airports and similar purposes, are all features of modern society.

In dealing with the legal framework theory (also referred to as the concession theory) Den Uyl did not refer to any of the specific features which make companies unique in our society, such as creation of the corporation as a legal person with unlimited life, limited liability for shareholders, differential tax rates and tax concessions, and the enormous economic and political power of the corporation. This is not surprising, since his main purpose was to provide a moral basis for supporting a Friedmanite view through the individual agreement theory.

Individual agreement theory

Den Uyl referred to the strong moral commitment represented by the sanctity of the contract, which he saw as the basis of the frequently quoted statement by Friedman that the only responsibility of business is to make profits, subject to remaining within the legal framework. The individual agreement theory argues that shareholders want to maximize profits from their investment:

Thus, the corporation is not an end in itself, nor is it an essentially public institution despite the large numbers of persons who may be associated with it . . . It would seem to follow, then, that corporations are not creatures of the state, but are, rather, private institutions whose existence is recognised by law. (Den Uyl, 1984, pp. 22-3)

This philosophical position would seem to be central to Den Uyl's argument and also to the fears of many people that corporations are often so large and influential that they are not under the control or influence of individual investors but of less-accountable managers. Den Uyl argued that Friedman's position does not prevent corporations pursuing moral goals, provided profitability is not reduced. He went on to discuss his theory of individual rights, the dichotomy of morality and profits, and finally put forward guidelines for what he regards as responsible behaviour.
A theory of individual rights

In addressing the theory of individual rights Den Uyl was concerned with the rights of an individual to be free from coercion by other individuals. His exposition concentrated upon the ‘negative’ aspects of interrelationships, because ‘positive’ aspects are seen as placing individuals on different levels in their dealings with one another:

Individuals must refrain from crossing the boundaries of others. ‘Positive’ rights, which require the taking of the resources of some for the benefit of others, treat the ends of some persons as more significant than the ends of others. Indeed, it is virtually impossible to maintain a system of individual rights if one admits the existence of positive rights . . . (Den Uyl, 1984, pp. 25-6)

This treatment of individual rights assumes equality of all individual characteristics, not only in legal and contractual relationships but in economic and political bargaining power as well. Den Uyl assumed throughout his explanation that corporate social responsibility involves the diminution of the benefits of one group to satisfy the perceived needs of another group. This approach ignores the interrelationships which may persist between groups. For example, employees may also be shareholders. Unequal power positions render the argument that individual rights must be treated equally untenable in modern society.

The dichotomy between morality and profits

It is argued that there is no dichotomy between morality and profits because the pursuit of profit fulfils the obligations that management has towards the owners of the business. Provided that profitability is not reduced, management may engage in actions which are considered to be socially responsible. This argument overlooks or ignores any longer-term perspective.

Guidelines for responsible behaviour

In the section entitled ‘Guidelines for Responsible Behaviour’ Den Uyl derived three principles. The first, called the ‘principle of respect for individual rights’, comes from the individual agreement theory outlined previously. The second, the ‘principle of responsible recommendations’, comes from the position that the pursuit of profit is an obligation and, therefore, any recommendation which does not take this factor into various parties should be evaluated. This is referred to as the ‘principle of moral consideration.’

The three basic principles may be used to evaluate the actions of corporations as well as their critics:

To summarize: 1) no action should be taken which violates another’s individual rights; 2) recommendations must be responsible in the sense that they do not ignore the context, purpose, and basic contractual commitments of those to whom the recommendation is made; and 3) the moral dimension of an action should always be given serious attention. (Den Uyl, 1984, p. 55)

Unaddressed issues

Considerable attention has been given in this section of the chapter to the review of Den Uyl because his monograph explicitly adopts the viewpoint of a Friedmanite free market approach and attempts to support this position on moral grounds. The social permission approach (especially the social contract) is criticized and guidelines for the evaluation of social responsibility recommendations have been put forward. The value systems explored by Den Uyl are relevant to an understanding of criticisms of some aspects of social accounting (for example, the valuation of externalities by Benston) which are reported in later chapters. However, a number of issues are unaddressed in the discussion leading up to the guidelines reproduced above. Organizational legitimacy was not discussed, possibly because this appears to fall into the functional theory area which is categorized by Den Uyl as amoral and consequently outside the scope of his work.

The first principle assumes that all individuals contracting with each other (and observing each others’ rights) are of equal standing regardless of economic and political power, information asymmetry and wealth endowments. Individuals are assumed to be involved in only one role at a time. In particular, positive discrimination is to be ruled out under any circumstances.

The second principle is based on a discussion of profitability and with reference to the market processes. The definition of profit, and hence profitability, is problematic. What is to be included in the calculation of profit? Which gains and losses are to be recognized at any point in time? What, if anything, should one do to capture external costs? What is the period of time with which we are concerned? The difficulties of relying upon the market are discussed in the next section, by reference to a number of authorities. One does not need to be a political radical...
Unfortunately, the rational and non-ideological nature of Den Uyl's area Den Uyl rejects regulation and favours 'the practical efficiency and operations, such as pollution and environmental degradation. In this responsible for alleviating the problems which are associated with their approach leads to his rejecting many of the moves to make corporations moral superiority of market alternatives' (Den Uyl, 1984, p. 25). This is alarming since it is the market which cannot cope with externalities in the first place.

**MORAL AGENCY, THE SOCIAL CONTRACT, ORGANIZATIONAL LEGITIMACY AND SOCIAL ACCOUNTING**

Social accounting activity can be justified in terms of moral agency and the social contract, which form the socially related arguments used here, because the world is not viewed in the same way as it was by investors and potential investors in the previous section, or by the advocates of a radical political solution in the following section. The participants addressed by socially related arguments include customers, employees, the general public and those affected by the indirect responsibilities of the corporation.

Organizational legitimacy may be the practical expression of the philosophical position adopted by the social permission theorists. The norms of society change continually and organizational management must adapt to these changes. To avoid doing so may be as damaging to the legitimacy of the organization as a dynamic system as would allowing products to become outdated be to the market position of the corporation. The philosophical positions considered in this chapter can be used to justify social accounting on moral or pragmatic grounds. On moral grounds, if the manager wishes to present the corporation as acting within a social contract framework; and on pragmatic grounds, if organizational legitimacy is the motivating force. In the latter case the disclosures would be made, not because the manager believed that constituencies were entitled to have them but in order to satisfy a demand for information and legitimate the organization with the public.

Individual agreement theory attempts to provide a philosophical basis for a relatively free market approach to economic activity and, therefore, indirectly acts to restrict any extension of accounting disclosures.

**THE EFFECT OF CULTURE ON THE PHILOSOPHICAL BASES OF SOCIAL ACCOUNTING**

It may be argued that the philosophical basis for social accounting is relatively strong compared to that underlying free market economics. Therefore, the socially related arguments are more appropriate than those related to market studies. However, the response of the accounting profession does not appear to follow the strength of the philosophical argument. There may be several reasons for this phenomenon, including the strength of classical economics and marginalistic philosophies within many economic systems (they are based on 19th century economics), inertia, or lack of explanation and educational endeavour on the part of accounting theorists. Recent work on the effects of culture on accounting may explain why social accounting developments do not always gain the support which might be expected, and also why the level of support varies both over time and between geographical areas.

Burchell, Clubb and Hopwood examined the relationship between the inception, development and apparent decline in the use of value added statements and the changes in social and economic conditions prevailing in the UK. In their conclusion they stated that:

We have sought to indicate how the value added event arose out of a complex interplay of institutions, issues and processes. The study of this particular accounting change has enabled us not only to move towards grounding accounting in the specific social contexts in which it operates but also to raise and discuss what we see to be some important theoretical issues which have to be faced when seeking to understand the social functioning of the accounting craft. (Burchell, Clubb and Hopwood, 1985, p. 408).

The cultural-accounting interface they explored was within one national culture which was changing over a period of time, rather than accounting practices in different cultures at the same time.

Perera (1985) considered the cultural aspects of accounting systems, particularly as they related to developing countries. A number of dimensions of culture were examined, specifically those which might affect accounting measurement and disclosure. Perera used the cultural dimensions put forward by Hofstede (1983a) and the international classification supplied by Gray (1985) to develop a model of the relationship between accounting and culture, which is reproduced as Figure 2.2. Perera and Mathews (1991) have applied the model to the differences in the attention given to social accounting disclosures. There is
external influences
forces of nature
trade, investment
conquest

demographic, historical
technological, urbanization

institutional consequence
legal, political, corporate
ownership, capital markets, professional
associations, education, religion

societal values
managerial/work-related
individualism
power distance
uncertainty avoidance
masculinity

accounting values
professionalism
uniformity
conservatism
secrecy

corporation

accounting systems
authority
application
measurement
disclosure


evidence that anglo-american accounting systems (including those of
Canada, Australia and New Zealand) have different priorities for both
financial and social responsibility accounting than do continental Euro­
pean countries. In particular, employee reporting has a far higher
priority in European countries than it does amongst Anglo-American
accounting systems. A number of differences are detailed by gray,
Owen and mauders (1987).

gambling (1977) has argued that accounting practices are akin to
magic or rituals taking place within a particular environment which
makes them meaningful. These rituals are often culturally specific or
anthropocentric (Gambling and Karim, 1986). The effects of cultural
differences on the philosophical bases of both social and conventional
accounting are not known with precision, although the general direction
may be predicted.

The arguments put forward by social permission theorists and those
favouring a social contract or organizational legitimacy approach, on
the one hand, or individual agreement theories on the other, will be

section summary
This section has distinguished a number of philosophical bases which
underlie social accounting, together with an alternative philosophy
underlying free market economic thinking. In particular, the notions of
the social contract and organizational legitimacy merit further attention
as justifications for additional disclosures.

The important point to be made here is that the expenditure of
additional resources on social accounting may be justified to share­
holders and debtholders (actual and potential) through market studies
and to most of the other groups in society through the socially related
arguments. There may be criticism of this position from radical groups,
because it contains an implicit acceptance of many of the characteristics
of present societal organization and values (with limited modifications
in respect of the latter). In other words, much of the status quo is
maintained.

The effects of culture on the development of accounting suggests that
there are a number of complicating factors which may assist or inhibit
the acceptance of given philosophies. Culture has a relationship with
the accounting sub-culture for financial accounting, and social account­
ing developments may be similarly affected.

social accounting and the radical paradigm

introduction
Supporters of a radical approach to the justification of social accounting
are critical of many aspects of current society. They are unlikely to
support social accounting as a result of the arguments put forward
in the two previous sections, although some of the concepts used in
developing the moral-agency view of the productive organization may
be encouraged. A radical individual will only be persuaded to take an
interest in social accounting by means of arguments framed in terms of
the radical paradigmatic view of society. In the last few years there
have been an increasing number of contributors to this debate and
several of the works are reviewed in this section.

In general, the radical view concludes that accounting has supported
not admit to problematic relationships between the organizations that accounting serves and society and follows a positivist approach. The radical theorists are critical of the socially related arguments used in the earlier sections of the chapter because that work envisages a plurality of approaches, the evolution of accounting and organizational developments, and the acceptance of much of the capitalist-based production and ownership systems.

The radical theorists have commented on many of the same issues as those working within the market-studies and socially related fields. The literature dealing with public interest accounting includes many of the issues which will be considered in later chapters, such as social responsibility accounting and the internalization of externalities, but from radical non-market and collectivist perspectives.

The work discussed in this section is only a small part of the voluminous literature produced by radical theorists and the proponents of critical theory (although including the most important contributions in the public interest accounting debate), and of these only a few items can be selected for discussion. The remainder of the chapter is divided into two main parts. First, a review of several items from the radical literature that are particularly relevant to the radical paradigm as a justification for developing different forms of accounting; and second, an examination of the problems which the promotion of the radical paradigm may generate for the proponents of practical social accounting.

A CONSIDERATION OF SELECTED ITEMS FROM THE RADICAL LITERATURE

Tinker, Merino and Neimark (1982)

Tinker, Merino and Neimark (TMN) have argued that all theories are normative, even where they are described as positive or empirical. There is no one reality 'out there' as is assumed by the instrumental paradigm, and all claims of reality are problematic and negotiable. The authors use a materialist theory of accounting in which the theory may come to form part of the reality by a process of reification. The purpose of their paper becomes clearer with an exposition of the arguments against a marginalist economic view of accounting, because such a view benefits only the shareholding and managerial class, without any attempt to extend the coverage to workers or customers. An analysis of the development of value theory is given, followed by a table contrasting the marginalist and classical theories.

The authors note that accounting thought has remained committed to marginalism through an emphasis on individualism (both shareholder and organization) and by attempts to preserve the fiction of objectivity by reference to objective market prices. Thus accountants, TMN argue, avoid becoming involved in social conflict between groups and classes:

The second emphasis in the development of accounting thought is the positioning of accounting as an impartial record of historical exchange values with the corollary that the accountant bears no responsibility for affecting expectations, decisions or ultimately the distribution of income within and between classes. (Tinker, Merino and Neimark, 1982, p. 189)

The implications for accounting and the development of research programmes are:

1. It is necessary to understand the normative basis of marginalism and the positive accounting approaches: 'the normative bias that is inherent in marginalism and its positive accounting variants: a neoconservative ideological bias that encourages us to take the 'free' market and its implicit institutional apparatus as 'given' (ibid., p. 191).
2. Radical accounting should not be construed too narrowly as 'only' accounting for trade unions and corporate accountability.
3. Accounting for social value in a wide sense is desirable.
4. Radical accounting needs to be extended into the management accounting field to investigate the effects of budgetary systems in the work-place.
5. Investigative studies are needed: 'The investigative studies, together with the general proposals for greater corporate accountability, envisage a similar role for accounting – that of an interpreter and articulator of social value, as an adjudicator in social struggles and as an instrument of social change'. (Ibid., p. 192).
6. Multinational organizations need to be investigated for their effects on developing countries.

Merino and Neimark (1982)

Merino and Neimark have questioned the conventional wisdom that the 1933 and 1934 US Securities Acts resulted in enlarged disclosure requirements. They concluded that the Acts were not fundamental changes to accounting disclosure provisions, but part of an attempt to maintain the status quo in ideological, social and economic terms. A radical paradigm is adopted, because the authors speak of a contradiction between an individualistic, market-based philosophy (atomistic competition and the assumptions underlying a free market) and the
realities of increased economic concentration (monopoly and oligopoly). This contradiction is presumably intensifying over time because the conflict continues over accounting policy and the provisions for disclosure.

The authors refer to a number of recent developments as part of the unresolved difficulties. Examples given are the different views on the degree of knowledge possessed by shareholders in Trublood and SFAC 1 (American Institute of Certified Public Accountants, 1973; Financial Accounting Standards Board, 1978), the reliance of some writers on the efficient markets hypothesis, and a 'Darwinian model of competitive market regulation (by rolling back disclosure requirements)' (Merino and Neimark, 1982, p. 50). They call for consideration of 'substantive corporate regulation rather than the tokenism of legislation such as the securities acts' (ibid., p. 51).

Presumably the substantive legislation would include 'measures of corporate performance and means of control ... that are independent of such markets and that are sensitive to the social consequences of corporate pricing policies, worldwide employment practices, waste disposal methods, and so on' (ibid.). The approach to regulating corporations (if they are permitted to exist!) is similar to the structural restraint view.

Lehman (1983)

Lehman examined the development of social responsibility over a period from the late 1960s, beginning with an attempt to define the topic area. If organizations are social as well as economic, and if there are moral considerations involved, should researchers be operating in a market context? Lehman clearly had doubts since 'Moral imperatives or quality considerations are not resolvable in an economic framework. The usual market framework cannot promote or be used to implement moral values or ensure quality of life' (Lehman, 1983, p. 3) Clearly, this view is in direct contrast to the view expressed by Den Uyl in a previous section of this chapter.

The various forms of social permission theory, as expressed through the social contract, notions of organizational legitimacy, government regulation and social audits, are based upon a consensus or harmonious view of the nature of society. In turn, the mainstream policy recommendations and research agenda reflect these assumptions. Lehman considered the outcomes from a different set of assumptions which view the world as conflictual as a result of social divisions and differences. Four models were considered: interpenetrating, public policy, general degree to which corporations influence the public and are, in turn, influenced by the political, social and economic environment. Although apparently straightforward, this theory does not explicitly recognize the extent to which the corporation can influence the environment as a result of economic and political power. Social responsibility reports may be designed to present only one side of selected issues, ignoring other, more revealing, aspects:

Although most accounting social responsibility researchers view the corporate influence over the public's expectations as non-problematic, they do so only by ignoring a wide body of literature that describes the influences corporations have had in this regard. (Lehman, 1987, p. 12)

Social institutions, such as the legal and education systems, influence public expectations; as does accounting, despite a widely held view that it is value-free and that the public is able to react in an independent manner to each new situation. If public expectations are conditioned by dominant groups, including corporations themselves, then 'the suggestion that public opinion and pressure can and will cause corporations to be socially responsible may be inappropriate' (ibid., p. 15).

The public policy model is based upon the use of the power of the state to influence company policy and decision-making. The general public can influence government to act because: 'The state is a free and neutral agent in this process and has the ability to act in ways that it determines rather than are determined by corporations' (ibid., p. 15).

However, a section of the literature has drawn attention to the degree to which corporations, as powerful economic interests, can lobby the legislative organs and modify any direct challenge to their authority:

accounts suggest corporations were supportive of government regulations and laws which would monitor corporations where such regulations were necessary for the survival of the corporations (e.g., such regulations could alleviate public criticism by providing, a sometimes false, assurance that corporations would be held accountable for their actions). (Ibid., p. 17)

From the radical perspective, the public policy model suffers from the same drawback as the interpenetrating model.

The general-market model assumes that the generation of profits and the increase in value of the corporation in the market-place are desired by shareholders and accepted by the general public as the legitimate aims of business entities. The market is held to be efficient and the best means of achieving resource allocation. However, unequal wealth
economic power leads to monopolistic and oligopolistic influences which detract from the resource allocation aspects of market performance. Many socially related activities lie outside the normal decision alternatives of management and they are not internalized into the market mechanism, because they do not provide guidance on socially related issues, including the social responsibility of business:

‘Additional important social issues are also ignored by those researchers who rely, particularly, on financial market participants (stock holders) to evaluate corporate activities and to achieve corporate social responsibility . . .’ (Ibid., p. 21)

The financial-market model is based upon the premise that shareholders seek to maximize share prices and will not invest in companies whose managements are not socially responsible. Shareholders will be concerned that corporate behaviour may attract government regulation, for example action against enterprises investing in South Africa. Management will in turn be concerned to keep share prices from falling. It is also suggested that a group of ethical investors may exist and drive down selected share prices if they discover that some of their holdings are in socially non-responsible corporations. Lehman challenges the assumption by some researchers that market mechanisms can be used to achieve corporate social responsibility. In addition to the general problems of market information asymmetry and biased communication, maximizing share prices does not necessarily maximize shareholder utility. The existence of monopolistic and oligopolistic enterprises, which are less reliant on the market for capital requirements and the varied nature of shareholders, prevents any valid generalizations about overall shareholders’ intentions. Furthermore, shareholders only represent one of a number of constituencies or audiences in society. The maximization of share prices does not lead automatically to corporate social policies which would maximize the overall welfare of all stakeholders.

Lehman concluded that researchers do not agree on how to define corporate social responsibility because of the view of corporations as profit-maximizing institutions:

‘Therefore, it is necessary for researchers to move beyond economic considerations, and explore defining corporate social responsibility broadly, in terms of social, moral and quality of life considerations’. (Ibid., p. 24)

None of the models considered, Lehman suggests, can deal with these social, moral and quality of life considerations, and researchers are urged to consider administrative theory: ‘This theory recognises that corporations, as social institutions, affect the political process, the

quality of life, moral values, economic conditions and social relationships’. (Ibid.)

The market cannot be employed as an indicator of efficiency because it is no longer effective as a regulator and cannot be an adjudicator of moral values. The search for social indicators as a measure of corporate social responsibility must be directed towards effects on society which are not simply market-related.

Cooper and Sherer (1984)

Cooper and Sherer have argued for a political economy of accounting to replace the existing approaches to external accounting for corporate performance. The present system of accounting ignores aggregate social welfare because of a bias towards shareholders. Studies cited showed that traditional accounting reports are useful to shareholders, but these studies must be evaluated against the lack of an accepted theory of user needs. The changes in accounting policies towards disclosure (naive or knowledgeable shareholders) means the possibility of wealth redistribution between shareholding groups. The effect of such a redistribution may not lead to a more efficient capital market because ‘understanding individual responses may be of interest in contributing to a general understanding of accounting (elaborating users and their settings); but it is unlikely that individual behaviour translates to aggregate market responses (Cooper and Sherer, 1984, p. 210).

Cooper and Sherer suggested that the literature relating the value of accounting reports to individual shareholders is concerned with the efficiency of the market for information rather than the efficiency of the market for securities:

It may be that the empirical results indicate the private value (or otherwise) of information . . . But only in the most unlikely of circumstances is it possible that capital market reactions also indicate the social view of information or have implications about the desirability of alternative accounting measures or disclosure. (Ibid., p. 210)

The usefulness of shareholder reports as a contribution towards the efficiency of the economy as a whole is questioned, together with the use of markets as a standard by which other social institutions should be judged. The authors critique both general equilibrium analysis and economic consequences analysis in much the same terms as the radical writers considered previously, before coming to their political economy of accounting approach. Political economy of accounting has three features: the recognition of power and conflict in society (which affects wealth distribution) and the logical consequences for accountants as
particpants; an emphasis on the specific historical and institutional environment of society; and a more emancipated view of society: 'Attempts to resolve technical issues without consideration of this environment may result in an imperfect and incomplete resolution due to the acceptance of current institutions and practices' (ibid., p. 219). These characteristics may be reduced to three imperatives: be normative, be descriptive and be critical. Accounting researchers should be explicit about the value systems underlying their work. This would place their work within a particular paradigm and facilitate the evaluation of alternative paradigms. Researchers are encouraged to describe 'accounting in action', provided that recognition is given to descriptions beyond 'commonsense' views of the world.

Finally, the researcher needs to be 'critical', a term interpreted as looking beyond markets and established value systems in order to assess the background influences on accounting. Cooper and Sherer indicated some doubt that the last imperative could be successfully implemented:

> Whether critical theory can in practice be applied to accounting research . . . depends on whether researchers can free themselves from the attitudes and orientations which result from their social and educational training and which are reinforced by the beliefs of the accounting profession and the business community. (Ibid., p. 222)

In conclusion the authors state that:

> it may be insufficient to rely on the market for accounting research to foster research which is significantly different in approach from the existing paradigm. Rather, in order to develop a political economy of accounting normative, descriptive and critical research needs to be actively promoted and nurtured. (Ibid., p. 226)

**Tinker (1985)**

Tinker (1985) critiqued accounting from a Marxist position and proposed the outline of an alternative system. The book is divided into four parts, beginning with an expose of a number of scandals involving large corporations. The purpose of this part appears to be to indicate that not all (any?) large corporations behave in a socially responsible manner and that their irresponsibility is not hindered, and indeed may be assisted, by current accounting systems.

In part two, Tinker examines value theory, which is a major contri-
Hierarchies of Problems of Alienation and Accounting Systems

Alienation under Capitalism (Emancipatory Accounting)

Hierarchy of Accounting Systems

Intra-class and Externalized Alienation (Social Constituency Accounting)

Fiduciary Alienation (Conventional Accounting)

Wealth Misspecification Alienation (Marginalist Entity Accounting)

Figure 2.4 Alienation and accounting consciousness. Source: Tinker (1985, p. 178).

Corporations may be compelled to acknowledge their external effects by fines, taxes, compensation payments and restrictions on the use of technology. These difference practices result in the externalities being internalised or impounded in the cost and profit functions of the offending corporation, thereby curtailing the anti-social (alienating) effects. (Ibid., p. 217)

However, although some attention is given to social constituency accounting, Tinker did not consider that it was adequate for his needs: 'Marginalist entity accounting was adjudged inadequate because it ignores many of the social contradictions raised by surrounding activity; thus we find that, in the final analysis, social constituency accounting, with its marginalist underpinnings, is similarly flawed' (ibid., p. 217).

This means that the majority of the literature on social accounting which refers to additional disclosures, including those of externalities, is also considered to be deficient. Tinker responded to this perceived deficiency by introducing the further category of ‘emancipatory accounting’ which he intended should deal with the problem of alienation under capitalism. This form of accounting was incompletely developed, although it clearly is based upon labour theory of value, is opposed to capitalist systems of production and consumption, and consequently is revolutionary rather than evolutionary in terms of current practice. Tinker is almost silent on the content of emancipatory accounting: ‘Emancipatory accounting includes information systems capable of recognising the alienating effects of capitalism and therefore is more effective in detecting capitalist alienation than any of the other account-

ability systems discussed previously’ (ibid., p. 202). Clearly, further work is needed in this area if Tinker is going to provide substance to this particular form of accounting.

*Paper Prophets* has been examined from both the conventional and radical accounting positions. Johnson (1986) has suggested that the work contains several faults, including a lack of specificity in relation to what radical accounting systems would look like in practice.

A similar point has been made in a review by Laughlin and Puxty. The review was favourable to Tinker and the authors noted the difficulties inherent in providing the specification for a completely new system of accounting:

It is hardly surprising therefore that the alternative proposed by him is not worked out in detail . . . Tinker is rejecting the basing of accounting values in market transactions. Instead, he is proposing a value system based in production. It is not clear if the balance sheet headings will remain essentially the same but the numbers attached to them would differ . . . (Laughlin and Puxty, 1986, pp. 87–8).

Alternatively, Laughlin and Puxty noted that the whole of the property-owning relationships in society may be changed. It is also noted that the mechanism by which society is to adopt a different form of accounting is not made clear; is a pluralistic society with active and energetic checks on accountability envisaged or some other scenario: ‘we are not clear if he envisages his system as improving current society, or being operational only in an alternative society’ (ibid., p. 89).

If others were clear about this feature of radical accounting their reactions might be different. Tinker has made a major contribution to the social accounting literature although not completely specifying his more advanced theories.

Lehman (1987)

Lehman has examined professional ethics, one of the most conservative aspects of accounting, from a radical position. In a review of accounting literature which covered the categories of discourse rather than the actual content, she concluded that:

The preceding results suggest that ethics is denied any fundamental importance in these publications; rather ethical practices are secondary to profit maximization. The real ‘lesson’ taught in these publications is survival of the fittest: compete rather than co-operate; advance the individual before the community. The promotion of Social Darwinism is business, the sacrosanct status attached to individual advancement, and the valuing of ends (the bottom line)
over means inhibits critical appraisal of unethical practice. (Lehman, 1988, p. 75)

Lehman noted that the predominant mode of accounting education is connected with ‘how’ to do things, not with ‘why’ they are done and the underlying implications of the particular course of action under examination. The trend shows that business education is taking the place of studies in education and the humanities in providing the basic general education of many young graduates, and yet the level of attention given to ethical matters in business courses is very low.

The institutional call for education in ethical matters is designed to constrain the system and ensure its survival because ethical behaviour is an informal control mechanism which mitigates against the worst excesses of the market system. The radical view is that the encouragement of ethical conduct in the professional and educational arenas should not be to ensure survival of the system; it should examine the broad effects of the action of organizations on the environment; and should involve education to the extent of questioning the institutionalization of inequalities, political constraints and the role of accounting in social conflicts; finally, social and political issues should not be taught separately from accounting and business. This position is summarized by Lehman as follows:

In contrast, the education in ethics proposed here entails: challenging old notions of ethics as good deeds of individuals, exploring the structures inhibiting socially desirable behaviour, and promoting political and institutional changes that would advance ethics. (Ibid., p. 3)

A SYNTHESIS OF THE RADICAL POSITION

The radical literature surveyed in this section serves to emphasize a number of different aspects of the radical approach. A number of basic characteristics may be distinguished:

1. The market must be de-emphasized, or even abolished, as a device for allocating resources. The efficiency which is alleged to exist benefits only a part of society.
2. Corporations are owned, organized and operated in a manner that is designed to establish and exploit power relationships.
3. The accounting profession as currently organized is engaged in wittingly or unwittingly maintaining the status quo by attaching itself to one party to social conflict (capital) to the of accounting in order to exercise power. Value positions held by accountants are based on marginal economics and are deficient because of their market basis.
4. Accountants are ignorant of the extent to which the discipline is both socially constructed and socially constructing.
5. Accounting must be changed to take account of social relationships in a much wider manner, perhaps by incorporating a labour theory of value.
6. Accountants, accounting educators and accounting students must appreciate that they have a choice in their social relationships; they must consciously take sides in social conflict.
7. Social accounting as presently advocated by most of the literature is deficient, because it only considers additional disclosures and perhaps externalities, does not envisage a change in the ownership of capital resources, would regulate the market mechanism rather than dispose of the market altogether, is too close to the marginalist economic position, and is based on a modification of the status quo. Social accounting is evolutionary rather than revolutionary, and consequently, when viewed from a radical perspective, is considered inadequate and obstructionist.

If this synthesis is valid it is reasonable to ask what contribution the radical paradigm can make towards social accounting in the form advocated by the mainstream literature.

THE CONTRIBUTION OF THE RADICAL PARADIGM TOWARDS SOCIAL ACCOUNTING

The radical paradigm in accounting does not support current attempts at implementing social accounting as discussed in later chapters of this book. The areas of social permission theory (the social contract and organizational legitimacy) and administrative theory are adjacent to the radical paradigm but do not present the same analyses. The radical paradigm provides an alternative view of the place of corporations in society, together with the accounting discipline which supports and regulates these corporations. It is an important view which can stimulate us to question both our own value system and that of the discipline within which we work.

The problem with the radical approach to social accounting is that the literature attracts those readers already prepared to question the basis of Western-style capitalism. In other words, the radical literature
accountants and managers of the need for additional accountability. Alternatively, it might provide a worst-case example of a ‘future’ if corporations do not change some aspects of their organization and embrace notions of a wider accountability. This is particularly appropriate when discussing environmental degradation.

The conventional view of the relationship of accounting to society and social change is that of a service activity, which reacts to change, not that of a policy-making system, which is proactive and initiates changes. Consequently accounting as a discipline evolves and the social accounting area is evolving only slowly, as later chapters will demonstrate. If society indicates, through the political process, a desire for more rapid changes in disclosure practices, the accounting discipline will respond. Until that time progress can only be made slowly by those accountants prepared to work through the existing system.

SOCIAL ACCOUNTING AND THE RADICAL PARADIGM – A SUMMARY

The diagram of the relationship of value theory and accounting, which is adopted from Tinker and shown in Figure 2.3 acknowledges the importance of another source of influence on accounting, namely legal, religious, scientific and other social beliefs. This amounts to a cultural effect which affects disclosure practices. The effect of culture on accounting appears to be considerable and a force for stability and against revolutionary change.

This effect does not mean that change is not desirable but that change is likely to be slow and evolutionary rather than rapid and revolutionary. Accordingly, the radical approach is not thought to be a particularly productive vehicle at the present time for influencing accounting practice, although the contributors offer particularly stimulating insights in the form of alternative views of the world.

Within the context of developing strategies to gain acceptance for social accounting disclosures or justifications for the expenditure of additional discretionary resources, this chapter has identified the radically related arguments. Furthermore, the differences between arguments for disclosures which are based upon notions of the social contract and arguments based upon more radical views of the corporation and its environment have been explored. The author argues for the more evolutionary direction because it is likely to be more advantageous as a strategy leading to the development and adoption of social accounting. This is not to suggest that the radical approach does not have value. However, in terms of interesting practising accountants and others in social accounting, there are considerable philosophical limitations.

These limitations are associated with the mainstream view of the role of the market mechanism, private ownership of property, and the importance of individual over collective actions. The radical view of accounting would seek to de-emphasize or eliminate the use of the market mechanism and is basically opposed to capitalistic modes of production, seeking to use alternatives such as administrative organizational structures.

The radical view of organization and ownership in Western society seems to be a long way from persuading the majority of the population to join in any popular movement for change. Environmentalists would probably argue that as our environment becomes progressively degraded, changes will be forced upon society. This view will be included in Chapter 6.

SUMMARY

The introductory chapter indicated that many writers in the area of social accounting have assumed that the ideas put forward for developments in this field are desirable, justified and fill a demonstrated need. The early literature argued a case for social accounting and non-traditional forms of reporting; later contributions have taken this case to be self-evident. Clearly, to a vast majority of the accounting, managing and investing community, the advantages are not self-evident, otherwise more would have been achieved towards implementing additional accounting disclosures in the last decade. Furthermore, the interests of different groups are no more congruent about social accounting than they are about other aspects of our complex society.

Chapter 2 uses three approaches to associate the attributes of social accounting with the arguments put forward by different parties. The attributes of social accounting associated with a particular user-group may lead to a strategy by which greater acceptance of non-traditional accounting and the attendant use of additional discretionary resources may be achieved.

The first section introduced market-related arguments which may be used to justify social accounting disclosures through the information content of additional disclosures and the effects these may have on corporate income and stock market values. Evidence of information content may be of interest to groups associated with traditional shareholder and management roles. The research connecting additional social responsibility accounting disclosures with share prices and other market related indices is conflicting, although there does appear to be some information content present in these disclosures. Shareholders and creditors may be interested in this information and a justification based upon shareholder-usefulness could be a partial strategy to obtain additional information in the form of social accounting disclosures.
The socially related arguments discussed in the second section may be used to develop the notion of a social contract between productive organizations and other groups. The moral agency of the corporation may be established and, through the notion of a social contract with business, other groups such as employees, customers and the general public are entitled to additional information. The strategy to achieve a greater demand for social accounting by those who are sympathetic to additional disclosures might be to stress the complementary rights and obligations of the corporation through moral agency and not by a radical attack upon the basic system. This approach leads logically to an emphasis on organizational legitimacy as the pragmatic expression of social permission theory. Managers who are unable to accept the moral imperative of the social contract arguments may be prepared to consider the amoral position of the organizational legitimacy approach.

*The Corporate Report* (ASSC, 1975) referred to the information needs of a wider group of users including employees and the general public: all those with 'reasonable rights' to the information. Despite the far-reaching and apparently radical nature of the accounting recommendations contained in *The Corporate Report*, there do not appear to be any radical political or organizational considerations. The recently constructed Australian conceptual framework also provides a basis for a wider view of accounting. Other conceptual frameworks may do so when they are revised.

The market-related and socially related approaches are different means of looking at the world without envisaging radical changes in society. The strength of these approaches is that they view the world in a similar way to most shareholders, creditors, managers, customers, employees and the general public. These groups may be socially conditioned, nevertheless, such that their reactions are predictable and in favour of evolution rather than revolution. The effect of culture on accounting sub-cultures, which was briefly introduced, may have a bearing on this condition of relative stability. The later chapters base the structure of a more socially responsible accounting on the social contract rather than on the radical paradigm because of a concern with implementation. Strategies for implementation are best provided for shareholders and creditors through market-related studies and for other groups through the social contract and organizational legitimacy positions. The evolutionary process of accounting will lead to a decrease in the emphasis placed on the market studies and to a corresponding increase in the emphasis placed on the other arguments. Both public- and private-sector organizational activities are included in the arguments advanced.

The radical paradigm is offered as an alternative to the social permission theory, the social contract and theories about organizational legitimacy. The economic nature of the corporation is seen as a part of the whole society to be considered along with social, moral and quality of life factors which cannot be processed through the market-place. The motives and interactions of individuals and collectives are seen as problematic. A particular problem is the extent to which organizations can manipulate the regulatory environment within which they operate, including the regulation exercised over the disclosures in annual reports. This is believed to apply with financial disclosures and, therefore, thought to be applicable to other forms of reporting.

The radical literature is, by definition, unsympathetic to the shareholder/creditor groups, and impatient with the evolutionary nature of the reforms/changes contained in the socially related arguments. Perhaps the research of the radical paradigm should be directed towards large-scale public-sector developments in the areas categorized by the author as socio-economic and social-indicators accounting; but the majority of radical theorists are concerned with private-sector organizations. A radical strategy is unlikely to generate the climate in which a majority of managers, investors and accountants will be inclined to favour the development of social accounting.
INTRODUCTION

Normative-deductive accounting research is not currently fashionable. However, there should be some interest in developments of the kind which this part of the book sets out to explain, particularly since the use of additional resources has been justified in Chapter 2. McDonald (1975) classified theories of accounting as descriptive (theories of accounting) and normative (theories for accounting). Furthermore, after Lindblom (1959), he associated the two alternatives with different methods of arriving at the policies shown in Table 3.1.

The rational-comprehensive approach is associated with a normative view leading to a theory for accounting. The successive limited comparisons approach corresponds more with the evolution of accounting. Goals are required in both cases; however, they are arrived at in different ways. In the descriptive approach goals are deduced from observing actions, decisions and policies, whilst in the normative approach:

goals are stated a priori, and decisions, actions, and policies are evaluated or judged in terms of established goals. Thus, goals, their nature and scope, must be of concern in any discussion of accounting or any other discipline. (Lindblom, 1959, reprinted in McDonald, 1975, pp. 15-16)

The remaining chapters are frequently concerned with normative accounting and have the goal of explicating the confused area of research often referred to as social accounting, by reference to a framework or classification which may lead towards a more socially responsible accounting. The issue of what constitutes social accounting is addressed first, followed by a discussion of measurement problems. Later chapters deal with each of the component parts into which the author has divided the field to permit easier examination; this is the suggested organization for social accounting research. The philosophical justification for this field of study, which was discussed in Chapter 2, is then set into the context in which it most frequently appears: the consideration of social responsibility and total impact accounting. Finally, the separate areas are reintegrated to form a system of accounting which is more socially responsible, thus demonstrating the usefulness of the classification system.

References to social accounting may be found in company reports, press releases, the news media and, occasionally, political speeches. The frequency of these references would suggest that social accounting might be increasingly important in the future, as the discipline of accounting is extended to include a variety of items which are not

<table>
<thead>
<tr>
<th>Rational comprehensive</th>
<th>Successive limited comparisons</th>
</tr>
</thead>
<tbody>
<tr>
<td>(root)</td>
<td>(branch)</td>
</tr>
<tr>
<td>1a Clarification of values or objectives distinct from and usually prerequisite to empirical analysis of alternative policies</td>
<td>1b Selection of value goals and empirical analysis of the needed action are not distinct from one another but are closely intertwined</td>
</tr>
<tr>
<td>2a Policy formulation is therefore approached through means–end analysis: first the ends are isolated, then the means to achieve them are sought</td>
<td>2b Since means and ends are not distinct, means–end analysis is often inappropriate or limited</td>
</tr>
<tr>
<td>3a The test of a ‘good’ policy is that it can be shown to be the most appropriate means to desired ends</td>
<td>3b The test of a ‘good’ policy is typically that various analysts find themselves directly agreeing that it is the most appropriate means to an agreed objective</td>
</tr>
<tr>
<td>4a Analysis is comprehensive; every important relevant factor is taken into account</td>
<td>4b Analysis is drastically limited: (1) important possible outcomes are neglected; (2) important alternative potential policies are neglected; (3) important values are affected</td>
</tr>
<tr>
<td>5a Theory is often heavily relied upon</td>
<td>5b A succession of comparisons greatly reduces or eliminates reliance on theory</td>
</tr>
</tbody>
</table>

disclosed at present. However, the development of alternative disclosures is particularly subject to social and economic conditions. Consequently it can not be claimed that development will be continuous or without periods of regression. As discussed in Chapter 2, a number of alternative approaches may be used to justify a concern with this form of reporting.

However, the argument for an increase in socially relevant accounting information cannot be made simply by justifying the basic notion, and a closely argued case must be clearly established for the implementation of the disclosures. The case for an extension of social accounting measurements and disclosures is affected by confusion and problems with measurement and evaluation. The confusion arises partly because the term 'social accounting' is used in different ways, by different groups of people and the measurement difficulties are always present in any new area (they are what accounting is all about). The disagreements about how far accountants should go in their measurement and reporting activities are traceable to fundamental differences in philosophies about disclosure and reporting. Indeed, some of the works considered in the section dealing with the radical critique would suggest that the issues are much more complex than simply disclosure and reporting, but extend deeply into the social fabric of the host society.

A study of the social accounting literature suggested the need for a framework within which social accounting research could be fitted. Such a framework might be of assistance in formulating empirical research, in analysing the existing literature or in developing teaching programmes. Furthermore, the fit between current disclosure practices and desired disclosures may be examined through the use of a suitable framework.

THE BASIC OUTLINE: CONFUSION AND STRUCTURE

Those who are interested in the area of social accounting often experience some difficulty in explaining their work to other accountants. The use of 'social' in conjunction with accounting does not seem to work as well as the addition of 'financial', 'management' or 'tax'. These words add a large measure of explanation and precision to 'accounting' that 'social' does not. Perhaps one difficulty, not encountered by the descriptions given above, is the range of total activity which may be included under the heading social accounting. In this book the term is used to cover the following activities.

SOCIAL RESPONSIBILITY ACCOUNTING (SRA)
Social responsibility accounting refers to disclosures of financial and non-financial, quantitative and qualitative information about the activities of an enterprise. This area also includes employee reports (ER), human resource accounting (HRA), and accounting and industrial democracy issues. Alternative terms in common use are social responsibility disclosures and corporate social reporting. This is the most frequently occurring form of social disclosure but perhaps lacks the depth of philosophical concern which is present in the next category.

TOTAL IMPACT ACCOUNTING (TIA)
This term is used to refer to the aggregate effect of the organization on the environment. To establish this effect it is necessary to measure both private and public costs (externalities). Because of the origins of this area it is often referred to as cost-benefit analysis (CBA) or social accounting (thereby confusing the use of that term) and sometimes as social audit. This area has now been expanded to include the subject matter of accounting for sustainable development.

SOCIO-ECONOMIC ACCOUNTING (SEA)
Socio-economic accounting is the process of evaluating publicly funded activities, using both financial and non-financial measures. The entire activity should be evaluated, with a view to making judgements about the value of the expenditure involved in relation to the outcomes achieved. Socio-economic accounting would encompass the value-for-money (VFM) audit functions and auditing of operations and performance.

SOCIAL INDICATORS ACCOUNTING (SIA)
The term social indicators accounting is used to describe the measurement of macro-social events, in terms of setting objectives and assessing the extent to which these are attained over the longer term. The outcomes of this analysis should be of interest to national policy makers and other participants in national and regional political processes.

SOCIETAL ACCOUNTING
Societal accounting is the term used by some writers in this area to
conceptual since implementation at this level is not envisaged or even possible to achieve.

Each of these component parts of the social accounting framework will be considered in turn. However, the characteristics of each type are clearly seen in a comparative format: Table 3.2 shows the basic divisions or components of the framework. The dimensions are based upon a division between the private and public sectors, the time-scale involved and the types of measurement used. The area of social responsibility accounting is predominantly a private-sector, short-term reporting system, using mainly non-financial quantitative and qualitative data. The second category concerns the difficult problem of the identification, measurement, valuation and disclosure of externalities, with particular reference to the environmental effects of entities. Together social responsibility accounting and total impact accounting make up what most of the literature refers to as social accounting.

In contrast, the third division, socio-economic accounting, is a public-sector activity, using qualitative and quantitative data (of both financial and non-financial types) to evaluate short- and medium-term programmes. Social indicators accounting is the macro-level activity which complements the micro-level socio-economic accounting activity. Taken together, these activities are intended to improve the performance and accountability of public-sector activities. Societal accounting conceptualizes all accounting as interrelated. The basic issue of measurement is addressed next.

MEASUREMENT

The American Accounting Association (1975), in the report of the Committee on Social Costs, suggested that three levels of measurement may be involved in the development of social accounting. These are:

Level I where the activity is identified and described. Examples might be the identification of polluting materials which are being discharged into the environment.

Level II where the activity is measured using non-monetary units. The polluting materials are measured in terms of rate of discharge, the timing of flows, and compliance with existing standards formulated in physical terms such as parts per million (ppm).

Level III where attempts are made to value the effects of discharges. The measurements are converted to financial estimates of costs and benefits to all stakeholders, ranging from shareholders to the general public.

<table>
<thead>
<tr>
<th>Table 3.2 The characteristics of the various component parts of social accounting</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Division</strong></td>
</tr>
<tr>
<td>Social responsibility accounting (SRA)</td>
</tr>
<tr>
<td>Total impact accounting (TIA)</td>
</tr>
<tr>
<td>Socio-economic accounting (BEA)</td>
</tr>
<tr>
<td>Social indicators accounting (SIA)</td>
</tr>
<tr>
<td>Societal accounting (SA)</td>
</tr>
</tbody>
</table>

Notes:
- Normally short term to fit annual reporting patterns.
- Refer to section 3.30
The three levels of measurement may be illustrated by reference to sulphur dioxide gas, which is a common cause of pollution. If sulphur dioxide is discharged into the atmosphere it will soon be detected by its odour, and elementary analysis will confirm that the odour is caused by sulphur dioxide. This is a Level I measurement. The volume of discharge measured over a period of time in physical units, such as parts per million (ppm) will provide a Level II measurement. A Level III measurement is made when we convert the effect of the discharge into financial terms by measuring the financial effects of damage to property and health.

The last type of measurement is the most difficult, because it involves valuation and the assignment of costs to events which are external to the organization. Examples might be: damage to the paintwork of neighbouring housing areas; the destruction of parks and gardens; and the creation of health problems. These valuation problems may be difficult to overcome and the values assigned to the effects of pollution will be open to dispute. The discounting to present value of the cost of future events, such as repairs or replacements, or the payment of damages, is obviously problematic. These measurements are made, however, in calculating compensation for injury, loss of earnings or death from accidents. Even if the local pollution measurement and valuation issues can be resolved, difficulties will arise where the damage is remote from the source in terms of time and distance. To continue the sulphur dioxide example, the effects of low levels of atmospheric sulphur dioxide over long periods of time may be more damaging to health than is currently recognized. This development (because it is currently undetermined) cannot be allowed for in our valuation. Similarly, if sulphur dioxide discharged in one country leads to acid rainfall in another, many miles away, this event cannot be measured and valued in any meaningful way at the present time. However, this position may change as the result of recent environmental problems, which are discussed in Chapter 6.

There is a political dimension to the valuation of externalities because both individual and group value positions are involved. This was especially clear in the section dealing with the radical critique of current accounting systems in Chapter 2. These issues are explored in the philosophical discussion on externalities in Chapter 6 that deals with total impact accounting.

The five categories of social accounting outlined in this chapter are not exhaustive, and further sub-division and classification may result from the development of the sub-discipline of social accounting. Indeed, this may be predicted on the basis of past trends in the development part of general social responsibility accounting disclosure, but which might become a separate concern in the event of another energy crisis. There is also an extensive literature devoted to employee-related accounting disclosures.

The attention paid to practical social accounting seems to be rather patchy. There are SRA disclosures in the private sector, probably due to SRA being short term and identifiable in the normal annual reporting procedure. TIA is beginning to develop as environmental accounting, although so far there is little evidence of practical application. Interest in environmental issues and sustainable development may encourage attention in this area. Public-sector attention is confined to VFM audits.

**SUMMARY**

This chapter has provided an outline of the proposed classification of social accounting which is advanced in this book, as an aid to understanding the literature of the subject area and to making further advances through individual contributions and practical applications. The classification covers public- and private-sector activities, long-medium- and short-term time periods, and the use of monetary and non-monetary quantification as well as qualitative statements. The measurement classification of Levels I, II and III put forward by the AAA report has been incorporated into the schema.

SRA is discussed in Chapters 4 and 5; TIA is the subject of Chapter 6, SEA and SIA are covered in Chapters 7 and 8. The remaining classification of societal accounting is the subject of Chapter 9 and the concluding chapter attempts an overall assessment of the extent to which accounting can be made socially responsible.
Social responsibility accounting

A GENERAL INTRODUCTION TO SRA DISCLOSURES

The objective of the next two chapters is to introduce social responsibility accounting, both as a theoretical and as a practical form of socially responsible accounting. In terms of current research and reporting, this area of non-traditional accounting disclosures has received the most attention. A suitable definition for social responsibility accounting (SRA) is:

Voluntary disclosures of information, both qualitative and quantitative, made by organizations to inform or influence a range of audiences. The quantitative disclosures may be in financial or non-financial terms.

SRA usually applies to private-sector organizations and involves a wide variety of information, most of which is non-financial in nature and of potential interest to employees and the general public as well as to shareholders and creditors. Although organizational management may have a target audience in mind, this is usually unspecified, and any disclosure policy may be an implicit rather than an explicit aspect of their strategy. Reports of government-funded activities may contain elements of SRA and these will be dealt with in Chapter 7. Other terms used to describe this area include social responsibility disclosures and corporate social responsibility. The pattern of development of SRA has been to include small amounts of data, in qualitative and non-monetary terms, as part of the annual report to shareholders. These disclosures are voluntary, unaudited and unregulated. SRA may be seen as an extension of the stewardship role, aimed at maintaining or improving the corporate image. Indeed, these two aspects, stewardship and corporate image, may be in conflict where disclosures are voluntary and unaudited. In terms of justification, the organizational legitimacy arguments may be the strongest motivator for these disclosures.

The earliest documentary analysis of published social responsibility accounting is usually credited to Ernst and Ernst (1972-8). This survey of Fortune 500 corporation annual reports was started in 1972 (1971 reports) and continued until 1978 (1977 reports). Ernst and Ernst were aiming to inform their readership about what organizations were reporting, and not to develop any theory, perform any detailed analysis, or adopt a normative approach; although the categories adopted by the study may have influenced accountants in developing reporting systems. No attempt was made to establish a connection between social responsibility disclosures and share price movements or to prescribe in a normative manner what should be disclosed. The reporting of certain social data has been criticized for a lack of accuracy and objectivity (Wiseman, 1982), but to date, most attention has been devoted to observing and recording rather than to a critical analysis of what has been recorded.

The growing interest in general social responsibility accounting disclosures extends throughout the English-speaking accounting environment. The overall impression provided by these studies is of a limited amount of information about employee- and product-related matters, which is disclosed through mainly qualitative statements. There are a number of aspects of this research which are questionable and are discussed in Chapter 5, which examines SRA in practice.

Although SRA appears to be becoming more acceptable to larger companies, it is necessary to maintain a sense of perspective. Guthrie (1982) reported an average disclosure of 0.2 pages per company report devoted to SRA, and this would appear to be a reasonable estimate, in line with the later Ernst and Ernst studies. However, there was no consideration given to the number of pages in the complete report and consequently no proportions could be calculated.

Surveys of accountants in Australia and New Zealand have shown support for the basic principle of voluntarily disclosing social responsibility data in sections of the annual report (Anderson, 1980; Mathews and Heazlewood, 1983). This support does not extend to compulsory disclosure, and most accountants would not want to be involved in an audit of this information at the present time. Similar surveys carried out among members of the American Institute of Certified Public Accountants (Benjamin, Stanga and Strawser, 1977; Stiner, 1978) and the National Association of Accountants (Barnett and Caldwell, 1974) have also shown some support for voluntary disclosure of social responsibility information. However, there is some evidence that lower levels of support accompany the more difficult economic conditions experienced at the present time.
Mathews and Gordon (1984) found that the degree of acceptance of social accounting as a concept varied according to the professional body to whom the respondent belonged. Management accountants tended to be more favourably inclined towards SRA than those in public practice.

CONCEPTUAL AND OPERATIONAL MODELS FOR SRA

A large part of this chapter is devoted to an examination of the SRA literature. For convenience the models are divided into two groups; conceptual and operational.

The reporting of social responsibility information and accountants' support for this activity must be viewed against the limited conceptual and operational frameworks available for guidance and evaluation. In the discussion that follows a number of examples will be examined in two groups: conceptual models and operational models. The two groups are differentiated by the extent to which the proposed models offer specific detail of the disclosures which are advocated.

CONCEPTUAL MODELS RELATING TO SOCIAL RESPONSIBILITY ACCOUNTING

In this section the following models will be discussed: Ramanathan (1976); Burke (1984); Wartick and Cochran (1985); Logsdon (1985); Brooks (1986); and Gray, Owen and Maunders (1987). The variety of possible approaches is evident from these chosen examples.

Ramanathan (1976)

Ramanathan provided a conceptual framework for the development of social accounting. The main objective and concept definitions have been extracted from the article and grouped together in Table 4.1.

Ramanathan was concerned with all aspects of the social performance of an organization. His framework is wider than others included in this chapter because no separation is acknowledged between SRA and total impact accounting (TIA). Objective 1 is clearly aimed at measuring the total impact of enterprise activities through the net social contribution. Objective 3 is closer to the normally accepted goal of SRA, that is, to provide relevant information about the firm that is appropriate for the needs of the different social constituents. The second objective may be related to either SRA or TIA.

This conceptual model is considered a seminal work in the development of conceptual social accounting, but of limited assistance in determin...
Burke (1984)

Burke has provided a conceptual model of a social accounting information system (SAIS) which is intended to assist decision-makers (the designated users in this case) to select from amongst programmes with explicitly stated social objectives. There are five basic guidelines for developing the SAIS, including the following reference to social information:

A precise definition of what constitutes social information should be avoided. The social domain has no natural boundaries. It is preferable, therefore, that social information loosely specified as consisting of that set of information not traditionally regarded as economic, or technological in nature, that deals with people’s values, relationship (e.g., laws), behaviour and concerns, that could have an important effect (financial and otherwise) on an organisation’s performance and the achievement of its goals. (Burke, 1984, p. 100)

Although concerned with the internal decision-making function of the organization, the model put forward by Burke would produce SRA disclosures to society in order to signal that environmental and social concerns have been internalized. The model is illustrated in Figures 4.1 to 4.3. Figure 4.1 details the four primary functions of the SAIS: to survey the environment; to provide information on social goals; to provide inputs to specific decisions; and to evaluate the overall effectiveness of the system.

Figure 4.2 provides a detailed breakdown of the general surveillance component of a SAIS, which is of relevance to the present discussion because one aspect of the surveillance is described as: ‘An overall evaluation of corporate social performance including progress reports on company progress’ (Burke, 1984, p. 107).

Finally, Figure 4.3 shows the full model with the SAIS related to external factors. Ample opportunities exist for the generation of SRA through the general surveillance system and the internal and external assessment process.
Wartick and Cochran (1985)

Wartick and Cochran argue that there are three challenges to be faced in developing a model for corporate social performance (CSP). These are economic responsibility, public responsibility and social responsiveness. However, even when these challenges have been met a further development is needed; this is termed social issues management. The model is described as follows and illustrated in Table 4.2:

Social responsibility – the first dimension – has been an extremely resilient concept. It has assimilated much of the criticism that has been levied against it. Yet, the two fundamental premises of social responsibility – the social contract and moral agency – remain as the ethical component of social responsibility. Social responsiveness – the second dimension – provides the approach to realising social responsibility. It has become the general means to the ends of satisfying corporate social obligations. Social issues management – the third dimension – is now being developed as the method of operationalizing social responsiveness. (Wartick and Cochran, 1985, p. 767)

Wartick and Cochran did not include specific references to SRA. But management will require information and a medium through which their concern with principles (the philosophical orientation) may be demonstrated. Traditionally the accounting function has specialized in providing information to both management and outside parties. The

<table>
<thead>
<tr>
<th>Principles</th>
<th>Processes</th>
<th>Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate social responsibilities</td>
<td>Reactive</td>
<td>Issues identification</td>
</tr>
<tr>
<td>Economic</td>
<td>Defensive</td>
<td>Issues analysis</td>
</tr>
<tr>
<td>Legal</td>
<td>Accommodative</td>
<td>Response</td>
</tr>
<tr>
<td>Ethical</td>
<td>Proactive</td>
<td>management</td>
</tr>
<tr>
<td>Discretionary</td>
<td></td>
<td>development</td>
</tr>
</tbody>
</table>

Directed at:
| The social contract of business | The capacity to respond to changing societal conditions |
| Business as a moral agent | Managerial approaches to developing response |

Directed at:
| Minimizing "surprises" | Determining effective corporate social policies |

Philosophical orientation: Institutional orientation: Organizational
model provided here is consistent with the use of SRA in order to demonstrate the development of corporate social performance and the management of social issues.

Logsdon (1985)

Logsdon examined organizational responses to environmental issues, particularly the example of air pollution from US oil-refining companies. However, the conceptual model she used is introduced here because it illustrates the way in which SRA disclosures may be an important part of the strategies employed by organizations. When confronted by social issues, organizational management may react by resisting or accepting behaviour at any of three stages of development of the issue: emergence, legislation and regulation. The resulting matrix of responses is presented in Table 4.3. SRA may be involved in these activities, but only in a peripheral manner.

In examining the behaviour of firms in the oil-refining industry over a period of 35 years, Logsdon developed a measure of responsiveness. The responses of corporations (resisting and accepting behaviour) were based upon the aggregation of four components: statements about air pollution; and political and legal actions related to air pollution (Logsdon, 1985, p. 56).

Propositions were developed relating the components to the predicted responses in both accepting and resisting patterns. The accepting patterns are shown in Table 4.4. The relevance of this conceptual model for SRA lies in the propositions for the accepting responses shown in the table. Logsdon envisaged the use of annual reports to publicize the record of the firm (management statements, stage 3) and the develop-

### Table 4.3 Stages in the evolution of a social issue integrated with the generic response categories

<table>
<thead>
<tr>
<th>Evolution of a social issue</th>
<th>Continuum of responsiveness</th>
<th>Accepting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 1: Emergence of the issue</td>
<td>Complete resistance by ignoring the issue, discrediting the issue and its proponents, and shifting responsibility to other parties</td>
<td>Development of corporate policy and voluntary activities to achieve the social goal</td>
</tr>
<tr>
<td>Stage 2: Legislative phase</td>
<td>Compromise by offering positive and negative inducements in bargaining for weak legislation</td>
<td>Technical and administrative learning by specialists and line managers</td>
</tr>
<tr>
<td>Stage 3: Regulatory phase</td>
<td>Reluctant capitulation by compliance with the minimum requirements as late as possible to avoid heavy fines and close-downs, using litigation to delay enforcement</td>
<td>Institutionalization by incorporating achievement of the social goal into incentive structures of line managers and into capital investment decision-making</td>
</tr>
</tbody>
</table>

### Table 4.4 Accepting response patterns

<table>
<thead>
<tr>
<th>Component</th>
<th>Stage 1</th>
<th>Stage 2</th>
<th>Stage 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management statements</td>
<td>Acknowledgement of air pollution and voluntary activities to reduce emissions in annual reports</td>
<td>First corporate policy</td>
<td>Expand reference to air pollution in annual reports and support some form of federal involvement</td>
</tr>
<tr>
<td>Structural actions</td>
<td>Assign responsibility for air pollution control at all major facilities and at headquarters to monitor corporate environmental activities</td>
<td>Create full-time environmental affairs units at the corporate level with both external and internal responsibilities</td>
<td>Increase environmental staffs at all levels. Develop reporting systems to evaluate environmental performance</td>
</tr>
<tr>
<td>Technical actions</td>
<td>Modest amount of voluntary air pollution control activities. Support industry research efforts and begin R&amp;D projects</td>
<td>More substantial voluntary air pollution control activities and environmental research programmes</td>
<td>Allocate funds for speedy compliance with new regulations. Cooperate with agencies on technical studies to improve standards and equipment</td>
</tr>
<tr>
<td>Political/legal actions</td>
<td>Support formation of state and local regulatory agencies</td>
<td>Support some form of federal involvement in air pollution within API. Make its support public in Congressional hearings and advertising</td>
<td>Publicize support for federal regulations and refuse to join litigation and coalitions to limit regulators. Cooperate with agencies and challenge violations only with good cause</td>
</tr>
</tbody>
</table>

ment of reporting systems to evaluate environmental performance (structural actions, stage 3).

When a corporation adopts a resisting pattern there is unlikely to be a place for SRA disclosures, except where they are required by legislation or as part of the measurement process when determining the cost of non- or partial compliance. Once management decides to adopt an accepting response pattern the way is clear for the development of appropriate information systems and two-way interaction with the environment. This process will include accounting reports and is part of the generation of a more socially responsible accounting.

Brooks (1986)

Brooks provided a comprehensive study of SRA in a Canadian setting including a conceptual model which envisaged the production of regular reports as part of the process of developing, monitoring and controlling corporate social performance (the term used by Brooks). The model for managing corporate performance is shown in Figure 4.4.

Figure 4.5 Implementation steps for a social accounting measurement and disclosure system. Source: Brooks (1986, p. 245).

whilst Figure 4.5 illustrates the steps by which the social accounting measurement and disclosure system might be implemented.

Figure 4.5 provides a framework for socially responsible corporate activity developed under the direct control of the board of directors. Social goals are identified and operationalized, and social performance is measured, monitored and controlled. Social responsibility accounting would be involved in the measuring, monitoring and controlling stages. The measurement and disclosure process is a most important part of the entire operation and involves the accounting function in a permanent and organized relationship, and not in an incomplete and ad hoc manner as is often currently the case.
Organization of report:
Corporate social
performance statement

or

Social performance
guideline (SPG)
1. Human resources
2. Product-related
3. Environment
4. Community involvement
5. Operational objectives
6. Financial issues
7. Trustworthiness

Content to be included:
Status achieved
Executive evaluation
Percentage complete

Rate of movement towards goals or SPG
1. Executive evaluation:
   excellent, good, etc.
2. Disclosure of achievements in year
3. Comparison of percentage complete,
   this year and last
   Comparison with:
   1. Legal standards
   2. Industry norms
   3. Executive expectations

Figure 4.6 Recommended corporate social performance disclosure framework.

operational model, but the disclosure framework gives some idea of the
basic categories involved. There are quite clear indications that Brooks
would expect corporations to set goals and measure the degree to
which these are achieved, whether against an external standard or an
internally determined target. Categories in which social performance
disclosures may be expected are also included. The three figures demon­
strate a coherent structure which provides for the development of SRA.

Gray, Owen and Maunders (1987)

Gray, Owen and Maunders have provided two forms of conceptual
model. The first is concerned with the required characteristics of a social
report and is developed from a value position of accountability: the
accountability of organizations for their impact on society. The required
characteristics are:

1. The report must be accompanied by a full statement of the
   intended general objectives of the report. The statement should
   also allow the reader to assess: (a) what selectivity of data has
   been made and why; and (b) why that particular presentation
   has been chosen.
2. The objective of a social report should be to inform society
   about the extent to which actions for which an organisation is
   held responsible have been fulfilled.

Although important as an initial statement, the set of characteristics
does not provide any direction or detail about what should be included
(other than general indications). There is a second conceptual model
which gives an indication of primary-level influences and relationships
between the organization and the environment (Figure 4.7).

Figure 4.7 Primary-level influences of organizational activity. Source: Gray, Owen
and Maunders (1987, p. 77).
OPERATIONAL MODELS RELATING TO SOCIAL RESPONSIBILITY ACCOUNTING

This section describes a number of models which indicate in more detail what should be disclosed in a social responsibility accounting report. These models are designated as operational because of the added detail provided.

In chronological order, the models covered are the Corporate Report (ASSC, 1975); UK Government Green Paper (HMSO, 1977); Cheng (1976); the French Bilan Social (Ray, 1978); Jackman (1982); and the UEC recommendations (1983). A number of other detailed models have been excluded from this section because they are considered to be more concerned with TIA than SRA. They will be discussed in Chapter 5.

The Corporate Report (ASSC, 1975)

The Corporate Report has already been described as having a social-contract perspective. The recommendations did not include social accounting. The reason appears to be that The Corporate Report defines social accounting in a manner that corresponds to total impact accounting in this book. Social accounting is defined as:

the reporting of those costs and benefits, which may or may not be quantifiable in money terms, arising from economic activities and substantially borne or received by the community at large or particular groups not holding a direct relationship with the reporting entity . . . (ASSC, 1975, para. 6.46)

and as such should be not be required until:

acceptable, objective and verifiable techniques have been developed which will reveal an unbiased view of the positive and negative impact of economic activities. (Ibid., para. 6.47)

Other recommendations for action in The Corporate Report include a number of areas which are regarded as part of the social responsibility accounting field, including value added statements, employment reports, statements of future prospects, statements of corporate objectives and segmental reporting. These recommendations, which follow discussions about the need for accountability and the rights of additional parties to information, indicate that The Corporate Report provided a conceptual model for at least some aspects of SRA. The appendices to the report contain a detailed example of an employment report and an indication of what might go into a statement of corporate objec-

hesitation, it has been decided to classify The Corporate Report as operational.

The UK government Green Paper (HMSO, 1977)

The UK Government Green Paper referred to social accounting as:

a term which covers a range of ideas, many of which are at a very early stage of development. At its simplest it involves reporting, largely on an ad hoc basis, on individual items such as anti-pollution or health and safety measures which may be of greater importance for their social impact than for their financial effects on the company. (HMSO, 1977, p. 16)

This statement, when added to the suggested content of various reports which are given as separate sections, provides a general indication of SRA content. The Green Paper followed many of the ideas put forward in The Corporate Report, including a statement of added value, an employment statement and references to disaggregation, a statement of future prospects and disclosures of energy usage. Only in the case of the employment report does the Green Paper appear to be operationalized in any way. The Green Paper was a limited operational model of what SRA disclosure should include.

Cheng (1976)

Cheng argued for a 'statement of socio-economic operations', the purpose of which was expressed as follows:

The essential concept of the statement of socio-economic operations is to include what a business organisation has given to or held back from society. The statement is a tabulation of these expenditures made voluntarily and involuntarily by a business aimed at improving the welfare of employees, or public safety of the product, or conditions of the environment. Offset against these expenditures would be negative charges for social action that is not taken but should have been taken. (Cheng, 1976, pp. 290–1)

The Cheng statement of socio-economic operations would be divided into three parts: internal activities in domestic operations; external relations in domestic operations; and socio-ethical considerations of international operations. The section on internal activities in domestic operations referred to activities in areas like job training programmes, employee safety and health improvements, improvements in working
installation of pollution control devices, public-education programmes, loans to students, recycling of materials and measures of consumer satisfaction.

In his statement on socio-ethical considerations of international operations, Cheng included the development of human resources, the provision of technical assistance, attempts to improve agricultural productivity and raise living standards in certain regions, as well as statements on corporate morality and realistic sales and profit goals. Many of the ideas contained in the Cheng framework can be used in SRA, although a limited number would appear to be more appropriate to total impact accounting because they involve the valuation of externalities.

The *Bilan Social* (1977)

The *Bilan Social* dates from 1977, although Gray, Owen and Maunders (1987) note that its origins may well have been in the 1968 social unrest in Europe. Legislation required companies with more than 750 employees to publish social balance sheets from 1979. Subsequent amendments meant that, starting in 1982, companies with more than 300 employees had to make a report. Over 7000 French companies are now covered by this legislation.

Gray, Owen and Maunders (1987, p. 28) noted that:

French social balance sheets are exclusively concerned with employment related issues. Information has to be provided under the following seven headings:

- number employed
- wage and fringe benefits
- health and safety conditions
- other working conditions
- education and training
- industrial relations
- other matters relating to the quality of working life to cover the current year and two preceding years.

The amount of information to be disclosed varies according to the size of the company and other factors; some reports may be quite large, but they are not audited.

*Jackman (1982)*

Jackman produced a very large volume of detail in establishing his framework for disclosure. It was suggested that businesses may take action to improve their reporting to society in the following areas: economic growth and efficiency; education; employment and training; civil rights and equal opportunities; urban renewal and development; pollution abatement; conservation and recreation; culture and the arts; medical care and government. Reporting should follow a social audit check list.

*UEC recommendations (1983)*

The Union Européenne des Experts Comptables, Economiques et Financiers (UEC) established a working party to make recommendations on the content of social reporting. This is given above in Table 4.5. The formal structure was intentional in that the UEC desired to bring the rigour of traditional financial statement preparation, including the external audit, to social accounting statements.

**A REVIEW OF THE MODELS PRESENTED**

The conceptual frameworks or models examined here are very diverse and it is difficult to obtain a common pattern from them, other than a concern for accountability to society in a wider sense than is practised.
at present. Ramanathan (1976) was concerned to define the terms employed in considering social reporting. Burke (1984) provided one of the more involved models in that he attempted to cater to both external users and internal decision-makers. He recognized that ultimately the two groups are connected, in that users need to be reassured that, in the long run, the decision-makers are taking cognizance of social issues in making decisions.

The Wartick and Cochran (1985) approach, which was not reported in the accounting literature, traced the development of the area that they call corporate social performance. The significance of this work for SRA lies in the way in which the development of social responsibilities, social responsiveness and social issues (as perceived by management) generate opportunities for the corresponding information and reporting systems. Logsdon (1985) also contributed to the management rather than the accounting literature, but his paper demonstrated the extent to which the stance taken by management will extend or limit the opportunities which accountants may have to extend their range of reporting services to management for decision-making purposes, or to the public, in the form of accountability statements.

Brooks (1986) provided a comprehensive model which moved from an overall framework developed by the board of directors, through implementation steps for a social accounting measurement and disclosure system, to a recommended disclosure framework. Finally, Gray, Owen and Maunders (1987) offered guidelines for developing social reports.

In terms of the content of operational models, it appears that some or all of the following topics might be included: employee-related information; pollution and environmental protection data; product safety; energy usage; research and development activity; productivity statistics; and community projects and relationships.

Employee-related information may appear in the form of employee reports; or human resource accounting, or, in the case of some European countries, reports to works councils. Employee reports and human resource accounting are discussed later in this chapter. General social responsibility disclosures might include details of the workforce, such as age, location and workplace, sex, average pay scales, and trade union membership. In addition, fringe benefits might be given, together with opportunities for training and advancement within the organization. Details of the safety performance of the organization would also be appropriate.

Pollution and environmental protection data are included in some models, particularly where an organization is part of what has been by an outside body. The data required is that corresponding to the AAA Levels I and II discussed previously, thus providing details of pollutant or potential pollutant discharge in parts per million or in pounds or gallons or some other physical measure. These details may be in absolute terms or for comparison with government standards or organizational performance in previous periods. After the collection of suitable information, comparison may be made with long-term organizational performance or with industry averages.

Organizations are encouraged in some instances to refer to improvements in product safety. However, this is an area where it is difficult to separate information-reporting from forms of self-congratulation or institutional advertising.

Energy usage might also be disclosed, in both monetary and non-monetary terms: monetary disclosures as part of the regular accounts, and non-monetary measurements as SRA. The information could also be reorganized to demonstrate savings, in the case of a production operation, by means of units of output per unit of energy used. This approach is represented in the literature of Roth (1981), Scudiere (1980), and Gartenberg (1980). One argument in favour of disclosing non-financial measurements of energy usage is that it avoids the problem of energy pricing and valuation. It is impossible to make monetary comparisons between periods without using an index. In the absence of a general agreement on indexed financial reporting, the use of non-financial measures would appear to be appropriate.

The disclosure of organizational activity in the field of research and development is often regarded as one of the most sensitive areas and, for obvious reasons of confidentiality, does not appear very often. Non-monetary information about a firm's research and development activities could include the number of projects in the research stage, projects in the development phase, the number of patents held and applied for, the numbers and types of personnel engaged on various projects, and new products or services coming on-stream in the next accounting period. Some form of social accounting standard or even legislation may be necessary if widespread disclosure is to be achieved in this area.

The productivity performance of an organization could be of considerable interest to a wide variety of readers without being too destructive of confidentiality. The issue of productivity in Western economies, compared with that obtained in some of the newer industrialized nations, is topical and likely to remain so for some time. The organization could develop measures of productivity which are free of bias or confidential information. These might be units of production per man-hour worked, tonnes of material mined or converted per man-shift or per machine-
producing the goods and service or to the capital employed. An example of the latter type would be units of output per $1000 of capital invested. Many measures could be developed for specific industries or organizations.

Measures of community welfare and good neighbourliness are often high on any list of social responsibility accounting disclosures discussed in the literature. Items such as contributions to charity, local rates and taxes paid, training programmes for local employees, recycling of waste products, and contributions to sporting and educational organizations would be good examples. Many US corporations produce social reports to publicize these activities.

However, it must be recognized that disclosures under this heading would have to be full and frank, rather than biased towards only the 'good news'. Disclosure of social responsibility should be practised fully or not at all. Furthermore, the public reaction to particular biased information may not be what the organization wants or perhaps expects. This aspect has not been investigated, as far as the author is aware. Wiseman (1982) provided examples of reports which were not full disclosures and which may have been misleading. She concluded:

The findings indicated that the voluntary environmental disclosures were incomplete, providing inadequate disclosures for most of the environmental performance items included in the index. Further, it was demonstrated that no relationship existed between the measured contents of the firms' environmental disclosures and the firms' environmental performance. (Wiseman, 1982, p. 62)

There is clearly a role for a social auditor, despite the reluctance of accountants to become involved in this area. The concept of the social audit is included in Chapter 6.

THE ROLE OF MANAGEMENT ACCOUNTING IN THE PREPARATION OF SOCIAL RESPONSIBILITY DISCLOSURES

A majority of the models included in the above discussion clearly relate to the external reporting of social responsibility disclosures by corporations. One attempt at formulating a model in terms of the contribution of management accounting is reviewed below (Schafer and Mathews, 1984). The discussion recognizes that some models do indicate an awareness of the importance of management accounting and social responsibility, even though the main thrust is directed towards external reporting.

A number of studies have indicated the need for a management accounting input to the development of social responsibility disclosures. Ramanathan (1976, p. 516) commented that: 'To the extent that a firm's social impacts are not subjected to formal measurement process, these aspects are not likely to enter into the firm's planning decisions or performance evaluation.'

Epstein, Flamholtz and McDonough (1976, p. 28) argued that a larger number of reports are produced for internal use than the public is aware of, because many are not issued for external consumption. The public is left with an impression that corporations only use social responsibility accounting for external purposes.

Although these references suggest that the authors have a firm basis for their statement about the relative emphasis of internal and external reporting, in conclusion they say:

We need to know more about:
(4) the extent to which corporations are using accounting for social performance for decision making and performance evaluation at different levels in the organization, including the evaluation of (a) individuals, (b) divisions and (c) the corporation as a whole. (Ibid., p. 35)

It will be argued in this section that management accountants need to be involved in social responsibility disclosures, whether they are intended for internal or external consumption. This is especially the case where, as Preston (1981, p. 262) noted:

(1) the value of a corporate social reporting activity depends upon its usefulness to management
and
(2) there are available techniques for developing social performance information that will have continuing managerial usefulness over time.

SRA is concerned with the internal reporting of social responsibility data as well as external reporting. One approach is given in the following sections.

STRATEGIC AND OPERATIONAL PLANNING PROCEDURES

Senior management should be responsible for major and far-reaching actions in respect of strategic planning. Objectives which may be adopted at this level are translated into strategic plans of a broad nature, examples might be to 'move into international marketing', to 'restructure plant X' or to 'cease manufacture of product Z'. Once the strategic decision has been taken, the operational planning procedures will fill in the details and operationalize the strategic decision. The models presented by both Brooks (1986) and Burke (1984) introduce the social dimension to the decision-making activity.
Table 4.6 The relationship between strategic and operational planning for social disclosure (partial only)

I. Objectives
1. organizational survival
2. maximization of long-term returns to shareholders
3. satisfying returns to all parties involved in the enterprise
   converted by top management into

II. Strategic planning - by senior management (examples)
1. to improve our safety record
2. to operate with less environmental impact
3. to generate a better relationship within our community
   reduced to targets (for example)

III. Operational planning - by lower levels of management
1. to develop areas and measures through which safety
   performance may be improved; these include records, education
   performance charts, and departmental measures

The same procedure should be adopted in respect of social responsibility disclosures, whether destined for ultimate consumption outside the organization or for use as an internal report. Examples of strategic decisions applied to social responsibility matters might be expressed as 'to improve our accident record' or 'to have a particular change in the hiring record for minorities' or 'to have a less damaging effect on the environment'. In any event, it is extremely important that senior management should be seen to have instigated the process. This will ensure that policies on SRA disclosures have an opportunity to proceed to the operational phase. This process is shown in Table 4.6.

To operationalize a decision to utilize social responsibility disclosures will require management to set general areas within which to operate. Subsequently, specific planning measures must be generated within these areas. The areas and measures listed in Table 4.7 are only a sample of those from which operational management might choose a final programme. Each organization would have to develop specific, as well as general, planning measures, to deal with problems within identified areas. The sequence of strategic planning decisions, followed by operational planning and action, leads naturally to the use of these measures for control purposes.

CONTROL SYSTEMS
The use of budgetary control systems must be acknowledged as a most

Table 4.7 The relationship of reporting areas and planning measures

<table>
<thead>
<tr>
<th>Areas</th>
<th>Planning Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Environmental</td>
<td>(a) Liquid, solid, gaseous discharge in physical measures such as lb. and gals.</td>
</tr>
<tr>
<td></td>
<td>(b) Specific measures of particular materials in parts per million (ppm) of toxic gases, for example</td>
</tr>
<tr>
<td>2. Product utility reliability</td>
<td>(a) Number of complaints from customers</td>
</tr>
<tr>
<td></td>
<td>(b) Reactions from consumer bodies</td>
</tr>
<tr>
<td></td>
<td>(c) Reports from independent consultants</td>
</tr>
<tr>
<td>3. Energy efficiency</td>
<td>(a) Cost of energy used</td>
</tr>
<tr>
<td></td>
<td>(b) Specific measures of energy used in physical terms for particular areas</td>
</tr>
<tr>
<td></td>
<td>(c) Cost of energy per unit of output</td>
</tr>
<tr>
<td></td>
<td>(d) Energy used to output ratio in specific plants and cost centres</td>
</tr>
<tr>
<td>4. Productivity per unit of individual employee or plant time</td>
<td>(a) Physical output in terms of process time</td>
</tr>
<tr>
<td></td>
<td>(b) Physical output in terms of employee time</td>
</tr>
<tr>
<td>5. Employee/employer relations (unions where applicable)</td>
<td>(a) Official disputes as a proportion of normal working time</td>
</tr>
<tr>
<td></td>
<td>(b) Unofficial disputes as a proportion of normal working time</td>
</tr>
<tr>
<td></td>
<td>(c) Use of agreed grievance procedures by employees</td>
</tr>
<tr>
<td>6. Employee conditions/ safety management</td>
<td>(a) Lost-time accidents involving serious injury</td>
</tr>
<tr>
<td></td>
<td>(b) Lost-time through minor accidents, analysed by plant, division, etc.</td>
</tr>
<tr>
<td>7. Research and development</td>
<td>(a) Number of patents held</td>
</tr>
<tr>
<td></td>
<td>(b) Number of active researchers</td>
</tr>
<tr>
<td></td>
<td>(c) Number of projects at various specified stages of development</td>
</tr>
<tr>
<td>8. Community activity</td>
<td>(a) Specific measures of community service: scholarships, loans, provision of equipment and personnel, sponsorship, etc.</td>
</tr>
<tr>
<td>9. Minority employment</td>
<td>(a) Employment at different levels within the organization</td>
</tr>
<tr>
<td></td>
<td>(b) Comparison with previous employment records and those of other organizations</td>
</tr>
</tbody>
</table>

Management accounting in social responsibility disclosures
planning process outlined above would be applied to divisions, departments and sections, and leads logically to the development of budgets for social measures as well as for physical and financial quantities. It is possible to budget for an accident record or a particular level of injuries in much the same way as for any other operational input relationship. Another example might be a budgeted improvement in environmental impact by reducing the discharge of a particular pollutant, even where the present output is below required (or statutory) levels.

Budgets may be flexed in the usual way to allow for activity levels above or below those originally envisaged. Furthermore, using a system of planning budgets will ensure that an appropriate recording system is established and maintained, since operational management will need to show compliance with the budget. Once the fixed (planning) budget is adjusted for actual activity (flexed), a comparison of budgeted and actual results is possible. The variances developed as a result of this comparison have the same strengths and weaknesses as control devices as those developed from the physical and monetary measurements. The variances from budgeted safety or environmental impact performance must be investigated if outside significant limits. The development of variances may have a particular importance for the measurement of divisional performance.

DIVISIONAL PERFORMANCE MANAGEMENT

The measurement of divisional performance and the subsequent control of divisional management from a central position are difficult problems. Divisional management has been assessed in the past by means of highly condensed financial aggregates such as return on capital employed (ROCE) and to some extent this system continues in operation. Undue reliance upon this type of measure can lead to dysfunctional actions in terms of overall corporate performance. A number of undesirable practices may result, including a reduction in the level of maintenance and research and development, the sale of currently unused assets, and sometimes managerial decisions which lead to higher output in the short term. These actions may produce a disaffected workforce and industrial disputes in the longer term.

The use of social responsibility accounting measures in divisional performance measurement may help to overcome the limitations of ROCE (or similar financial measures such as return on investment (ROI)). The package developed might include measures of employee morale (turnover of personnel) as well as of research and development, safety, and environmental impact (measures of pollutants). These SRA measures would be disclosed in addition to the more traditional financial and value added statements. The evaluation of divisional performance would then be seen by the management concerned as balanced and aimed at the longer term, in which case many of the dysfunctional consequences of unidimensional measures may be avoided. The usefulness of social responsibility accounting systems designed and operated by management accountants, for control and performance evaluation, is probably a sufficient reason for their introduction.

SUMMARY

This section has examined the issue of SRA from the management accounting perspective. This contrasts with the usual financial accounting perspective, and a number of authorities within the SRA literature have indicated the importance of management accounting to the development of the area. However, there is some doubt about how much SRA is performed for the use of management and not disclosed in accounting reports.

Management accountants should take an active role in developing objectives, strategic and operational policies and standards for SRA. This would enable budgetary control systems and variance analysis to be used to ensure adherence to previously agreed standards in the areas normally included in SRA, in particular those connected with employees, safety, product improvement, community relationships, energy usage and environmental impact. An additional benefit could come from a more balanced system of divisional performance evaluation for use with segregated management structures.

A discussion of SRA would be incomplete without consideration of four areas which are frequently treated independently, although probably belonging under this general heading. These are employee reports, human resource accounting, accounting for industrial democracy and value added statements.

EMPLOYEE REPORTS

Employee reports form part of the SRA field as defined in this book. However, the gain in popularity in Australia and the United Kingdom has led to a specialized literature for this sub-group. Despite an increase in popularity, employee reports are voluntary, unregulated and unaudited disclosures. Consequently, quality varies and there is no uniformity of use within different industries. The approach taken by the French Bilan Social and other European countries is based upon legislation, and is quite different from that of Anglo-American accounting.

Many of the items that Cheng (1976) included in his first statement (internal activities in domestic operations) are to be found in employee reports or employment statements (Taylor, Webb and McGinley, 1979).
The UK Government Green Paper included a section on employee statements, separate from the entry on social accounting. In the case of the employment statement:

What is proposed is that companies should publish an employment statement which sets out information about its workforce and employment policies which are relevant not only to employees themselves but to shareholders and others concerned with the company. The aim is to provide sufficient information about the workforce and about the way in which the employment resources are managed to give an indication of the effectiveness of management in this crucial area of the company's activities . . . (HMSO, 1977, p. 9)

Examples of suitable information include: numbers of employees joining and leaving the organization; employment and training policies; matters relating to trade unions and participation in decision-making; the number of man-days lost as a result of industrial disputes; pension and sick-pay arrangements; and employment opportunities for the disabled.

The Green Paper does not distinguish between employment reports, which are about employees and a part of the annual report to shareholders, and employee reports, which are made to employees. Both may be considered part of the SRA disclosures. Although much of the information would be common to both reports, they have different objectives. The employee report is usually designed to present employees with a number of items of information not otherwise available to them. The employment report is a part of the annual report to shareholders and could be used where no employee report is used.

The incidence and content of employee reports have been discussed in the accounting literature in Australia, New Zealand and the UK. Published work includes examples of current practice, the attitude of employers, employees and trade unions towards employee reports and some attempts at a normative framework for employee reports.

In Australia, Taylor, Webb and McGinley (1979) and Webb and Taylor (1980) reported on the information given in company reports. They referred to a lack of uniformity and quality in the disclosures. Hussey and Craig (1979) and Craig and Hussey (1981) conducted surveys of employees and employers respectively. The information sought from employers was designed to obtain a profile of current reporting practices. In the survey employees were asked what they would like to see in employee reports, and the extent to which they understood the material given in actual examples. Follow-up interviews found that many employees did not understand the material provided as well as the report's understandability, was investigated by Pound (1980). The results were interesting and also disturbing, since it found that many employee reports were written in a way which would render them incomprehensible to a large proportion of the target audience. The basis of this type of research was extended through work by Lewis, Parker, Pound and Sutcliffe (1983).

It has been observed in respect of general SRA disclosures that most of the literature is devoted to descriptive analysis and empirical studies, with correspondingly little attention to providing a normative framework. The same general comment can be applied to employee reporting. Jackman (1982) provided employee reports as part of his social audit. The most important information excluded from his extensive list of data is simplified financial information, which frequently provides the basis for employee reports. Financial information would probably include value added statements, which are included in Jackman's paper, but not as a part of the social audit check list. Lewis, Parker and Sutcliffe (1982) have suggested a framework which would provide a better foundation for research into financial reporting to employees. The authors indicate dissatisfaction with much of the work previously carried out. The research framework was designed to assist future efforts in the area by providing several critical propositions, which they argue must be examined in order to make any meaningful progress. They are: employees do not require employee reports; employees do not require employee reports for any decision-making purposes; certain specific employee decision types; employees do not require information for 'other' (non-decision making) purposes; employees are not familiar with the concept of employee reports; employee reports received by employees are perceived as management propaganda vehicles; and employee reports have in the past supplied employees with the particular types of information which they require.

Little work of this nature has been carried out in New Zealand. Chye (1982) provided a review of the literature and a limited number of examples of company employee reports from 1980 annual reports. Smith and Firth (1986) surveyed employees and found that most of the respondents welcomed the reports and thought that they understood them, but wanted more future-orientated and non-financial quantitative information.

In the UK Purdy (1981) examined the provision of financial information to employees with a particular emphasis on the environmental and organizational pressures which may induce companies to produce employee reports. Purdy included in his study a reference to the style of management and the degree to which management attempted to
Hussey (1979) considered several aspects of UK employee reporting, including the perception of employee reports by employees. Jackson-Cox et al. (1984) examined the place of information disclosure so far as it impinges on the industrial relations strategies of corporations and trade unions and the development of a code of practice for the disclosure of information.

Employee reports are difficult to classify. Do they belong to the field of financial reporting, or to that of social responsibility accounting, or both? There is usually a large financial component made up of a value added statement and simplified financial statements. There is often a large non-financial component, including a diagrammatic representation of the financial material (division of the value added as a pie-chart, for example) and statistics about the organization and workforce. A quantity of qualitative material will often be present such as 'a message from the Chairman'. There is some evidence that employees are more concerned about their own place of work than about the group of companies to which their own employing company belongs, whereas financial accounting reports are consolidated.

On balance, the author considers that most employee reports should be treated as potentially SRA disclosures. Employee reporting (or reporting to employees) is predominantly a Level I and II measurement exercise, except where financial data are reproduced from the regular annual accounts. The Level III measurements of employee activity have been separated off in the form of human resource accounting. This is discussed later in this chapter.

ACCOUNTING AND INDUSTRIAL DEMOCRACY

An extension of the employee reporting literature has been concerned with industrial democracy. This term is used to refer to the involvement of labour in decision-making and may be formal, as envisaged by the Bullock Report (Department of Trade, 1977), or less formal, as in providing trade union negotiators with additional information for use in collective bargaining or negotiation over plant closures and redundancy (Gray, Owen and Maunder, 1987, ch. 9). Major contributions have been made by critical theorists, concerned that trade union negotiators should be sufficiently well-versed in financial matters that they can understand and critique the accounting data provided by management (Bougen and Ogden, 1985). Radical researchers have also explored the logical extension of industrial democracy in the form of feasible socialism (Tomlinson, 1985) and worker co-operatives (Jefferis and Thomas, 1985).

Many of the models used in accounting and industrial democracy have been criticized for viewing the costs and benefits of alternative actions from a management perspective and not taking into account workers' separate costs and benefits (Bougen and Ogden, 1985). An explanation for this phenomenon could be that employee representatives are concerned with mastering the financial accounting data and have not yet come to appreciate the resources available in the form of non-traditional accounting. Although individual firms are unlikely to be swayed by the costs of unemployment following a decision to close a plant, government may be encouraged to intervene if presented with a statement of total costs and benefits to all parties.

The majority of Anglo-American SRA models do not deal with the topic of accounting and industrial democracy, although the provision of information to works councils and other employee groups is provided for in continental Europe. There are historical and cultural reasons for these differences (Mathews and Perera, 1991).

HUMAN RESOURCE ACCOUNTING

Human resource accounting (HRA) was once an important area of theoretical discussion and may become topical again, although at the moment there is little being written in this area. HRA has not led to widespread modification of reporting practice and it is difficult to know exactly where HRA would fit into the framework of social accounting proposed herein. The valuation arrived at is a monetary amount, frequently derived from data which are not cost-based. It must, therefore, be a Level III measurement (under the system proposed by the AAA) of the data which could be produced as a general SRA disclosure or as part of an employee report. The following examination proceeds on the basis that it is the logical framework of reporting socially useful information that we are describing, and not possible reporting practices in the near future.

The purpose of HRA is to place a value on the human capital employed by the firm in a manner similar to the valuation of other assets. A section of the literature favours putting these values on the balance sheet in a similar form to that of a capitalized lease. Other writers think that it would be sufficient for the capitalized figures to be included with other social responsibility disclosures. The valuation for HRA would be based on the number of each type of employee within the organization. Average and total value of employees would be expected to alter in line with changes in staffing, the amount of training undertaken, and the increase or decrease in employee morale. The value of the human resource may be determined according to one or more of the following approaches: conventional accounting; replacement cost; discounting of future salaries; and economic value (Unruh and Mathews, 1992).
The conventional accounting approach would be to capitalize expenditures related to recruiting, training and developing personnel. These amounts would then be amortized over the useful life of the asset. There are obvious difficulties in accumulating this data, and furthermore, what constitutes a useful life for an employee? Not only do employees retire or die, they often move from position to position and employer to employer. Finally, how does an organization value a new employee who arrives with a variety of skills acquired elsewhere? A partial response may be found in the literature dealing with accounting for pension schemes, but this does not address the problem of the uncertainty surrounding continued employment.

A replacement cost approach may be used in an attempt to value the human resources of an organization. The replacement cost is a measure of the costs which would be incurred in replacing the existing personnel, including recruiting, hiring, training and developing personnel to their existing levels of competence. Presumably, under this system of valuation, those employees thought incompetent would have a low, zero or even negative value, since they could leave without being replaced. The total value under this approach could be quite different from the accumulated cost approach. Both methods of valuation could be adjusted for price-level changes.

A third approach would be to value employees at the capitalized value of their discounted future salaries for the expected period of employment. This method requires a number of estimates or assumptions in respect of the period of employment, the career path, the level of salary paid during the career path, and last, but not least, a discount rate with which to obtain the present value.

The last approach to be included here is the measurement of human resources at their economic value. Flamholtz (1974) suggests developing an estimate of future services from each employee and discounting this to get the economic value of that person. The total of individual economic values would be the value of the human resource to the organization.

The difficulties attached to the last two approaches are immediately apparent. Accountants generally do not favour estimates being made of future costs and/or benefits associated with employees, and then discounting the value of these estimates with a rate which may be largely guesswork. The use of an historical-cost or replacement-cost approach might be acceptable to accountants, but would be rejected by other theorists. Early advocates of human resource accounting argued in favour of putting value on the balance sheet along with other assets. There are alternative courses of action which could be taken, such as

There are a number of difficulties attached to the development of HRA. These may be categorized as behavioural, methodological and theoretical. Behavioural problems arise when employees and others object to the valuing of human beings, because the ‘worth’ of the individual is under examination. Whilst the valuation process may be acceptable to senior management, organized labour often has disagreements over historical relativities in pay scales, and the process of valuing individuals or groups is likely to cause further industrial difficulties, including strikes.

The methodological problems are many, and centre about the usual difficulties of measuring inputs and outputs. These problems are compounded in some models by the use of present values of future events, necessitating the development of discount rates. The theoretical difficulties stem from the isolated nature of much of the HRA work. It is not grounded in the reality of other accounting developments. This criticism may also be levelled at later sections of this book; however, HRA purports to measure the value of employees as assets, but the vast majority of the literature is on a level which makes practical accomplishment most unlikely. This is analogous to the situation with plant, which is valued at cost and not the present value of the future cash flows which influenced the acquisition decision, despite many theoretical arguments in favour of the latter.

In a recent return to the HRA issue, Flamholtz (1985) has developed in conjunction with Touche Ross, a stochastic rewards valuation model (SRVM) for use in determining the ‘net present value of the average person at each job level’. Flamholtz provided a number of potential users of the system, including personal advancement analysis within the firm and a number of uses on behalf of clients. The author summarized the work as follows:

Although the system requires significant further refinement and research, this pilot study represents a potentially significant advance in the human resource accounting field. The study is also significant because there are, at present, relatively few examples of actual organizations which have developed human resource accounting systems. (Flamholtz, 1985)

VALUE ADDED STATEMENTS

Value added statements have a place in the SRA literature, although they are composed of financial data that is derived, for the most part, from conventional financial accounts. Value added statements were
tators on behalf of the principal accounting bodies in the UK (Renshall, Allan and Nicholson, 1979; Gray and Maunders, 1980). Consideration has been given to technical particulars, such as whether value added should be calculated on a production or sales basis, and whether it should be shown as a gross or net figure before distribution.

Burchell, Clubb and Hopwood (1985) have charted the rise and fall of value added statements in the UK and associated their use with accounting in a social context in which the discipline responds (or is induced to respond) to particular social factors. Value added has been used in parts of Europe (Dierkes, 1979), but statements are reported to be almost non-existent in the US (Choi and Mueller, 1984). The important factor at work appears to be the use to which the information is to be put, rather than the type of information. Value added statements, which reflect the production and distribution of value added, are perceived by many to demonstrate the team approach to generating value added. They are therefore part of social responsibility accounting.

SUMMARY

This chapter has considered a number of conceptual and operational models for SRA, the involvement of management accountants in developing both internal and external disclosures, employee reports and accounting for industrial democracy, human resource accounting and value added statements. A number of conceptual models were examined and found to range from philosophical positions and definitional statements, to historically generated categories of response by accountants and managers, to given changes in the social and legislative environment. Several models emphasized the interrelationship of the entity and the surrounding environment, whilst others were more concerned with the development of a further (social) dimension as an aid to decision-making, which was also sensitive to the needs of outside parties.

Several operational models were considered (the difference between conceptual and operational being defined in terms of details of what should be disclosed) and found to be couched in terms of employee reports, product information, energy reports, community involvement and environmental impact. A number of specialized areas were also included, such as SRA and management accounting, accounting and industrial democracy, human resource accounting and value added statements. It was noted that historically continental European models were devoted almost exclusively to employee matters.

Social responsibility accounting in practice

INTRODUCTION

Social responsibility accounting captures a variety of information that organizations want to disclose. A number of studies designed to find out what is disclosed are reviewed below. They are followed by a brief examination of some of the problems inherent in this type of research. The studies are grouped according to the country of origin and are intended to be illustrative of the disclosures in each. The chapter concludes with a partial explanation of differences by reference to studies on culture and accounting.

A REVIEW OF SRA STUDIES FROM AROUND THE WORLD

AUSTRALIA

Studies carried out in Australia between 1979 and 1984 included Trotman (1979), Kelly (1979), Trotman and Bradley, (1981), Pang (1987), Guthrie (1982) and Gul, Andrew and Teoh (1984). There have been no major studies since the mid 1980s.

Trotman (1979)

Trotman used a sample consisting of the accounts of the largest 100 companies listed on the Sydney Stock Exchange. Disclosures were analysed under the headings of environment, energy, human resources, products, community involvement and 'other'. Trotman found an increased incidence of disclosure, from 28 companies in 1967, to 48 in 1972 and 69 in 1977, with 'the environment' and 'human resources' as the most frequently included categories in 1977. Disclosures were categorized into monetary quantification, non-monetary quantification...
and qualitative disclosures. About half of all disclosures were found to be qualitative. The proportion of social accounting material in the annual reports was measured in terms of 'average pages per company report': 0.08 in 1967, 0.30 in 1972 and 0.57 in 1977. It is the quantification of disclosures which makes this study particularly important in the Australian context. Unfortunately, Trotman did not reveal the decision mechanism by which particular disclosures were judged to be eligible for inclusion.

Kelly (1979)

Kelly used selected social responsibility disclosures from the annual reports of 50 selected Australian corporations over the period 1969-78. The results confirmed Trotman’s findings of increased disclosure over the time period and drew attention to differential aspects of reporting. Kelly found that large corporations tended to disclose more environmental and product information than did smaller organizations, whilst companies in the primary and secondary sectors of the economy tended to disclose more environmental and energy-related information than corporations engaged in tertiary activities. The opposite was true in the case of information about the interaction of the firm and its local community.

This study was important in the context of Australian social responsibility accounting research, because it established statistically significant relationships between types and sizes of industries and various social responsibility disclosures. However, the sample size was quite small (50 companies) and this limits the ability to generalize from the results.

Trotman and Bradley (1981)

The study by Trotman and Bradley was designed to test a number of specific hypotheses concerned with volumes of disclosures and (1) the size of companies; (2) their systematic risk; (3) social constraints as perceived by management and (4) the long-term effects of decisions. The sample comprised 207 companies listed on the Australian Associated Stock Exchange. The annual reports of the companies selected (all volunteers arrived at by process of elimination) were examined for social responsibility disclosures in the area of environment energy, human resources, products, community involvement and 'other'. The number of companies producing suitable disclosures was 40% of the sample selected (83 reports). The extent of social responsibility disclosures was measured through a line-by-line examination of the report, which pro-

and total sales at the 1978 balance sheet date. Systematic risk was defined as the contribution of the individual security to portfolio risks, using beta measurements supplied by the Australian Graduate School of Management. Measurement of the social pressures perceived by companies and management’s decision horizon were taken from a previous survey by Bradley. Statistically significant relationships were found in the following areas:

1. Company size (total assets and total sales) was associated with social responsibility. Larger organizations tended to provide more disclosures.
2. A positive correlation was found between the volume of social responsibility data disclosed and the extent of the social constraints faced by companies.

Positive relationships of lesser significance were found between systematic risk (beta) and the volume of social responsibility data provided, and the disclosures and emphasis on long-term developments within the organization. The Trotman and Bradley study was important because of the direction it gave to social responsibility disclosure research in Australia and the increased sophistication of its analysis.

Pang (1982)

Pang modelled her study on that of Trotman (1979) and examined the social responsibility disclosures of a sample of 100 companies listed on the Sydney Stock Exchange in 1980. The 100 companies included the 70 largest companies (based on market capitalization) and 30 companies selected at random. The reports were analysed in terms of community involvement, environment, energy, human resources and products and consumer issues. The results showed that in 1980, 79 companies made some form of social responsibility disclosure, the larger companies disclosing socially related material more frequently than the smaller companies. Disclosure rates ranged from 92% for those with a market capitalization above $A500m to 73% for those less than $A100m.

The location of the social responsibility information was also considered. Alternative formats included: a separate report (4); a separate section of the annual report (25); separate headings in various reports (18); and coverage as part of other major topics in the annual report (32). Larger companies tended to provide separate disclosure of social activities, whereas smaller companies tended to disclose these activities in conjunction with other matters in the annual report.
Guthrie (1982 and 1984)

Guthrie (1982) examined the annual reports of the top 150 listed Australian companies for 1980. The study was aimed at showing trends in SRA disclosures and analysing the extent and type of disclosure activity. Content analysis was used to place information within four dimensions: theme; evidence; amount; and location. 'Theme' was based on categories such as environment, energy, human resources, products, community involvement and others. 'Evidence' described the form of disclosure: monetary, non-monetary, declarative (qualitative) and none. 'Amount' was the familiar measure by the proportion of pages devoted to social responsibility matters; and 'location' referred to a choice between management reviews, a separate social disclosures section, parts of other sections of the annual report and a separate booklet on social responsibility.

The results showed that 42% of the companies surveyed included some form of social responsibility disclosure, with the different themes having the following relative importance: human resources 43%; environment 21%; community involvement 14%; energy 9%; products 5%; and 'others' 8%. The evidence section showed that 60% of all disclosures were declarative (that is, non-quantitative), whilst 24% gave some non-monetary quantification. The reports giving both monetary and non-monetary quantification were limited to 12% of those making some disclosure, and only 4% gave monetary disclosures alone.

The most popular places for locating social responsibility disclosures were the director's report (50%), or a non-specific section of the annual report (40%); and only 10% used a specific section of the annual report devoted to social responsibility disclosures. No company issued a separate booklet on socially related matters. The amount of disclosures was a mean of 0.68 pages; however, 11% disclosed more than one page, whilst 40% reported less than 0.25 pages. The overall results tended to confirm previous studies. The important dimensions added by Guthrie are content analysis, which incorporated checks on validity and reliability, and the addition of variability to the average figure for disclosure.

Guthrie (as reported in Guthrie and Mathews, 1985) continued this analysis with a further study in 1984 using 1983 Annual Reports. Because the analyst conducted both studies using the same instrument for measurement, it was possible to tabulate comparative data for certain features for 1980 and 1983. These comparisons related to the top 50 companies on the Sydney Stock Exchange, as measured by market capitalization.

In both 1980 and 1983 annual reports 56% of the sample companies made some form of social responsibility accounting disclosure. Of the various possible SRA themes, in 1980 it was found that human resources accounted for 22 disclosures, the next highest number was environment (15) and community involvement (8). Of lesser importance was energy (4), others (4) and products (1), from a total of 54 reporting companies. In 1983 there were considerably fewer disclosures for environment (6) and only one related to energy. These results are reported in Table 5.1.

Of the 54 disclosures identified it was found that only 21 were expressed in quantified terms, either monetary or non-monetary. This represents approximately 44% of the total disclosures. The results shown in Table 5.2 indicated that human resources had the highest incidence of quantified disclosure with 13 disclosures, followed by energy, community involvement and environment. There were no entries for community involvement and products. In 1983 the only

<table>
<thead>
<tr>
<th>Table 5.1 Types of social responsibility accounting disclosure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1980</strong></td>
</tr>
<tr>
<td><strong>Environment</strong></td>
</tr>
<tr>
<td><strong>Energy</strong></td>
</tr>
<tr>
<td><strong>Human resources</strong></td>
</tr>
<tr>
<td><strong>Products</strong></td>
</tr>
<tr>
<td><strong>Community involvement</strong></td>
</tr>
<tr>
<td><strong>Others</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

*Note: Some companies reported more than one theme.*

<table>
<thead>
<tr>
<th>Table 5.2 Type and quantification of social responsibility accounting disclosures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1980</strong></td>
</tr>
<tr>
<td><strong>Quantitative Disclosure</strong></td>
</tr>
<tr>
<td><strong>No. %</strong></td>
</tr>
<tr>
<td><strong>monetary</strong></td>
</tr>
<tr>
<td>Environment</td>
</tr>
<tr>
<td>Energy</td>
</tr>
<tr>
<td>Human resources</td>
</tr>
<tr>
<td>Products</td>
</tr>
<tr>
<td>Community involvement</td>
</tr>
<tr>
<td>Others</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
</tr>
</tbody>
</table>

*Note: Many corporations made more than one disclosure.*
Table 5.3 Quantification of social responsibility accounting disclosures

<table>
<thead>
<tr>
<th></th>
<th>1980</th>
<th>1983</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Both monetary and non-monetary quantification</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>Monetary quantification</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Non-monetary quantification</td>
<td>11</td>
<td>40</td>
</tr>
<tr>
<td>Declarative</td>
<td>12</td>
<td>44</td>
</tr>
<tr>
<td>Total</td>
<td>28</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 5.4 Location of social responsibility accounting disclosures

<table>
<thead>
<tr>
<th></th>
<th>1980</th>
<th>1983</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director's report</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>Separate section of annual report devoted to SRA</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Other section</td>
<td>16</td>
<td>18</td>
</tr>
<tr>
<td>Separate booklet</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 5.5 Number of pages devoted to social responsibility accounting disclosures

<table>
<thead>
<tr>
<th>Pages</th>
<th>1980</th>
<th>1983</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.01-0.25</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td>0.26-0.50</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>0.51-0.75</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>0.76-1.00</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>1.01 or more</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>

A significant change was the increase in quantification of disclosures related to human resources.

Table 5.3 outlines the results for the degree of quantification. In 1980 16 of the 28 companies quantified their disclosures, but only five companies (16%) had some form of monetary quantification and 12 companies (40%) had no quantification whatever in the identified SRA disclosures. In 1983 there appeared to be an increase in the number of disclosing companies which were willing to quantify disclosures, from 56% in 1980 to 82% in 1983.

Table 5.4 indicates that SRA disclosures were located throughout the annual reports with 12 appearing in the Chairman's report (45% of disclosing companies). However, the majority of companies disclosed this information in the general body of the report, and no company provided a separate SRA booklet. In 1983 there was little change in

of social responsibility accounting disclosure identified. The average number of pages devoted to SRA information, per disclosing company, was 0.68 of a page. There were only seven (11%) of the companies with more than one page of the annual report devoted to SRA whilst 25 companies (40%) of disclosing companies devoted less than 0.25 of a page to SRA. Similar results were obtained for 1983 with the average being 0.70 of a page.

In the 1983 annual report review, a new category was introduced into the recording instrument, that of the issuing of bad or negative news about any one of the themes. The main reason for the 11 disclosures on human resources was the reduction of staff employed because of retrenchments and reorganization of the corporation.

There are obvious advantages in having the same analyst examine the annual reports using a 'proven' instrument. A greater degree of comparability should result. It can be seen that, on the whole, there were few changes in SRA in Australia between 1980 and 1983 as evidenced by the annual reports of the top 50 companies on the Sydney Stock Exchange.

Gul, Andrew and Teoh (1984)

Gul, Andrew and Teoh used the instrument developed by Guthrie on a random sample of 136 annual reports of Australian companies. The results they obtained differed to some extent from those reported in the previous section, probably as a result of the random sample used in place of the sample of larger companies adopted by Guthrie. Results showed that 30% of the companies sampled made SRA disclosures. These included 42% of the companies in the construction industry and 32% of the companies in the manufacturing industry. The information disclosed consisted of 36% relating to the human resource, 32% relating to community involvement and 10% relative to the environment. It was found that large companies made more disclosures about employees, but disclosures about community involvement was spread across firms of all sizes. The largest proportion of monetary quantification was concerned with community involvement, and the majority of disclosures were in the directors' report.

The authors concluded that a reasonable proportion (30%) of companies surveyed included SRA disclosures, and for foreign-owned companies the proportion was 50%. There are limitations associated with the study in terms of the use of a relatively small sample and only one year's reports.
NEW ZEALAND

Robertson (1977)

In a 1977 New Zealand study Robertson reported on a survey undertaken to assess the extent and kind of corporate social reporting in published annual reports. This was achieved by using the annual reports of the largest 100 companies, (based on paid-up capital) as at September 1975. The analysis found that for 54 companies there were 79 qualitative, 17 quantitative and 34 monetary disclosures. However, any references to 'social' matters were included, no matter how trivial, and 24 of the monetary disclosures referred to housing assistance for personnel. Although a useful beginning, the study lacked quantification. For example, the extent of disclosure is not quantified, in contrast to the work of Trotman and the other studies discussed previously.

Davey (1985)

Two New Zealand studies provide an insight into the problems associated with this type of research. Davey examined the annual accounts of a 15% random sample of firms listed on the New Zealand Stock Exchange at 31 March 1982. This gave a sample of 32 firms which were classified as primary, heavy industrial, manufacturing or service industries. The accounts were analysed for the type of disclosure taxonomy used (all were found to use an inventory approach), differing measurement levels, any form of attest relationship, and the volume of each type of disclosure as measured by six-character 'words'.

It was found that social responsibility disclosures had increased considerably since Robertson's 1977 study, but that most were generalized qualitative statements without any attempt at attestation, and with a low score on the scale of quality used. Approximately 60% of the sample made disclosures exceeding 100 'words' in length. There was no confirmation of the relationship between size of organization (as measured by total assets) and the volume of social responsibility disclosures. This is contrary to the Australian studies of Trotman, Trotman and Bradley, and Kelly, and may have been the result of the small sample size.

Davey constructed a 'corporate social responsibility worksheet' which allowed for disclosure under the headings of employment, corporate objectives, product, philanthropy, environment, energy and 'other'. Guidelines were provided for the calculation of 'words', the determination of the type of disclosure (inventory approach, cost approach, programme management approach, benefit/cost approach), the quality of disclosure (on a seven-point scale) and any evidence of independent audit or attestation. An example of the worksheet is given in Figure 5.1.

It is evident that much of the analysis is subjective. However, it may be hypothesized that the total of 'words' and the percentage of total wordage attributed to a particular form of disclosure (for example, product) could be expected to remain reasonably constant between observers.

Ng (1985)

The reproducibility hypothesis was tested by Ng, who used the same test instrument with the same sample of companies but for three years (1981, 1982 and 1983). She found that even a careful attempt to replicate the word-count (for 1982 reports) did not yield the same results, because of the impossibility of different observers reacting in the same way to some of the statements. The extent of the differences are detailed below.

In Table 5.6 a comparison of the percentage of the sample reporting SRA shows a consistent upward bias by Ng compared with Davey. That is, Ng discarded fewer disclosures as unworthy of inclusion because they were of a self-serving or public-relations nature. The only category where Davey recorded a higher number of words was 'other' because Ng seems to have gone to greater lengths to categorize some of the difficult entries which Davey had assigned to this category. A forced-nature choice may have been employed by Ng to avoid the 'other' category, and this may reflect the individual characteristics of the researcher.

Table 5.7 provides comparative data on each category of disclosure. The results presented in this table indicate the subjective effect of using different observers. Ng had a different reaction to marginally subjective statements than Davey and this had an aggregate effect of increasing her word count by 32%.

<table>
<thead>
<tr>
<th>Percentage of sample corporations reporting SRA</th>
<th>Davey</th>
<th>Ng</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total companies reporting disclosures</td>
<td>84</td>
<td>100</td>
</tr>
<tr>
<td>Percentage of companies reporting:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>employment</td>
<td>66</td>
<td>88</td>
</tr>
<tr>
<td>corporate objectives</td>
<td>38</td>
<td>41</td>
</tr>
<tr>
<td>product</td>
<td>3</td>
<td>28</td>
</tr>
<tr>
<td>community support/philanthropy</td>
<td>16</td>
<td>10</td>
</tr>
<tr>
<td>environment</td>
<td>6</td>
<td>14</td>
</tr>
<tr>
<td>energy</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>other</td>
<td>13</td>
<td>3</td>
</tr>
</tbody>
</table>
Like Davey, Ng did not find the association between the level of disclosure of SRA and industry size or characteristics that the Australian studies have reported. This was the case for both individual years and average results over the three years.

**UNITED STATES**

**Buzby (1974)**

Buzby examined 38 items of information, both financial and non-financial, to determine the extent to which they were included in annual reports. These items were ranked using a panel of financial analysts. The analysts' ranking, plus a literature search, was used to construct a set of weighted criteria for each item which was then applied to a sample of 88 company reports from small and medium-sized organizations. The measures were intended to determine the extent of disclosure, the average extent of the relationship between importance and disclosure, and the average extent of the overall disclosures. Listed items of a non-financial nature were number of employees, plant and warehouse sizes, locations and ages, and indications of employee morale. Buzby concluded that many items were inadequately disclosed in the sample, and that correlations between the relative importance of items and the extent of their disclosure were low.

**Ingram (1978)**

In a study of the information content of firms' voluntary social responsibility disclosures, Ingram found that information content depended to a large extent on the market segment. This study was referred to in greater detail in Chapter 2.
Social responsibility accounting in practice

Ernst and Ernst (1972–8)

Probably the most well-known studies in this area were those carried out by Ernst and Ernst between 1972 and 1978. The 1978 report was very comprehensive and, like all the studies in the series, it was based upon annual reports of the Fortune 500 companies. The survey showed a small decline in the number of companies which made social responsibility disclosures (from 91.2% to 89.2%), the first reduction recorded in the series. The average number of pages devoted to social responsibility disclosures was 0.56, an increase from 0.43 in the previous year. There was a small decrease in the number of companies quantifying their disclosures (from 60% to 59%). One notable feature of the 1978 Ernst and Ernst report was the considerable attention given to examples of disclosures and to the method employed in the survey. The authors were aware of the subjective nature of these studies:

The identification and categorisation of SRA information is a subjective task because there is no widely accepted definition of ‘social responsibility’, or agreement as to what constitutes a corporate socially responsible activity. (Ernst and Ernst, 1978, p. 30)

The authors attempted to reduce the degree of subjectivity and bias and stated:

If anything, the amount of disclosure reported in the survey is understated because of the selective approach employed in identifying and categorising disclosures and the possibility of human error. (Ibid., p. 31)

The incidence and types of SRA disclosures found in the 1977 Fortune 500 annual reports are shown in Table 5.8.

CANADA

Burke (1980)

In a study published in 1980 Burke compared the SRA disclosure (called social measurement disclosures (SMD)) and material social measurement disclosures (MSMD) for US and Canadian company reports. The results of the study are revealing in that the difference between the two categories of disclosure was designed to overcome the problems which have been apparent in other studies. The definitions used were: SMD, ‘any disclosure about an area of social concern not traditionally reported upon’; MSMD, an SMD that provided a reasonably comprehensive profile of a company’s activities in such an area. Apart from breadth of coverage, meeting the MSMD test required specific data in quantitative form (Burke, 1980, p. 21).

The differences were reported in a series of tables detailing the number of companies in each country that reported disclosures at both levels for a range of categories. The relationship of size of corporation to extent of disclosure was explored, and it was found that larger companies were more likely to provide meaningful social measurement
disclosures. It is clear from this study that there were important differences between Canadian and US companies at that time.

Demers and Wayland (1982a and b)
Demers and Wayland examined the annual reports of major Canadian companies which have taken the initiative in the SRA field. The information gleaned from the reports was reported in narrative form and may be summarized as follows:

**General Foods** (1977 report): annual seminar on nutrition; sponsorship of awards to journalists; employment of blind tasters in quality control area; the programmes continued in 1978; a five-year energy conservation plan was launched in 1978.

**Canadian Industries** (1978 report): installed new system for evaluating occupational accidents, including comparisons between company's record and the rest of the chemical industry. Figures given for rate of accidents for company employees for both 1977 and 1978. Company-owned collection of contemporary Canadian art touring the country.

**Imperial Oil** (1977 report): devoted four pages of the annual report to community relations; SRA items included: formation of teams to deal with oil spills; petroleum industry participation in environmental protection groups; existence of 86 employee-management consultative groups; a survey of employees on their expectations and attitudes towards the company; employee health programmes; job safety programmes which produced a dramatic reduction in the number of hours lost due to accidents; continued support for higher education, reduction of energy costs.

**Fina** (Petro Canada) (1976 report): concentrates social actions in area of environmental protection; detailed involvement, including donating time of employees; improvement in quality of refinery waste water; donations to 215 agencies in the field of industrial relations; enlarged company newspapers; 25 university scholarships for the children of company employees.

**John Labatt** (1979 report): indicated a substantial increase in contributions to social programmes (from $648,000 to $778,000) for use mainly in local communities; also summer jobs for students in community organisations; company-wide corporate social responsibility committee within the board of directors.

**Imasco** (1977 report): sponsorship of sporting events; scholarships to assist performing artists; contributed $840,000 to non-profit agencies.

**Gas Metropolitan** (1978 report): opened a training centre to instruct firefighters in the control of natural gas leaks; free medical examinations for employees; retirement preparation courses.

**Bombardier** (1978-9 report): social involvement through foundation; installation of park, construction of a cultural centre; donations to Canadian universities; donations to charities, both local and international.

**Brooks** (1986)
In a very comprehensive examination of corporate social performance in Canada, Brooks analysed the SRA component of company annual reports for 22 matched pairs for the years 1974 and 1980. He was particularly interested in changes to reports over this period and concluded that:

there has been relatively little change in the percentages of space allocated to social responsibility disclosures between 1974 and 1980 . . . according to the nonparametric sign test for matched pairs . . . the only changes in disclosure which are significant . . . are those for Human Resources – Pictures. (Brooks, 1986, p. 73)

It is noteworthy that Brooks recognized the need to separate pictures and script in his analysis. This is a problem with many SRA disclosures, and few analysts appear to state their approach with the same clarity.

Brooks provided examples of the SRA disclosures of US and Canadian corporations and an international comparison of SRA studies, which is considered in a later section of this chapter.

**UNITED KINGDOM**

There appear to have been relatively few comprehensive analyses of UK company reports to determine the type and volume of SRA disclosures. However, there are a number of studies dealing with specific aspects of the SRA field, such as value added statements or employee reports, and reference has been made to these in other parts of this book. Gray, Owen and Mauders (1987, p. 56) state that: 'In terms of systematic publications, CSR can be grouped under four headings: value added statements, employment reports, employee reports, and "other" social reporting.'

Gray, Owen, and Mauders (1987, p. 57), and Burchell, Clubb and...
UK company reports during the 1970s and 1980s. The data from these studies, originating with the Institute of Chartered Accountants in England and Wales Survey of Published Accounts are given in Table 5.9. Although the use of value added statements is not increasing, there appears to be a substantial minority of companies making use of this form of disclosure.

The same authors’ comment on the incidence of employment reports (information about the workforce) within the annual report. They state the percentages of companies providing employment statements to be: 1975-6, two; 1976-7, five; 1977-8, six; 1978-9, four; 1979-80, five; 1980-1, six; 1981-2, five; and 1982-3, three.

The legislative framework which influences the disclosures of companies on employee-related matters has been changing in recent years, particularly the Companies Acts 1981 and 1985. However, the survey of company reports of 300 large companies shows that they are still providing disclosures in excess of the requirements of the Companies Acts. The details of these disclosures for 1982-3 are given in Table 5.10.

The third form of SRA disclosure referred to by Gray, Owen and Maunders is the employee report. Lyall (1982) analysed 60 employee reports received from a random sample of companies chosen from The Times 1000 largest UK companies. He found that the most frequent disclosures were profitability (57 companies), value added (43 companies), divisional information (29 companies), financial resources (21 companies), and capital investment (21 companies).

Marsh and Hussey (1979) analysed 302 employee reports and found that the most commonly included information was a financial highlights statement (77.2%), a value added statement (40.7%) and a balance sheet (38.7%).

As indicated previously, comprehensive analysis of annual reports of UK companies covering all categories does not seem to be very common. Gray, Owen and Maunders (1987) offer such an analysis in the form of a comparison with the results of the last of the Ernst and Ernst studies. This is shown in Table 5.11.

## CONTINENTAL EUROPE

The literature relating to SRA disclosures in continental Europe is dealt with in this section. Although they are not of prime concern to this book, which is of necessity directed towards developing socially related accounting within Anglo-American influenced accounting systems, these reports enable a comparison to be drawn between continental European and Anglo-American SRA disclosures.

### Belgium

Theunesse (1979) described the legal obligations which apply to Belgian enterprises and reported upon an empirical examination of annual reports of Belgian companies for the year 1977. Thirty-four reports were examined (from the 50 largest limited companies) and the results are summarized in Table 5.12. Theunesse noted that the reports were designed to give a good image of the company and that no audit provision existed in respect of the information provided. The cost of strikes was given prominence in annual reports.

Delmot (1982) reported on social reporting in Belgian enterprises; in particular a sample of 58 companies in 1980. Of the 58 companies, 32 published social information within their annual reports (in addition to that which they are required by law to give to works councils). It was stated that 27 reports provided descriptive information, eight produced a value added statement, 15 used non-monetary social indicators, and 12 used ratios to impart the information. The contents of the social information section of the annual reports are given in Table 5.13. The most common size of report was between two and four pages, a position reported by 41% of the companies surveyed; 28% reported more than four pages and 19% between one and two pages. The motivation for reporting was stated by some companies to be the French Bilan Social.

### France

The Bilan Social requires details of numbers employed, wages and fringe benefits, health and safety conditions, other working conditions,
Table 5.11 Frequency of publication of CSR information

<table>
<thead>
<tr>
<th></th>
<th>UK 1982-3</th>
<th>USA 1978</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Environment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. pollution control</td>
<td>10</td>
<td>133</td>
</tr>
<tr>
<td>2. prevention or repair of environmental damage</td>
<td>7</td>
<td>15</td>
</tr>
<tr>
<td>3. conservation of natural resources</td>
<td>–</td>
<td>39</td>
</tr>
<tr>
<td>4. other environmental disclosures</td>
<td>–</td>
<td>46</td>
</tr>
<tr>
<td>B. Energy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. conservation</td>
<td>16</td>
<td>126</td>
</tr>
<tr>
<td>6. energy efficiency of products</td>
<td>10</td>
<td>45</td>
</tr>
<tr>
<td>7. other energy related disclosures</td>
<td>2</td>
<td>29</td>
</tr>
<tr>
<td>C. Firm business practices</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. employment of minorities</td>
<td>1</td>
<td>52</td>
</tr>
<tr>
<td>9. advancement of minorities</td>
<td>26</td>
<td>47</td>
</tr>
<tr>
<td>10. employment of women</td>
<td>6</td>
<td>49</td>
</tr>
<tr>
<td>11. advancement of women</td>
<td>–</td>
<td>142</td>
</tr>
<tr>
<td>12. employment of other special interest groups</td>
<td>11</td>
<td>18</td>
</tr>
<tr>
<td>13. support for minority businesses</td>
<td>–</td>
<td>18</td>
</tr>
<tr>
<td>14. socially responsible practices abroad</td>
<td>15</td>
<td>43</td>
</tr>
<tr>
<td>15. other statements on fair-business practices</td>
<td>1</td>
<td>104</td>
</tr>
<tr>
<td>D. Human resources</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. employee health and safety</td>
<td>46</td>
<td>69</td>
</tr>
<tr>
<td>17. employee training</td>
<td>53</td>
<td>80</td>
</tr>
<tr>
<td>18. other human resource disclosures</td>
<td>75</td>
<td>32</td>
</tr>
<tr>
<td>E. Community involvement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. community activities</td>
<td>13</td>
<td>56</td>
</tr>
<tr>
<td>20. health and related activities</td>
<td>5</td>
<td>35</td>
</tr>
<tr>
<td>21. education and the arts</td>
<td>11</td>
<td>70</td>
</tr>
<tr>
<td>22. other community activity disclosures</td>
<td>7</td>
<td>56</td>
</tr>
<tr>
<td>F. Products</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. safety</td>
<td>11</td>
<td>42</td>
</tr>
<tr>
<td>24. reducing pollution from product use</td>
<td>–</td>
<td>22</td>
</tr>
<tr>
<td>25. other product related disclosures</td>
<td>14</td>
<td>46</td>
</tr>
<tr>
<td>G. Other social responsibilities disclosed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26. other disclosures</td>
<td>11</td>
<td>56</td>
</tr>
<tr>
<td>27. additional information</td>
<td>49</td>
<td>16</td>
</tr>
</tbody>
</table>

Notes:
UK data: analysis of sample of 300 reports used for financial reporting, 1983-4.
USA data: Ernst and Ernst (1978) adjusted from sample size of 500 pro rata to 300 to provide comparison with UK.
Source: Gray, Owen and Maunders (1987, p. 60).

Table 5.12 Contents of annual reports of Belgian companies, 1977

<table>
<thead>
<tr>
<th>Contents</th>
<th>% of reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value added statement</td>
<td>3</td>
</tr>
<tr>
<td>Number of employees</td>
<td>74</td>
</tr>
<tr>
<td>Labour turnover</td>
<td>56</td>
</tr>
<tr>
<td>Remuneration</td>
<td>47</td>
</tr>
<tr>
<td>Training possibilities</td>
<td>47</td>
</tr>
<tr>
<td>Age structure of workforce</td>
<td>29</td>
</tr>
<tr>
<td>Working conditions</td>
<td>26</td>
</tr>
<tr>
<td>Composition of workforce</td>
<td>24</td>
</tr>
<tr>
<td>Accidents</td>
<td>21</td>
</tr>
<tr>
<td>Social conflicts</td>
<td>18</td>
</tr>
<tr>
<td>Relations with other groups</td>
<td>15</td>
</tr>
<tr>
<td>Future staffing policy</td>
<td>29</td>
</tr>
<tr>
<td>Contact procedure between staff and management</td>
<td>44</td>
</tr>
<tr>
<td>Consumer-related data</td>
<td>26</td>
</tr>
<tr>
<td>Data related to the environment</td>
<td>35</td>
</tr>
</tbody>
</table>


Table 5.13 Contents of social information in annual financial reports

<table>
<thead>
<tr>
<th>Item</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size and distribution of workforce</td>
<td>88</td>
</tr>
<tr>
<td>Labour turnover</td>
<td>78</td>
</tr>
<tr>
<td>Working hours</td>
<td>72</td>
</tr>
<tr>
<td>Remuneration and social charges</td>
<td>68</td>
</tr>
<tr>
<td>Training possibilities</td>
<td>63</td>
</tr>
<tr>
<td>Absenteeism</td>
<td>59</td>
</tr>
<tr>
<td>Hygiene and job security</td>
<td>59</td>
</tr>
<tr>
<td>Relations with social partners</td>
<td>59</td>
</tr>
<tr>
<td>Social works</td>
<td>44</td>
</tr>
</tbody>
</table>


Germany

Gray, Owen and Maunders (1987, pp. 29-30) reviewed the work on SRA disclosure in Germany and noted that three approaches towards the production of social reports may be distinguished. These were:

1. a broadly based and partially integrated social cost-benefit reporting system;
2. an extension of the traditional employee-orientated report;
3. corporate goal accounting and reporting in which quantitative indicators are used wherever possible to describe the attainments of corporate objectives in areas of social performance.
Brockhoff (1979) examined the reports of 300 German companies issued between 1 December 1973 and 30 November 1974; 205 published a social report during that period. A variety of information was disclosed:

1. Two companies explicitly stated that social activities had been made part of the objective function of the firm.
2. 256 reports published the total number of employees.
3. Reports contained information on a wide variety of social benefits provided to employees, including: sports and leisure activities; supplementary health insurance; company medical services; profit-sharing and capital formation; training (not including apprenticeship programmes); security of the workplace; employee housing; apprenticeship programmes; pensions and retirement benefits.
4. Reporting on research and development.
5. Reporting on environmental protection.

Brockhoff noted that there were very wide differences in reporting practices between industry segments.

Dierkes (1979, p. 97) reported the results of a detailed analysis of the social reports of 14 companies. The analysis addressed the following questions:

1. Which concept of reporting has been used, referring to the recommendation of the study group on practical aspects of social reporting?
2. To whom is the social report directed?
3. Which functional group in the company has the ultimate responsibility in combining the report?
4. Was the report certified by a certified public accountant?
5. Which are the important sections of such a report, and which areas are still neglected?
6. What indicators are used?
7. How intensive is the reporting with respect to giving specific data on expenditures or achievements?
8. Does it provide the reader with comparative information from previous performance periods or is it based on other companies’ activities?
9. Is the report just narrative or does it give detailed technical information?
10. Are goals, measures and plans mentioned in relatively specific terms or in very selective general statements?

Schreuder (1979) explained the complexities of social reporting in Germany where several conceptual frameworks are in use, leading to correspondingly different reporting practices. A number of examples are given in his article, including the reports of Steag AG and Deutsche Shell AG which have been widely quoted as examples of different forms of social report. Schreuder (1979, p. 121) concluded:

The overview presented in this paper suggests that the German developments in the field of corporate social reporting are noteworthy in at least the following respects: (1) the variety of conceptual models proposed in the literature; (2) the actual course of developments in practice; and (3) the evolving debate between the corporations and the trade unions. As such these developments would seem to be of interest to students of corporate social reporting in many other countries.

The Deutsche Shell report has been commented on by Van den Bergh (1976) and Most (1977). Van den Bergh comments that – 'employees are the most strongly emphasised group in all the [German] social reports'; whilst for Most, 'the 1975 annual report of Deutsche Shell A.G. is a portent of things to come'. The contents page of the Deutsche Shell AG report is shown in Figure 5.2.

Holland

Dekker and van Hoorn (1982) have commented on the scarcity of empirical research on social reporting in Holland. They cite four studies:

1. Van Ommeren (1974), who analysed 21 social or personnel annual reports for 1973 with regard to 29 elements related to the social policies of companies.
2. Feenstra and Bowma (1975) investigated the annual reports of 40 Dutch companies for the period 1970-3. They described aspects of the reports from which may be deduced the concern shown for company personnel and the environment. Many of the elements examined were common with those used by Van Ommeren.
4. De Gier (1976) studied seven 1975 social annual reports on 18 elements related to the social policy of companies.

Dekker and van Hoorn (1977) investigated 64 1975 social annual reports of Dutch companies to determine the contents. Table 5.14 shows the information provided which was not related to employees. It is clear that, like many of the continental European reports examined in this section, most of the information provided relates to employees and their interests.
Table of contents
1. Introduction
2. The framework of Shell's policy: general developments in the energy market
   2.1 The policy of the OPEC countries
   2.2 The impact of the German mineral oil market
   2.3 The Federal government's energy programme
   2.4 Obligation to maintain minimum stock levels
   2.5 Structural and business activity problems of the mineral oil industry
   2.6 Special levies on domestic oil and natural gas production
   2.7 Long-term aspects
3. The goals of Shell's corporate policy
4. The performance of Deutsche Shell AG
   4.1 Supplying the consumer on conditions determined by the market
   4.2 Development of new application techniques and products
   4.3 Achieving a reasonable return on investment
   4.4 Taking account of our employees' interests
   4.5 Paying regard to the general public welfare
5. Explanations pertaining to the German Shareholders' Act
   5.1 Explanations of the balance sheet
   5.2 Explanations of the profit and loss account
6. Tables
   6.1 Social accounts
   6.2 Relations with investors
   6.3 Account of performance
   6.4 Balance sheet
   6.5 Profit and loss statement

Figure 5.2 The concept of goal accounting - social reporting: the example of Deutsche Shell AG. Excerpt from Deutche Shell AG. Annual Report, p. 4. Unauthorized translation by Dierkes and Coppock (1977), cited in Schreuder (1979, p. 117).

Table 5.14 Non-employee-related data reported in Dutch social annual reports, 1975

<table>
<thead>
<tr>
<th>Type of data</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial/economic expectations as to the future</td>
<td>27</td>
</tr>
<tr>
<td>Its consequences for the (internal) social policy</td>
<td>18</td>
</tr>
<tr>
<td>Ergonomics</td>
<td>4</td>
</tr>
<tr>
<td>Employees' participation in decision-making</td>
<td>2</td>
</tr>
<tr>
<td>Suggestions box</td>
<td>22</td>
</tr>
<tr>
<td>Cost c.q. savings aspects of these suggestions</td>
<td>9</td>
</tr>
<tr>
<td>Impact on milieu of the environment</td>
<td>13</td>
</tr>
<tr>
<td>Costs of these measures</td>
<td>0</td>
</tr>
<tr>
<td>Benefits of these measures</td>
<td>0</td>
</tr>
<tr>
<td>Contacts with local government</td>
<td>8</td>
</tr>
<tr>
<td>Contacts with action groups</td>
<td>0</td>
</tr>
<tr>
<td>Actions of action groups</td>
<td>0</td>
</tr>
</tbody>
</table>

Sweden

Gray, Owen and Maunder (1987) suggest that Sweden provides examples of internal rather than external social reporting and cite a study by Jonson et al. (1978) which calculated the financial savings resulting from a reduction in absenteeism. In a different type of study, Gröjer and Stark (1977) developed a goal-orientated social accounting report, with the different constituencies receiving explicit consideration. Although employees featured prominently in the report, environmental factors were also included.

OTHER COUNTRIES

Research into SRA disclosures is being carried out in several other locations, in addition to those reviewed here. However, these appear to be isolated events and not part of any concentrated research effort.

Teoh and Thong (1984) have reported on SRA disclosures in Malaysia, and Low, Koh and Yeo (1985) on disclosures in Singapore. An Indian report is cited by Gray, Owen and Maunder (1987, p. 26) and, although described as an 'outlier', it is also thought to be important as a public-sector development which may set an example for the private sector in that country. Tokutani and Kawano (1978) have provided an extensive note on the Japanese social accounting literature, some of which corresponds to SRA disclosures.

LIMITATIONS OF THESE STUDIES

SUBJECTIVE ANALYSIS

It is evident from the comparative works of Davey (1985) and Ng (1985) and the concern with replication expressed by Guthrie (1982), Ernst and Ernst (1978) and Burke (1984), that some researchers are aware of the subjective nature of this type of investigation. There seems to be very little difference between qualitative data which is aimed at conveying information and statements which are designed for advertising purposes. Whether a self-congratulatory message imparts information depends upon the perceptions of the reader. Many studies do not report any methodological safeguards or even acknowledge that there might be a problem at all. This is not to argue against this type of research. However, researchers have to guard against the inherent subjectivity of the analysis through publication of the instruments used and
understatement in the final analysis. This is only a partial solution to the difficulties presented by subjectivity. The surveys reported here suggest that replication studies are urgently needed since, although Guthrie has found his own instrument to be reliable, other research has produced conflicting results when used on the same material by a second researcher. Other studies have been reported as single studies, often without all the details. The subjective nature of many of the qualitative SRA material makes analysis extremely problematic. Consequently, until studies are commonly replicated, all those interested in the area must be wary of disclosures can be compared between different accounting systems because of the different cultural values involved.

THE INTERRELATIONSHIP OF CULTURE AND ACCOUNTING

A further difficulty arises because of cultural and other influences at work in different accounting environments. This issue is considered in depth since it provides a possible explanation for many of the differences in reporting practices which were illustrated in the earlier part of the chapter. The discussion follows that of Perera and Mathews (1990) and Mathews and Perera (1991).

It has been demonstrated (Gray, 1985) that the effects of culture may be used to group countries together in order to study their accounting systems. Although a relatively recent area of study, the culture-accounting interrelationship has provided some interesting ideas. This section attempts to apply some of these ideas and developments to the social accounting field (Perera and Mathews, 1990).

Research on national systems of accounting has focused particularly on the Anglo-American countries (that is, USA, Canada, UK, Australia and New Zealand) and continental Europe (Lafferty, 1975; Benston, 1982a, 1982b; Oldham, 1981; Nobes and Parker, 1981; Holzer, 1984).

As national differences in accounting systems and practices become increasingly evident, attempts were made to identify international patterns and to classify countries on the basis of those patterns. Two alternative approaches have been taken; the first involves the identification of relevant environmental factors and links them to national accounting practices (Mueller, 1967, 1968; Zeff, 1973; Radebaugh, 1975; Nobes, 1983, 1984). The second involves the classification of accounting practices by using statistical analysis and then attempting to explain the patterns discovered by reference to environmental factors (Frank 1979; Nair and Frank, 1980; Da Costa et al., 1978; Goodrich, 1982; Belkaoui, 1983).

Accounting and culture

Recently there has been an increasing interest in applying behavioural ideas to accounting. This has, no doubt, enriched the field and contributed significantly to changing the status of accounting from being a purely technical discipline. Research in this area has ranged from a consideration of the psychological factors which influence the preparers of accounting statements, to a socio-political consideration of the role of accounting in organizations and societies.

The most recent set of ideas emanating from the established social science areas to be applied to accounting comes from cultural anthropology. Culture has featured prominently in more recent discussions of factors influencing the accounting development of a country (Nobes and Parker, 1981; Bromwich and Hopwood, 1983; Choi and Mueller, 1984; Arpan and Radebaugh, 1985; Perera, 1985; Riahi-Belkaoui et al., 1991). It has also been argued that the lack of consensus across different countries on what represents proper accounting methods is because their purpose is cultural, not technical. The content of reports depends on local history and convention (Hofstede, 1985). It is probably why the product of accounting, that is, financial statements and reports, sometimes has a shareholder orientation, at other times a creditor orientation, and occasionally it serves the interests of national planners or public administrators (Mueller, 1985). It is clear that cross-cultural behavioural research in accounting is likely to provide some explanation about why there are differences in accounting techniques and practices between countries, and to answer questions about whether the findings of researchers in one culture can be transformed without modification for effective use in another culture.

In the field of management, Hofstede (1983a) has sought to analyse differences in work-related values across cultures. His study was based upon data collected through an employee attitude survey in a multinational corporation. The survey took place twice between 1968 and 1973, and involved different subsidiaries in 64 countries and 116,000 questionnaires in 20 languages.

Culture-based societal value dimensions

In an attempt to develop a commonly acceptable, well-defined and empirically based terminology to describe cultures, Hofstede identified four distinct dimensions which he considered reflected the cultural orientation of a country. These were (a) individualism versus collectivism; (2) large versus small power distance; (3) strong versus weak uncertainty avoidance; and (4) masculinity versus femininity. The appli-
Different cultural environments: Anglo-American versus continental European

It may be reiterated here that the ideas developed in any society are a product of the socio-political-economic environment. Therefore, a proper understanding of that environment is a precondition for any considered explanation of why the participants behave in a particular way, because human behaviour is usually reflective of some pattern of thinking. This can be illustrated by a number of specific examples. The growth of economic activity in the UK took place in an atmosphere of classical liberalism with a broadly laissez-faire approach to government. This was also true of the economic growth that began to gain momentum in the US in the middle of the nineteenth century. In such a highly individualistic atmosphere, the promotion of investment by trying to interest people with uncommitted funds in various investment projects became an important activity. Once prospective investors began to assess investment opportunities on the basis of their expected earnings, financial statements that included some kind of earnings figure became a necessity for the functioning of the entire system (Abel, 1971). This was the background for the development of capital market activity which is the main source of funds for investment in both countries. The activities of these markets have resulted in continuous pressure being exerted for the provision of financial information for investors, making investors the most important recipients of accounting reports from companies. The pressure for disclosure had a significant effect on the development of accounting principles and practices in these countries, and the requirements of the capital markets became a major factor influencing their disclosure patterns. Furthermore, financial reporting and capital market activity were so closely related that they became interdependent (Barrett, 1977). Similar developments took place in other Anglo-American accounting countries, such as Australia, Canada and New Zealand. It was assumed that these developments should be implemented by accountants, independent of legal direction or government intervention.

The position in much of continental Europe is quite different. In both France and Germany there has been a tradition of state intervention in economic affairs. Unlike the position in the UK and USA, the influence of the classical economists was far more limited in continental Europe. Instead, there has been a succession of economic theories with a different approach to government.

Social reporting: international pressures for more disclosure and national disclosure patterns

There has been considerable pressure at an international level, particularly from the UN and the EC, for greater disclosure with special refer-
disclosures beyond purely financial reporting. These proposals, although not specifically recommended, favoured the production of separate social reports. Areas identified for disclosure were: labour and employment; production; investment programmes; organizational structure; and environmental measures.

The fifth EC directive on employee information and consultation, and the Vredeling proposals for giving information rights to employees of 'large' companies (issued in 1980 and revised in 1983) are even more extensive in scope. The directive requires the disclosure of information relating to corporate organizational structure, employment, the economic and financial situation, probable developments in production, sales and employment, production and investment programmes, rationalization plans, and plans for new working methods or other methods that could have 'a substantial effect' on employee interests. The OECD (1980) statement also required the disclosure of the average number of people employed, categorized by function, together with employment costs showing social security costs and pensions. However, despite these pressures at an international level for a well-chosen programme for promoting greater disclosure in social reporting, the extent of regulation at national level tends to be minimal (Gray et al., 1984), with the notable exception of France, where employee reports are required by law. In France, since 1977 large corporations have been required by law to publish a separate social report (Bilan Social). In that report detailed information must be disclosed about a wide range of matters including: employment; wages, salaries and social security payments; hygiene and safety; conditions of work; training; and trade union activities. The emphasis here is on the impact of the corporation on employees. The extent of voluntary disclosure is significant and growing in other European countries, such as Germany, The Netherlands and Sweden, where additional special employee reports are often provided (Schoenfeld, 1978; Schreuder, 1979). Disclosure of information relating to employees is also required from US and UK companies, but on a much smaller scale.

Some specific examples of differences in reporting practices

Employee reporting. The continental European countries seem to be much more advanced in regard to 'social' or 'employee' reporting, at both institutional and practical levels, than the Anglo-American countries. This can be explained to some extent in terms of their different cultural environments because systems usually develop unique characteristics as a result of both internal and external pressures. Pressure groups and institutional influences which are active in developing social disclosures in industrialized countries generally include employees and trade unions, shareholders, community leaders, environmentalists, consumerists, idealists and moralists, professional guidelines and pronouncements, and legislation and regulation. In a given country some of these groups will be more prominent than the others, and the emergence of such pressure groups is likely to be influenced by the cultural background. As clearly demonstrated elsewhere by historical development and also Hofstede's analysis of culture, the UK and US are both orientated towards individualism, whereas France and Germany are relatively less individualist- and more collectivist-orientated. It is interesting to see how the pressures for social disclosures have varied between these two groups of countries. Employees have been a powerful force in France and Germany, whereas consumerists and environmentalists have been more influential in the US and to a lesser extent the UK.

Industrial democracy. In the collectivist-orientated cultures of continental Europe, industrial democracy or worker representation has provided a co-determination framework for corporate performance and disclosures. As a result, employees have been a powerful force. By contrast, in more individualist cultures, the relationship between the employer and the employee is a business relationship based on the assumption of mutual advantage. Either party can terminate the relationship in favour of a better deal elsewhere. In classical economic theory, which was largely responsible for moulding the individualist cultural thinking, employees are 'labour', a 'factor of production' and 'part of a labour market'. They are not regarded as important contributors to decision-making by the management. This is why employee and union pressure in North America has been relatively insignificant. For example, when top-ranking officials of each of the 20 largest Canadian unions were surveyed in 1984 about industrial democracy, they did not agree that workers should be represented on boards of directors and doubted that this would become widespread by 1994 (Brooks, 1986). Therefore, contrary to the European experience, social disclosures in the US and Canada have developed from other forces, such as environmentalists, consumerists and idealists. Also, in the UK the issue of expanded social reporting has not met with rapid acceptance, partly due to the current value accounting debate which tended to retain the forefront of disclosure proposals for many years.

Environmental disclosures. In contrast to the position on employee reporting there is some evidence of a greater concern on environmental matters in North America. Tinker (1985) has referred to the Love Canal scandal; Wiseman (1982) and Rockness (1985) have examined the veracity of corporate disclosures on environmental matters; and the Ernst and Ernst studies (1972-8) of disclosures by Fortune 500 companies showed that considerable attention was given to environmental matters,
as was demonstrated in a summary of the 1978 survey earlier in the chapter (Table 5.8). The table also incorporates similar data from UK studies. The categories provided are in contrast with continental European reports which emphasize employee matters almost exclusively. Brooks (1986, p. 213) has provided a useful analysis of the issues addressed in corporate social reports. Table 5.15 shows the different emphases which have already been noted.

A number of attempts have been made to link the provision of environmental information, whether supplied by the reporting organizations or an outside body such as the Council for Economic Priorities (CEP), with changes in the market price of shares. This work, which has already been discussed in Chapter 2, follows the general trend of the individualist, market-related, cultural features already referred to.

Conversely, the discussion of the measurement and valuation of externalities has been contested by several academics on the grounds that shareholders would be forced to pay for additional information which they would not want. The same view would be put forward in relation to other social disclosures (Benston, 1982a, 1984).

Concluding comments

This section of the chapter has explored the implications that recent work on the effects of culture on accounting may have for social accounting, as a developing area within the accounting discipline. The study of the impact of culture on accounting has a relatively short history and has not yet been extended to the developing area of social accounting. No attempt has been made at this stage to consider differences within the major groups such as those between the US and Canada and the extent to which the UK approach is moving towards that of continental Europe as a result of that country's membership of the EC.

The application of the work of Hofstede and others to the field of international accounting differences is worthy of a further extension to the social accounting field and should not be ignored by social accountants working in both empirical and normative-deductive domains.

SUMMARY

This chapter has examined a number of studies which detail actual SRA disclosures in several countries. These disclosures vary in content, but most are of qualitative or non-financial quantitative information provided by private-sector organizations, except for financial data in value
accounting systems (US, Canada, UK, Australia, New Zealand) SRA disclosures are voluntary. In most of the continental European countries examined (France, Germany, Belgium, Holland, Sweden) there are systems of legislative and customary differences, mainly dealing with reporting to employees, which impact on the disclosures made by corporations. In addition to legislative and customary differences in the volume and type of disclosures, there appear to be differences in their nature, with North American and Australian disclosures comprehending a wider variety of information (environment, product, energy, as well as employment) and the continental European corporations concentrating on those matters which affect employees. UK disclosures appear to occupy a point between the other two groups.

The various aspects of SRA disclosures are brought together in Figure 5.3, which uses the four dimensions of social responsibility disclosures suggested by Jackman (1982), at different levels of measurement. The diagram illustrates the various links which may be made between the different dimensions. It also indicates where there may be links with other forms of social accounting measurement and reporting which have not yet been discussed in detail.

However, progress in the area of SRA disclosure is not uniform. Although some aspects, for example employee reports, have attained a measure of uniformity and acceptance of content and style, there are still considerable variations in other disclosures. This applies particularly to product- and environment-related disclosures, and those attempting to record community activity. The more esoteric areas of SRA such as human resource accounting and matters related to industrial democracy have not made much progress at all.

The chapter concluded with an examination of some of the difficulties involved in analysing SRA disclosures. The first main problem is one of subjectivity. The reports do not lend themselves to consistent analysis even where the same instrument is involved. Comparability of reports over time and between different countries of origin is obviously hindered by subjectivity and the lack of a standardised approach. However, an attempt to standardize approaches to SRA disclosures will encounter the second difficulty which is referred to in this chapter: the influence of culture upon accounting in general and forms of social accounting in particular. Recent research has indicated strong societal pressures towards particular forms of accounting and reporting which are likely to prevent widespread conformity or comparability between the products of differing cultural backgrounds.

It seems clear that SRA is an important growth area in accounting disclosure. However, it is likely that some aspects will show more growth than others, developing a stronger literature at the same time. A survey of the social accounting literature shows an overwhelming concern with SRA as the archetypal social accounting. The next chapter considers total impact accounting, which promises to take over SRA as the front-runner of social accounting development.
INTRODUCTION

The objective of this chapter is to introduce the second category of social accounting in the framework aimed towards a more socially responsible accounting. Total impact accounting is defined as follows:

The term total impact accounting (TIA) refers to attempts at measuring, in monetary terms, the total cost of running an organization in its existing form. The total cost of running an organization may be divided between private and public costs.

Unfortunately, confusion persists with the use of the term 'social accounting' because many writers refer to SRA material as 'social accounting' whilst economists use the term for macro-level national accounting. The distinction between the two areas is made clearer in this book by the descriptions given in Table 3.2.

This chapter consists of an introduction, a consideration of the philosophical issues which are generated by proposals to account for externalities, an examination of a number of the better-known models for achieving disclosure, reference to the concept of the social audit, and an account of the recent developments within environmental accounting.

The total cost of running an organization may be divided between private and public costs. Private costs, also called internal costs, are already recorded and measured by the accounting system, as the individual costs of material, labour and overheads. After accumulation, these costs are used in the preparation of intermediate and final accounts, many of which are published under statutory requirements and form the traditional disclosures to the shareholders. Internal costs are also used in the preparation of product costs and for the valuation examples of externalities leading to public costs are those of pollution by fumes, smell, noise and waste discharge. Others are plant-induced traffic congestion or excessive demands on medical and social services which result from the operation of a particular plant.

The difficulties faced by proponents of total impact accounting are related to the identification, measurement and valuation of externalities prior to their possible disclosure in accounting reports. Although the identification of many potential social costs is not difficult, measurement and valuation is not easy. It is possible to see smoke or dust pollution leaving factory premises and to smell gaseous contaminants polluting the atmosphere, but how can a value be attached to the effects of these phenomena? The process of valuation has the two aspects of occurrence and measurable effect, both of which are problematic.

The American Accounting Association Committee on Social Costs (1975) suggested that three levels of measurement could be involved in any case of social accounting. These levels were discussed in a previous chapter. Level III measurements require that non-financial quantification be converted to a financial estimate of costs and benefits. In the case of pollution, the cost of emissions above an acceptable limit may be internalized as a private cost, through fines or even closure, or through the award of damages to individuals. The cost to the community will possibly involve damage to buildings, increased maintenance costs and loss of amenities or poor community health. Estimates of the public cost may serve as the basis for fines or damage awards.

Two measurement difficulties which have not been addressed by the Levels I-III disclosure hierarchy are time and distance. How much time can be expected to elapse between the event (for example, the sulphur dioxide discharge) and the resulting effect (damage to something or someone)? Although a social cost undoubtedly exists, if discharges which were considered harmless are subsequently found to be cumulative and eventually harmful it is difficult to see how the organization can be made to bear the cost. However, once the knowledge is made public, a different set of rules may be applied. Examples which come to mind are expectant mothers and thalidomide, miners and pneumoconiosis, and the effects of asbestos. In the area of cumulative pollution, we can refer to the poisoning of soil around plants processing arsenic, cadmium and other heavy metals.

When considering the physical distances from effluent discharge and the resulting effects, what geographic limits should be placed on the measurement of social costs? It has been asserted that the improved local effects of passing sulphur dioxide into the atmosphere via tall chimneys in the UK has resulted in pollution being concentrated
example of the problems of time and distance which would remain even if there was any intention to compensate losing parties.

How does TIA deal with time and distance problems? One approach would be to look at the costs and benefits of organizations over their entire life and get away from conventional accounting periods and short-term matching principles. It is difficult to do this with changing knowledge and technology, and there may still be costs which could not equitably be charged to an organization, because of new developments and knowledge, although some form of insurance policy might be developed. In respect of distance, the matter is complicated by national boundaries. If an organization discharges material inside one country, it does not matter whether the effect is felt next door or at the other end of the land, since only one jurisdiction is involved. However, where international pollution is involved, the jurisdiction issue is likely to be more difficult to deal with.

The consideration of pollution, its measurement and valuation, is not new. Estes (1973) has cited one of the oldest and most famous calculations of social cost: that of the estimate of smoke damage in Pittsburgh. This 1993 study produced a cost which, in 1959 terms and if extended to the entire United States, would have been $11 billion annually. The 1993 cost could be much higher. Taylor (1975) has referred to the work of the Programme Analysis Unit in Britain and described some of the difficulties experienced in determining the social costs of pollution in that country; in particular, who is responsible for the costs. Beams and Fertig (1971) have indicated that accountants need to take action to convert social costs into private costs in order to protect the environment.

Once the identification of externalities and their effects has been achieved and the measurement systems developed and deployed, it will be possible to turn to evaluation. The evaluation stage requires conversion of the measured outcomes of externalities into a financial quantity for disclosure in either internal or external accounting reports. Because the effects of externalities may be spread over several time-periods, aggregation and discounting will be required and consequently a discount rate must be determined for use in this process. The varied nature of externalities will ensure that the procedures required for measurement and evaluation will also be varied. For example, the valuation of an externality such as a pollutant, which is of nuisance value, will differ from that accorded to one which is likely to damage property. Both will be different from that where a health hazard already exists. The discount rate could also vary from one class of externality to another.

Clearly, the field of disclosing externalities is technically complex. However, the decision to attempt the identification, measurement and valuation is the starting point.

THE PHILOSOPHICAL PROBLEM

For some accountants the major difficulty with the valuation of externalities is not in knowing that they exist, or even in their identification and measurement, but in recognizing that there is an accounting problem at all. The philosophical nature of the question of measuring and valuing externalities in accounting may be illustrated by reference to the work of Ramanathan and Schreuder and of Benston.

The conceptual framework for social accounting put forward in Ramanathan (1976) appears to have been designed for the private-enterprise organization. It was also noted in Chapter 4 that the framework is inclusive of both SRA and TIA. Indeed, the major impact may well be on the valuation of externalities rather than on general SRA disclosures. A later paper by Ramanathan and Schreuder (1982) developed the arguments in favour of the valuation of externalities, in the quest for a more realistic development of private sector costs. As they have commented (p. 15):

The ultimate aim of CSAR is not to weaken the corporate and/or market system, as many opponents of its development seem to think, but to strengthen these systems by making them more inclusive. They suggest that this would be achieved by using a macro approach. A large proportion of government expenditure, raised through general taxation, is devoted to neutralizing the externalities resulting from private-sector activities and, therefore, the private sector costs of the firms concerned are currently lower than they should be because of the public costs created through externalities. There is a large difference, in some cases, between enterprise costs and the total impact of the enterprise on society. The payment of corporation tax may offset some of the private costs which are put on to the public purse as externalities; however, any equality of tax payments and clean-up costs (or other public expenditures) would be coincidental.

Ramanathan and Schreuder argue that a system of linked macro and micro indicators could result in the total cost to society of neutralizing externalities (government costs) being allocated to the firms responsible for the externalities in the first place. This policy would have a number of effects. First, general taxation could be lowered as a result of specific recoveries, and the use of specific charges or taxes would force the organization to internalize costs through the regular accounting system. The cost structure would then be comparable to that of an organization...
that did not produce externalities. Second, in some industries there would be a general rise in the cost structure leading to higher prices and reduced demand. Third, the viability of some industries might be reduced and others increased. The weakness in this approach lies in the operational phase, that is, getting macro and micro indicators which may be linked together to provide a framework for specific charges or taxes. This is admitted by the authors:

Finally, we may point toward one area of agreement between proponents and opponents of CSAR, namely the finding that the current state-of-the-art has not yet moved sufficiently from the phase of initial individual experiments to the stage of operationalization and testing of more general frameworks. We feel the social indicators approach which integrates micro and macro perspectives is a promising avenue of research to pursue for this purpose, and we shall direct our future research efforts accordingly.

(Ramanathan and Schreuder, 1982, p. 29)

Underlying the work of Ramanathan and Schreuder is a philosophical position which was classified by Den Uyl (Chapter 2) as social permission theory, which takes into account a number of theories such as the social contract and, perhaps, organization legitimacy. This philosophical position leads to an acceptance of new types and forms of disclosure and, inevitably, to an evolutionary perspective on accounting as a discipline.

Benston (1982a) has taken a different philosophical position in respect of social accounting, social responsibility issues and the valuation of externalities. He introduces his argument on the issue of to whom is the corporation responsible? The options suggested are to shareholders, to stakeholders or to society in general. All three sectors are affected by the assumption (explicit or implicit) that corporation managers may misuse shareholders' resources. Benston attempts to undermine this assumption by considering four types of limitation: the market for goods and services; the market for finance and corporate control, which are believed to be efficient and to penalize inefficient management by charging higher rates of interest; the market for managerial services; and internal and external monitoring systems. This leads Benston to argue that, although some social responsibility disclosures may benefit shareholders, most would not do so:

The principal implication of the analysis for corporate social responsibility is that if concern for shareholders is the motivating factor behind this accounting, there is no reason to require its inclusion in public reports. To do so would impose costs on shareholders for the benefit of those who contract with it (e.g., employees) or would support the values of some group in society (e.g., advocates of programs that they say are socially responsible) over others (shareholders, customers and employees). (Ibid., p. 93)

Benston next considered (p. 94) externalities which are examined on a net basis (that is, positive externalities and negative externalities must be offset): the cost to society as a whole is the difference between these aggregate costs and benefits. This approach may lead to an apparently inflexible mechanistic and possibly immoral view of externalities as indicated in the following passage in relation to pollution costs:

Thus if all the area residents are associated with the factory (say as employees or suppliers), the disability from breathing polluted air is a cost of dealing with the factory and will be reflected in the wages or prices for goods paid by the factory owners. Therefore, there is no externality. (Ibid.)

Benston conceded that negative externalities such as pollution will not be self-controlled, and by implication social.
nation of these costs. He analysed the contributions of Abt (1977), Estes (1976) and others, before concluding that an ideal system can never be attained. Lesser systems based upon indicators and supplementary reports are then examined. They are found wanting because 'it benefits anyone, including the owners of corporations, to impose negative externalities on non-contracting parties and to report on social matters only when the result is likely to be beneficial to the owners' (ibid., p. 98).

Benston concluded that social responsibility accounting (by which he meant both the reporting of voluntary non-financial and financial data as well as attempts to value externalities) is not a viable proposition: the analysis presented above concludes that shareholders are likely to be well served in the accounting procedures voluntarily adopted by corporate managers and directors. Similarly, employees, customers, creditors and others who have contractual relationships with corporations are likely to be well served. The remaining area to which external reports of social responsibility might be directed, the imposition of negative externalities on the general public is not likely to be self-regulating. But the inherent problems of measuring externalities places resolution of the problem outside the scope of accounting. (Ibid., p. 102)

A similar, though shorter paper, presents the same analysis in respect of corporate governance and social responsibility (Benston, 1982b).

Benston has concluded that social responsibility accounting (by which he means both the voluntary reporting of non-financial data as well as attempts to value externalities) is not a viable proposition. In taking a classical free-market position Benston is ignoring trends towards a greater questioning of organizational legitimacy by the public. These issues were ignored completely by Benston. Furthermore, by rejecting organizational attempts at social responsibility, Benston may have encouraged the conditions under which legislation is eventually inevitable, to the ultimate disadvantage of the shareholders whose interests he seeks to protect. The philosophical position underlying this analysis may be identified as the individual agreement theory put forward by Den Uyl.

Schreuder and Ramanathan (1984, p. 411) have provided a critique of Benston which seeks to identify his position as normative, and not positive as he claimed:

our comments partly provide an internal critique of Benston's argument pointing towards logical inconsistencies, fallacious arguments and unwarranted conclusions. Other comments, however, challenge the very framework set up by Benston, questioning whether this is the only possible mode of analysis, revealing the normative foundations of this framework and suggesting that the value premises involved are not the only ones possible or acceptable.

The authors conclude that Benston's analysis is limited, and that is the position taken here. It is argued that it is limited because accounting is a discipline which evolves as society evolves, and the basic philosophy of large sections of the population is changing. To account only to shareholders is to ignore many other groups who, because of choice or lack of wealth endowments, are not shareholders but employees, customers, suppliers or members of government bodies.

The purpose of presenting the views of Schreuder and Ramanathan and Benston was to establish the contrast, which highlights the difficulties imposed by the philosophical underpinning of arguments about the measurement of externalities. The debate finally emerges as a conflict of value systems which are normative and untestable.

ISSUES IN THE EVALUATION OF EXTERNALITIES

This section serves to indicate a number of circumstances where the valuation of externalities might yield interesting results. Consequently, one would expect to encounter models dealing with these areas.

COSTS OF POLLUTION

Pollution is a negative externality which may affect the health and enjoyment of individuals as well as the value of private and public property. A secondary effect will be a reduction in the costs of production within the corporation, an improvement in competitive position, more successful marketing and greater sales, all of which will add to the potential for further pollution. The valuation of pollution is a major issue addressed by many TIA models.

VALUE OF PROPERTY

The value of real property, particularly that which is owned by individuals or corporations, may be increased or decreased by external factors. Pollution by noise and odour or an increase in heavy road traffic, or by some perceived disadvantages may result in a loss of property values. Similarly, an action taken by one party may enhance the value of the property of another party. Should some accounting be made for these particular externalities, and if so, how? This aspect of externalities does not appear explicitly in the accounting literature and is a suitable topic for further research.
COSTS OF CONGESTION

A negative externality which may be very difficult to deal with is the cost of congestion, particularly of transport channels. The location of commerce and industry may lead to choked roads and railways and, increasingly, the airways. This problem often requires capital expenditure by a government which may be paid for by the corporation through taxes, but may also be financed by other taxpayers. A similar problem exists with the provision of power to industry, where peak power needs may necessitate the provision of additional equipment which will be used only infrequently. The problem is ‘solved’ by the imposition of a fixed charge based on maximum demand at the peak time. However, the charge may not cover the provision of the additional capital equipment which is paid for in part by other users.

VALUE OF PUBLIC IMPROVEMENTS

In some cases corporations provide a positive externality by effecting additions to the stock of public goods in the form of roads, railways, harbour facilities and buildings. These are treated as donations or as part of the set-up costs for the enterprise.

These issues, and many others, have to be addressed if externalities are to be valued. Externalities must be included with private costs to determine total impact accounting measures. The position of net positive externalities is often not explored. An assumption is made that in most cases the outcome will be a net negative externality. Clearly, there is considerable work to be done in this area.

VALUATION AND DISCLOSURE MODELS

A number of models, designed to facilitate the identification, measurement and valuation of externalities, can be found within the social accounting literature. Several models are considered here, in order of their date of publication.

Linowes (1972)

One of the earliest attempts to design a model which would account for externalities, and consequently enable the total impact of the organization to be calculated, was provided by Linowes (1972). His socio-economic operating statement is produced in Table 6.1.

The operating statement divides the impact of the organization into

<table>
<thead>
<tr>
<th>Table 6.1 Socio-economic operating statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>X Corporation</td>
</tr>
<tr>
<td>Socio-economic operating statement for the year ending 31 December 1991</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>I. Relations with people</td>
</tr>
<tr>
<td>A. Improvements</td>
</tr>
<tr>
<td>1. Training programme for handicapped workers</td>
</tr>
<tr>
<td>2. Contribution to educational institution</td>
</tr>
<tr>
<td>3. Extra turnover costs because of minority hiring programme</td>
</tr>
<tr>
<td>4. Cost of nursery school for children of employees voluntarily set up</td>
</tr>
<tr>
<td>Total improvements</td>
</tr>
<tr>
<td>B. Less detriments</td>
</tr>
<tr>
<td>1. Postponed installing new safety devices on cutting machines (cost of the devices)</td>
</tr>
<tr>
<td>Total improvements</td>
</tr>
<tr>
<td>C. Net improvements in people actions for the year</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>II. Relations with environment</td>
</tr>
<tr>
<td>A. Improvements</td>
</tr>
<tr>
<td>1. Cost of reclaiming and landscaping old dump on company property</td>
</tr>
<tr>
<td>2. Cost of installing pollution control devices on Plant A smokestacks</td>
</tr>
<tr>
<td>3. Cost of detoxifying waste from finishing process this year</td>
</tr>
<tr>
<td>Total improvements</td>
</tr>
<tr>
<td>B. Less detriments</td>
</tr>
<tr>
<td>1. Cost that would have been incurred to re-landscape strip-mining site used this year</td>
</tr>
<tr>
<td>2. Estimated costs of installing purification process to neutralize poisonous liquid being dumped into stream</td>
</tr>
<tr>
<td>Total socio-economic deficit for the year</td>
</tr>
<tr>
<td>C. Net deficit in environment actions for the year</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>III. Relations with product</td>
</tr>
<tr>
<td>A. Improvements</td>
</tr>
<tr>
<td>1. Salary of vice-president while serving on government Product Safety Commission</td>
</tr>
<tr>
<td>2. Cost of substituting lead-free paint for previously used poisonous lead paint</td>
</tr>
<tr>
<td>Total improvements</td>
</tr>
<tr>
<td>B. Less detriments</td>
</tr>
<tr>
<td>1. Safety device recommended by Safety Council but not added to product</td>
</tr>
<tr>
<td>2. Safety device not added to product</td>
</tr>
<tr>
<td>Total socio-economic deficit for the year</td>
</tr>
<tr>
<td>Add: Net cumulative socio-economic improvements as of January 1</td>
</tr>
</tbody>
</table>
and net them off against what are termed detriments, to give a net figure.

Although the design of the statement appears logical, the content is not consistent with most of the literature dealing with externalities. There is no estimate of cost or benefit to the environment in the future and consequently no discounted future effect. The costs referred to are current actual or opportunity costs and do not relate to the cost of the activities of the enterprise in the public domain. For example, in the section on relations with the environment, the 'cost of detoxifying waste from finishing process' is shown as an improvement (this is a private and not a public cost), and one of the detriments is the 'estimated costs of installing purification process to neutralize poisonous liquid being dumped into stream'. The latter are not the costs of the externality (the cost to the public) which would be the costs which result from the continued dumping (dead fish, loss of fishing amenities, or reduced value of farm land). This approach does not provide a satisfactory means of valuing or disclosing externalities.

Dilley and Weygandt (1973)

In a frequently quoted study, Dilley and Weygandt presented a statement of funds flow for socially relevant activities in respect of a power utility company, which is reproduced in Table 6.2. The majority of the items listed have an actual or potential effect on the environment; however, in all cases costs are actual and current. Future costs to the public are not calculated and benefits are not evaluated except in terms of current costs. For example, the benefits of creating less-unsightly plant and equipment in a variety of ways is measured in terms of current costs, which does not measure the future benefit of the expenditure in reducing an externality (in this case unattractive places to work in or pass by). A more complex example is the increased cost of using low-sulphur coal as feedstock for the plants. This cost is correctly stated as incremental, and yet the incremental benefit, in terms of reduced damage, is not valued in the manner suggested in most of the literature on externalities.

The model put forward by Dilley and Weygandt is still deficient, although perhaps of greater utility as a means of disclosure than that used by Linowes.

Ullman (1976)

Ullman put forward a model for the disclosure of environmental impact called the corporate environmental accounting system (CEAS) which employed non-monetary measurement. It has been described as 'partial

<table>
<thead>
<tr>
<th>Table 6.2</th>
<th>Statement of funds flow for socially relevant activities 1971</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Environmental</strong></td>
<td>$</td>
</tr>
<tr>
<td>Installation of electrostatic precipitators (Note 1)</td>
<td>26,000</td>
</tr>
<tr>
<td>Construction of power plants (Note 2)</td>
<td>2,089,000</td>
</tr>
<tr>
<td>Construction of transmission lines (Note 3)</td>
<td>35,000</td>
</tr>
<tr>
<td>Electrical substation beautification (Note 4)</td>
<td>142,000</td>
</tr>
<tr>
<td>Incremental cost of low-sulphur coal (Note 5)</td>
<td>33,670</td>
</tr>
<tr>
<td>Conversion of service vehicle to use of propane gas (Note 6)</td>
<td>3,700</td>
</tr>
<tr>
<td>Incremental cost of underground electrical installations (Note 7)</td>
<td>737,000</td>
</tr>
<tr>
<td>Incremental cost of silent jackhammers (Note 8)</td>
<td>100</td>
</tr>
<tr>
<td><strong>Environmental research</strong></td>
<td>$</td>
</tr>
<tr>
<td>Thermal</td>
<td>17,000</td>
</tr>
<tr>
<td>Nuclear</td>
<td>1,955</td>
</tr>
<tr>
<td>Other</td>
<td>38,575</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>57,530</td>
</tr>
<tr>
<td><strong>Total environmental funds flow</strong></td>
<td>3,124,000</td>
</tr>
<tr>
<td><strong>Other benefits</strong></td>
<td>$</td>
</tr>
<tr>
<td>Charitable contributions</td>
<td>26,940</td>
</tr>
<tr>
<td>Employee educational and recreational expenditure (Note 9)</td>
<td>6,000</td>
</tr>
<tr>
<td><strong>Total other benefits</strong></td>
<td>32,940</td>
</tr>
<tr>
<td><strong>Total 1971 funds flow for socially relevant activities</strong></td>
<td>31,156,940</td>
</tr>
</tbody>
</table>

As a percentage of 1971 operating revenues: 7.9%

As a percentage of 1971 advertising expenses: 8.50%

Notes to funds statement

2. The company is building power plants which will begin operation in the middle to late 1970s. Incremental cash costs of environmental controls installed in these plants during 1971 totalled $2,089,000.
3. The company is constructing a high-voltage transmission line from another community to the company's service area. Environmental cash costs resulting from wider spacing in line towers totalled $35,000 in 1971.
4. The company constructed a new substation in 1971 with an enclosed structure rather than open exposure of the electric transformers. The cost of this enclosure along with landscaping of existing substations totalled $142,000 in 1971.
5. The company used approximately 150,000 tons of coal during 1971 for electric power generation. Low-sulphur-content coal comprised 8.6% of this coal consumption with the remaining 91.4% being coal of higher sulphur content. The low-sulphur coal cost approximately $2.61/ton more than the high-sulphur coal.
6. Motor vehicles fuelled with propane gas contribute substantially less air pollutants to the atmosphere than gasoline-fuelled vehicles. During 1971 the company converted nine of its fleet of 115 vehicles to use propane gas. The cost of this conversion was $3,700. Seventeen company vehicles are now operated on propane gas.
Table 6.2 Continued

7. Underground installation of electric transmission lines has increased since environmental attention has focused on the aesthetic pollution of poles and wires. During 1971 the company installed underground electric transmission lines, which cost $737,000 more than putting the same lines above ground.

8. Jackhammers used by the company are, with one exception, of the normal, noise-polluting type. One jackhammer purchased during 1971 with noise controls costs $100 more than the regular jackhammers.

9. The company reimburses employees for educational expenditures and provides recreational opportunities such as the annual company picnic. Such expenditure amounted to approximately $6000 in 1971.

Source: Dilley and Weygandt (1973).

non-monetary and output oriented. A complex calculation is required to develop the input-output relationship which is based on the equivalent factor or EF. This is then used in conjunction with physical measures of environmentally relevant inputs and outputs to arrive at CEAS units. The units are used to prepare a CEAS balance sheet consisting of three sections:

1. environmental effects produced by the production process: materials and energy used, pollution and waste generated and dissipated; plus:
2. impacts due to the use of products sold to customers not subject to CEAS; minus:
3. materials, respectively material content of products sold to customers subject to CEAS (Ullman, 1976, p. 76).

The CEAS model includes a wide range of impacts but does not necessarily measure, even indirectly, the cost to third parties of discharging gaseous matter (his example). Furthermore, the literature on externalities does not normally include the impact of products sold to customers as a cost of operation of the initial producer.

Estes (1976, 1977)

Estes (1976) attempted to model systematically the impact of the organization on the environment from the perspective of the environment. Table 6.3 presents a social impact statement prepared on this basis and divided between social benefits and social costs. The majority of entries are in present cash flows and set off the payments made to society against the payments received from society. However, Estes placed a

Table 6.3

<table>
<thead>
<tr>
<th>The Progressive Company</th>
<th>Social impact statement for the year ended 31 December 19X1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Social benefits</strong></td>
<td>$</td>
</tr>
<tr>
<td>Products and services provided</td>
<td>$xxx</td>
</tr>
<tr>
<td>Payments to other elements of society</td>
<td>$xxx</td>
</tr>
<tr>
<td>Employment provided (salaries and wages)</td>
<td>$xxx</td>
</tr>
<tr>
<td>Payments for goods and other services</td>
<td>$xxx</td>
</tr>
<tr>
<td>Taxes paid</td>
<td>$xxx</td>
</tr>
<tr>
<td>Contributions</td>
<td>$xxx</td>
</tr>
<tr>
<td>Dividends and interest paid</td>
<td>$xxx</td>
</tr>
<tr>
<td>Loans and other payments</td>
<td>$xxx</td>
</tr>
<tr>
<td>Additional direct employee benefits</td>
<td>$xxx</td>
</tr>
<tr>
<td>Staff, equipment, and facility services donated</td>
<td>$xxx</td>
</tr>
<tr>
<td>Environmental improvements</td>
<td>$xxx</td>
</tr>
<tr>
<td>Other benefits</td>
<td>$xxx</td>
</tr>
<tr>
<td>Total social benefits</td>
<td>$xxx</td>
</tr>
</tbody>
</table>

| **Social costs**       | $   | $   |
| Goods and materials acquired | $xxx |
| Buildings and equipment purchased | $xxx |
| Labour and services used | $xxx |
| Discrimination | $xxx |
| In hiring (external) | $xxx |
| In placement and promotion (internal) | $xxx |
| Work-related injuries and illness | $xxx |
| Public services and facilities used | $xxx |
| Other resources used | $xxx |
| Environmental damage | $xxx |
| Terrain damage | $xxx |
| Air pollution | $xxx |
| Water pollution | $xxx |
| Noise pollution | $xxx |
| Solid waste | $xxx |
| Visual and aesthetic pollution | $xxx |
| Other environmental damage | $xxx |

| Payments from other elements of society | $xxx |
| Payments for goods and services provided | $xxx |
| Additional capital investment | $xxx |
| Loans | $xxx |
| Other payments received | $xxx |

| **Other costs** | $xxx |
| **Total social costs** | $xxx |
| **Social surplus (deficit) for the year** | $xxx |
| Accumulated surplus (deficit) 31 December 19X0 | $xxx |
| Accumulated surplus (deficit) 31 December 19X1 | $xxx |
Table 6.4

XYZ Corporation

Social impact statement for the year ended 31 December 1980 (in $ millions)

<table>
<thead>
<tr>
<th>Social benefits</th>
<th>Customers</th>
<th>Employees</th>
<th>Shareholders</th>
<th>Suppliers</th>
<th>Government</th>
<th>Contiguous community</th>
<th>Society at large</th>
<th>Total social cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Products and services provided</td>
<td>1.80</td>
<td>0.10</td>
<td>0.10</td>
<td>0.02</td>
<td>0.01</td>
<td>0.06</td>
<td>0.05</td>
<td>2.00</td>
</tr>
<tr>
<td>Cash payments made</td>
<td>-</td>
<td>0.60</td>
<td>0.15</td>
<td>0.05</td>
<td>0.10</td>
<td>0.15</td>
<td>0.10</td>
<td>1.40</td>
</tr>
<tr>
<td>Additional employee benefits</td>
<td>-</td>
<td>0.10</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-0.10</td>
</tr>
<tr>
<td>Environmental improvements</td>
<td>-</td>
<td>-</td>
<td>0.03</td>
<td>0.10</td>
<td>0.15</td>
<td></td>
<td></td>
<td>-0.30</td>
</tr>
<tr>
<td>Staff services, facilities, and equipment services donated</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.02</td>
<td>0.05</td>
<td></td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td>Other social benefits</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total benefits</td>
<td>1.81</td>
<td>0.63</td>
<td>0.20</td>
<td>0.60</td>
<td>0.60</td>
<td>0.40</td>
<td>3.90</td>
<td>2.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Social costs</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Human services used</td>
<td>-0.30</td>
<td>-0.04</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-0.34</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Materials acquired</td>
<td>-</td>
<td>-0.30</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-0.30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structures and machinery acquired</td>
<td>-</td>
<td>-0.20</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-0.20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discrimination in hiring</td>
<td>-0.02</td>
<td>-0.01</td>
<td>-0.03</td>
<td>-0.06</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash payments, received</td>
<td>1.60</td>
<td>0.09</td>
<td>0.14</td>
<td>-0.01</td>
<td>-</td>
<td>-1.84</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental damage</td>
<td>-0.10</td>
<td>-</td>
<td>-0.15</td>
<td>0.05</td>
<td>0.30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>air, water, noise, aesthetic pollution; solid waste; terrain damage)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public services and facilities used</td>
<td>-</td>
<td>-</td>
<td>-0.25</td>
<td>-</td>
<td>-</td>
<td>-0.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industrial injuries and illness</td>
<td>-0.10</td>
<td>-</td>
<td>-0.02</td>
<td>-0.10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporate crime (price-fixing, tax fraud, bribery, etc.)</td>
<td>0.05</td>
<td>-</td>
<td>0.01</td>
<td>0.02</td>
<td>0.02</td>
<td>0.20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other social costs</td>
<td>-</td>
<td>-</td>
<td>-0.20</td>
<td>-</td>
<td></td>
<td>0.20</td>
<td>0.00</td>
<td>0.20</td>
</tr>
<tr>
<td>Total costs</td>
<td>1.65</td>
<td>0.61</td>
<td>0.14</td>
<td>0.56</td>
<td>0.28</td>
<td>0.20</td>
<td>0.27</td>
<td>3.71</td>
</tr>
<tr>
<td>Social surplus (deficit)</td>
<td>0.16</td>
<td>0.02</td>
<td>0.06</td>
<td>0.04</td>
<td>(0.12)</td>
<td>0.10</td>
<td>0.13</td>
<td>0.19</td>
</tr>
</tbody>
</table>

Note: Separate columns could be provided for different levels of government - federal, state, and municipal. Source: Estes (1977).

Valuation and disclosure models

Incorporated the cost of environmental damage as determined by surveys, analysis, avoidance costs, restoration costs and surrogate valuation and shadow pricing, all of which may present measurement problems. The valuation (conversion of physical measurements to financial entries) will necessitate an examination of discount rates, with the two main alternatives being a social time preference rate or the use of a social opportunity cost rate.

In a later paper Estes (1977) subdivided the social impact statement between a number of constituencies, expressing social costs and benefits for each constituency. This development is presented in Table 6.4. Although intended as a refinement, the resulting statement is rather complicated.

The overall approach taken by Estes is similar to the concept of TIA developed by the author; however, TIA is intended to be taken from the organizational perspective in the conventional manner and not from that of the environment.

Dierkes and Preston (1977)

Dierkes and Preston reviewed a number of attempts to deal with the problems of accounting for the physical environment. A number of specific proposals were included, for example that of the Council on Economic Priorities issued in 1975, and the American Accounting Association proposal that social costs be accounted for in terms of the Levels I, II and III hierarchy, both of which are cited with approval. The authors noted that any proposal for an accounting for environmental impacts needs to have a systematic framework but not one which aims at bringing all events to a common valuation:

The framework outlined here does not suggest the use of a unique performance measurement unit and certainty not a monetary measurement unit for all areas of environmental impact. On the contrary, it uses a wide variety of measures appropriately developed for the various specific impact areas. (Dierkes and Preston, 1977, p. 14)

They put forward a model based on inputs and outputs, which assumed that the company has a formal policy statement requiring information about the environmental impact of decision making. The model is illustrated in Table 6.5. Extensive use is made of Levels I and II in the AAA hierarchy, with less reliance upon Level III. To this extent the model avoids the issues which Estes was prepared to address.

The social cost figures obtained may be used for three purposes:

1. for government use - is the community willing to tax itself sufficiently to correct the problem?
2. as a basis for negotiation between the parties; and:
3. the 'social costs' may be expressed as 'effluent charges' levied
<table>
<thead>
<tr>
<th>Factor</th>
<th>Description</th>
<th>Input (Commitment) Measure</th>
<th>Further information</th>
<th>Output (Performance) Measure</th>
<th>Further information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy</td>
<td>Research and development</td>
<td>D,No. $.</td>
<td></td>
<td>Consumption - total</td>
<td>$. per sales</td>
</tr>
<tr>
<td></td>
<td>Savings measures</td>
<td>D,$</td>
<td></td>
<td>oil gas</td>
<td>$. per unit output</td>
</tr>
<tr>
<td></td>
<td>Policy and goals</td>
<td>D,No. ($ or %)</td>
<td></td>
<td>other</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Re-use waste heat</td>
<td>$. % of total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Air pollution</td>
<td>Policy and goals</td>
<td>D,No.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water pollution</td>
<td>Research and development</td>
<td>D,No.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solid waste</td>
<td>(by pollutant or waste)</td>
<td>$</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Noise</td>
<td>Control equipment</td>
<td>$. D.</td>
<td>% of total</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Recycling equipment</td>
<td>$ D.</td>
<td>investment</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>$ D.</td>
<td>% increase</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>$ D.</td>
<td>in production</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>$ D.</td>
<td>cost</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Despoliation of landscape</td>
<td>Policy and goals</td>
<td>D,No.</td>
<td></td>
<td>Complaints</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Rehabilitation</td>
<td>D,$</td>
<td>% production</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(landscaping)</td>
<td>D,$</td>
<td>costs</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Beautification</td>
<td>$ D.</td>
<td>size area disaploiled</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>$ D.</td>
<td>size area reclaimed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Raw materials*</td>
<td>Policy and goals</td>
<td>D,No.</td>
<td></td>
<td>Type</td>
<td>W, %, $.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Waste</td>
<td></td>
<td></td>
<td>W, %, $.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Use of recycled material</td>
<td></td>
<td></td>
<td>W, %, $.</td>
</tr>
<tr>
<td>Packaging</td>
<td>Research and development</td>
<td>D,No.$</td>
<td></td>
<td>Returnable</td>
<td>W, %</td>
</tr>
<tr>
<td></td>
<td>substitution recycling</td>
<td>$</td>
<td></td>
<td></td>
<td>W, %</td>
</tr>
<tr>
<td>Transport</td>
<td>Modal policy</td>
<td>D</td>
<td></td>
<td>Energy use</td>
<td>$. W</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pollution</td>
<td></td>
<td></td>
<td>(as above)</td>
</tr>
</tbody>
</table>

Notes

* Consideration may also be given to the use of scarce non-renewable resources, and the use of renewable but long-term resources, e.g., trees.
No. = Absolute quality. Could mean both staff and beneficiaries.
$ = Cost in applicable currency.
% = Proportion or percentage in terms of applicable denominator.
D = Description of policy, measure, goal, activity.
Fr = Frequency of activity.
T = Length of time applicable to activity.
W = Weight.
S = Sales.
P = Product.
A = Assessment.

Source: Dierkes and Preston (1977, p. 15).
This is the approach taken by the author in the concept of TIA.

**Eichhorn (1979)**

In contrast to the detailed models put forward by Estes and Dierkes and Preston, Eichhorn has offered a societal profit and loss account which is theoretical and conceptual and apparently incapable of implementation. The outline is reproduced Table 6.6. Schreuder has noted that models of this type are useful as a frame of reference against which less-ambitious models may be evaluated.

**Gray, Owen and Maunders (1987)**

Gray, Owen and Maunders (1987) illustrated the involvement of the organization with its environment at three levels. The first, corresponding to conventional accounting, or possibly conventional accounting and SRA, was used in Chapter 4. The second illustration is shown as Figure 6.1 and includes a range of environmental interactions, some of which are similar to, or actually are, externalities. It should be noted that this model is conceptual and does not provide any details of the mechanism which would provide for the measurement and valuation of identifiable events.

**MODELS OF EXTERNALITIES: A SUMMARY**

The seven models reviewed in this section cover the main types available for consideration until the developments which are discussed in the section on the emergence of environmental economics and accounting. Linowes and Dilley and Weygandt use the historical cost structure to indicate the costs and benefits of preventing externalities and the costs against the course of the pollution. These latter — which, in effect, result in the ‘internalization’ of previously ‘external’ cost impacts — then enter the managerial calculations of an individual firm just like any other costs of doing business. (Ibid., p. 2)
associated with non-prevention. Ullman deals exclusively with nonfinancial measurement on a macro scale. Estes and Dierkes and Preston offer models which not only use financial measurement for current items but impute the costs of unprevented externalities. However, the approach taken by Estes has been criticized as providing an ideal position which cannot be realized where market-based valuations do not exist. The Dierkes and Preston model is designed to accept both financial and non-financial data. The last two approaches by Eichorn and Gray, Owen and Maunders revert to conceptual models, leaving out any procedures by which the measurement and valuation may be accomplished.

The TIA disclosures envisaged in this book involve the calculation of externalities and then their internalization into the cost structure of the enterprise. In terms of the approaches discussed above, a combination of Estes and Dierkes and Preston would be the closest. It is clear that additional research is required in this area to fulfill the potential which TIA holds for those with a concern for environmental matters.

SOCIAL AUDIT

INTRODUCTION

Modern financial accounting practice associates the preparation and disclosure activities with the checking and attesting function known as auditing. Financial or external auditing has been an important part of accounting for several hundred years, and later variants include internal and operational auditing in the private sector, and value-for-money auditing in the public sector.

Social accounting activities have induced a demand in the literature for social audits, although the term is often used to describe different activities. This section considers the social audit in the context of SRA and TIA; value-for-money audits are dealt with in Chapter 7. The discussion of social audits can be divided between an internal monitoring of social responsibility accounting disclosures, an external audit of SRA and TIA disclosures on behalf of the producers, and an external audit of the performance of the corporation from the perspective of society as a whole.

INTERNAL MONITORING OF SRA DISCLOSURES

Two examples of conceptual SRA models discussed in Chapter 4 (Brooks, 1986; Burke, 1984) were concerned with providing social infor-

ment was monitored and fed back to aid further decision-making. This activity is a form of social audit, although admittedly outside of the normal usage of that term.

EXTERNAL AUDIT OF SRA AND TIA FOR PRODUCERS

The idea being explored here is an audit of SRA and TIA disclosures by appropriately qualified personnel, with an audit report being passed to the management or the shareholders of the organization. There are relatively few examples of this procedure being undertaken, perhaps because SRA disclosures are not produced in sufficient quantity to make an independent audit worthwhile, and TIA has an underdeveloped methodology about which there might be insufficient agreement to permit attestation.

Brooks (1980) documented the use of a particular technique (an attitude survey approach) for use with a social audit. Although described as a survey of internal personnel, the subject was the external relations of the company and, consequently, the contribution fits into this section. Sellers (1981) provided a conceptual model for developing a social audit. The model consisted of four distinct interest groups: the entity, the auditors, the standard-setting bodies, and the constituent (or user) groups. One interesting point was that despite the stage of development of SRA, Sellers referred to the standard-setting bodies in a manner that indicated his belief that newer forms of disclosures will follow the same development pattern as has occurred previously.

Filios (1985) used the term 'social process auditing' in referring to the audit of corporate activities in the social area. The relationship between the organization and the government is not to be neglected since:

The aims of an accounting system for social goals are:
- Determination of the specific goals and objectives to be sought through government intervention and the specific actions to be taken in specific programmes and activities.
- Evaluation of social alternatives and determination of the effectiveness and efficiency of efforts expended to maintain or improve social conditions. (Filios, 1985, p. 482).

Gray, Owen and Maunders (1987) have given an example of a corporation-inspired audit of SRA disclosure by Atlantic Richfield, which they described as a rare event.

EXTERNAL AUDIT OF CORPORATIONS - A SOCIETAL PERSPECTIVE
an external audit of their SRA or TIA disclosures and that most social audits are undertaken by organizations with consumer or labour groups as their main constituencies. As examples they refer to the work in the UK of Social Audit Limited, Counter Information Services, the work of local authorities, and finally, the work of the government in monitoring social performance.

Social Audit Limited provided educational material on social audits and has in the past provided detailed reports. The general view appears to be that the reports are searching but not deliberately anti-business. Counter Information Services provides anti-reports which are labour-orientated and ideologically informed by Marxism and critical theory. In the UK a number of local authorities have been concerned by the closure of factories in their administrative areas, and have attempted to delay or avoid these changes. Social audits, in this context, are concerned with the costs of shutting down plants, leading to a loss of rating income, unemployment and social problems and the cost to employees compared to the savings and benefits to the organization (Owen and Harte, 1984; Harte and Owen, 1986).

Government monitoring of social performance is carried out in many fields, including race relations, sexual discrimination, air pollution, water pollution, health and safety at work, protection of consumers, rights of employees, the implementation of mental health legislation, and public protection (police). However, government departments frequently attempt to mediate between different groups and do not want to provide wide-ranging information about their own activities. It is clear, however, that one method of enforcing widespread social audits is through legislation in a similar manner to the current statutory audit.

SOCIAL AUDIT - A CONCLUSION

It may be concluded that very little audit of SRA and TIA disclosures takes place at the behest of the corporation, on behalf of management or shareholders. However, management may be provided with internal reports to monitor socially sensitive activities, such as effluent discharge.

The social audits which are normally encountered are those produced by outside parties of consumerists or those looking to criticize the organization from a radical position. There is little momentum to develop social audits at present although some writers imply that the government needs to be involved. The audit issue is re-examined as part of the environmental accounting development.

THE EMERGENCE OF ENVIRONMENT ECONOMICS AND ACCOUNTING

This chapter has outlined the philosophical issues involved in accounting for the total amount of the entity, including private costs and externalities which are translated into public costs. Furthermore, a number of models for total impact accounting and social audit have been presented for consideration. It is not difficult to see that further development is needed before environmental accounting can be applied to the problems of modern Western-style economies.

Recent developments have taken two new approaches. The first is the work of environmental economists such as Siebert and Antal (1979) and Pearce et al. (1989), whose work has been important in encouraging others to look at the issues of intergenerational effects and sustainable development. Second, and more important for our purposes, has been the work of Gray (1990, 1991) in developing further measures of environmental accounting and disclosure which, if implemented, would assist in controlling the entities which are endangering the environment. The discussion will be developed by examining the literature in terms of these two approaches, and is based upon Mathews (1991).

ENVIRONMENTAL ECONOMICS

Two publications provide a very good flavour for the environmental economics literature of the past decade, which has in turn provided an opening for the proposals of environmental accountants.

Siebert and Antal (1979) provided a good introduction to some of the problems facing the industrialized world in the closing years of the twentieth century; problems which originated with the economics of the nineteenth and have been exacerbated by many factors, including the way in which accounting concentrates on monetary values, private ownership and the determination of value through the marketplace.

Mathews (1991, p. 111) noted that this book provided 'an excellent introduction to economic/environmentalist thought, which provided good background information, and a solid basis from which to proceed to more advanced material'. Documented environmental problems are placed clearly before the reader:

Not only is the air we breathe saturated with pollutants from our economic development; our water is also contaminated. Germany's celebrated Rhine transports 24 million tons of poisons and pollutants to the Dutch frontier yearly. Daily, this represents about 3 tons of arsenic, 450 kg. of mercury, 30,000 tons of sodium chloride...
ions, 16,000 tons of sulfates, 2,200 tons of nitrates, and over 100 tons of phosphates. (Siebert and Antal, 1979, p. 11)

and:

We are now threatening the earth's store of oxygen. The demand for oxygen is constantly rising. Every combustion process requires oxygen. A VW uses as much oxygen in 900 km. as does a person in a year; a jet at takeoff consumes as much as a 17,000-hectare forest produces in a night. (Ibid., p. 37)

Conventional economics are blamed for many problems because the environment has been regarded as a free good, externalities have been ignored, and social problems have often been addressed via economic growth which frequently leads to further problems. The goals of economic growth and environmental quality are conflicting and distorted if one measure, such as GDP, is used as the sole measure of social well-being. The position with regard to the dysfunctional effects of industrialization is well stated:

Social groups must be prepared to calculate into their real income the value of an improved environment, and must be willing to sacrifice income increases in the traditional sense of the term in favor of improvements in environmental quality. (Ibid., p. 134)

The suggested way forward towards an improved quality of environment does not include regulation or tighter emission standards, as might have been expected, but instead relies upon an emission tax:

The authors believe that only taxes, emission standards, and pollution permits should be considered to be key measures. Subsidies, public investments, the concept of a 'basic right' to the environment, and moral suasion are simply insufficient as primary answers to the allocative problem. (Ibid., p. 164)

The rejection of a regulatory approach is characteristic of the environmental economists but not the environmental accountants.

Pearce et al. (1969) authored a report for the UK Department of the Environment, which was well received by the minister and has had some influence with academicians in both economics and accounting. Their treatment begins with the concept of sustainable development, a topic which has a number of interpretations. Pearce et al. (1989, pp. 1-2) adopted the position that:

Sustainable development involves devising a social and economic system which ensures that these goals are sustained, i.e., that real

The concept of intergenerational equity was outlined: future generations should not be left worse off by the actions of the present generation:

What is the justification for ensuring that the next generation has at least as much wealth – man-made and natural – as this one? The intuitive idea underlying this approach to sustainable development is that of intergenerational equity. What is being said is that we can meet our obligations to be fair to the next generation by leaving them an inheritance of wealth no less than we inherited.

(Ibid., pp. 34-5)

The environment should be protected by valuing it, in order to demonstrate that environmental services are not free:

The fact that we find positive values for so many environmental functions means that an economic system which allocates resources according to economic values (i.e., consumer preferences) must take account of the economic values for environmental quality.

(Ibid., p. 81)

It is at this point that Pearce et al. demonstrate their adherence to the economics approach to the environmental problem. Their chapter on 'Accounting for the Environment' presents information on a macro (economics-orientated) scale, as for the national accounts, and not in an accounting manner (as for the enterprise). Later chapters compound the problem by arguing in favour of cost-benefit analysis (albeit with allowances for environmental damage) and having concern for sustainable development and aggregate environmental capital. As Mathews (1991, pp. 114-15) notes, the authors have provided a thorough critique of discounting from an environmental perspective, which looks at pure time preference, risk and uncertainty, diminishing marginal utility of consumption, and opportunity cost of capital. Despite the strength of these arguments, the authors do not favour adjusted rates (that is, the use of social rates) but market rates in conjunction with better information. This would include the use of improved valuation techniques, the integration of environmental considerations into all economic decisions, and the incorporation of a sustainability constraint into the appraisal of environmental programmes.

The final chapter explains the role that prices and incentives may play in improving the environment. As might be expected, as economists the authors favour price mechanisms based on markets. However, it is well known that there are market inefficiencies which have led to our present environmental crisis. Pearce et al. propose to use the market to remove market-based problems, by ensuring that the value of environmental
A market-based system of regulation is more efficient than one based on command and control.

The most powerful tool by which to achieve the proper pricing of products and services is the ‘polluter pays’ principle. The polluter is made to pay:

1. by setting standards, the cost of achieving which is initially borne by the producer;
2. by setting charges or taxes on the polluting product or input;
3. by setting a standard, issuing pollution permits in amounts consistent with the standard, and allowing those permits to be traded (ibid., p. 158).

Market-based incentives include pollution charges and taxes, such as a carbon tax, and creating markets for pollution permits.

The Pearce report was an extremely important addition to the study of environmental economics and should be consulted by accountants who are interested in the area. The most important features include: the concept of sustainable development; the separation of capital into natural and man-made assets, together with a commitment to intergenerational equity; the description of macro accounts based on both physical and monetary measurements, the arguments over discount rates; and finally, the use of market-based incentives to ensure that the environment is properly valued.

The authors adopted a number of positions with which accountants might disagree, including the emphasis on markets and against regulation, together with the use of only macro accounts. However, these are interdisciplinary differences and should be recognized as such. Accountants are challenged by this book to define a position which will take those parts which are acceptable and produce alternatives to those which are not.

ENVIRONMENTAL ACCOUNTING

Recent work in this area is exemplified by that of Gray (1990, 1991) whose prolific output has provided many new ideas for the study and implementation of environmental disclosures in annual reports. The following material provides only a brief review of these works.

Gray (1990) built on the work of environmental economists, including Pearce et al. (1989). Gray does not regard the solutions put forward by the economists as satisfactory because they are still preoccupied with continued economic growth, choose to rely upon market-determined values, ignore ethical perspectives when discussing environmental matters, and do not favour regulation and the enforcement of standards of conduct. Gray favours a systems approach by which he seeks to demonstrate the interrelationship of society and the environment.

Gray (1990) reviewed the current (inadequate) role of accounting in terms of the environment, due in large measure to a view of social reality which is based upon the economist’s view of the world. A new approach is needed from accounting if firms are to consider non-traditional users: consumers and employees, resources, products and the ecosphere, and the financial sector. The first is important, because these groups may not wish to be associated with an insensitive organization; the second, because continued environmental pollution will result in heightened levels of both requirements and penalties. Finally, ethical investment funds are beginning to appear and these have an effect in the capital markets. In addition to the above, governments will eventually have to take action.

In two crucial chapters Gray presents his recommendations dealing with internal accounting and information systems and the external reporting of green accounting. In Chapter 5, internal accounting and information systems are considered. Most organizations have undisclosed means of collecting information to assist with decision-making. Gray suggests an enhancement of these systems to include data more directly concerned with avoiding environmental damage. The impetus for change must come from the top of the organization in order to be fully successful. Once an organization has decided to implement change, it is suggested that an environmental department be set up. This would be an independent, identifiable part of the organization, with senior management and board representation. Its role would include: monitoring issues and priorities; engaging in strategic questions; and the integration of environmental awareness and sensitivity into organizational life.

Gray (1990) argues that the organization needs to have an environmental policy which is not of the PR variety. This might include: the particular orientation of the organization; the provision of information for employees, customers and suppliers; as well as the statement of parameters of acceptable activities. Setting up an environmental department and developing an environmental policy must be backed up with an information system:

The selection and design of the information system will therefore be a complex and crucial element in the organisation’s environmental response — systems must be selected that can deliver believable information; of an understandable nature; relevant to the actors receiving or reporting the information; they must identify what is happening and what is not happening – selected from the universe...
of all possible activities – and action/non-action identified against yardsticks of acceptable action. (Gray, 1990, p. 79)

The reports suggested include: a compliance report or audit; an ethical audit; a waste audit; an energy audit; an emerging issues audit; environmental impact assessment/appraisal/analysis; a general environmental audit; and a financial environmental audit. The purposes of each are evident from the titles. The compliance report or audit would make sure that the organization complies with legal requirements in relation to the environment. The ethical audit refers to above-the-law requirements which management may require. Setting such requirements would necessitate an open discussion about a large range of issues within the organization. The waste audit should identify waste, the costs associated with the treatment and disposal of waste, and that which may be recycled. A similar modification to the accounting and management information system would allow energy flows to be audited. The emerging issues audit would act as a reminder that the problems of the environment are ongoing, and that initiatives must be maintained.

The environmental impact assessment/appraisal/analysis will have serious effects on organizations, as governments regulate the planning and location of industry more thoroughly. There are costs associated with environmental protection which will have to be included in project costs. The reference to a general environmental audit is an alternative to the structured approach detailed above, which might be carried out by an outside consultant as a starting point. The financial environmental audit is included as a warning against short-term evaluation to deter-
Gray (1991) develops the ideas suggested in Gray (1990) in an examination of current accounting orthodoxy:

(a) the current conventional orthodoxy of accounting – or rather more specifically of financial accounting and reporting – is indefensible – in its own terms, in its failure to acknowledge its widespread social, economic, political and environmental implications as well as in its failure to encompass social and environmental accountings; and

(b) a different approach in accounting thought is required that will both overcome the lacunae in current approaches and naturally embrace social and environmental accounting and reporting. (Gray, 1991, p. 3)

The Gray (1991) approach is set out in Figure 6.2, in which the orthodox and the new accounting are compared. The inclusion of externalities and the perceived need to report other than economic events to groups additional to those addressed at present are quite clearly stated.

Figure 6.3 goes one step further in showing that the ‘new’ accounting is concerned not only with additional reporting from established processes but also with new processes: a concern for the environment, community, democracy and so on, is placed in opposition to a concern for economic and legal values. The overall equation is concerned with accountability in its fullest sense.

The values pursued by conventional accounting are strenuously attacked because they do not lead to accountability in the wider sense, but only to a narrow conception of decision-usefulness for a limited range of users. Because accounting reports are not neutral, the outcome of biased or partial reports is very important, especially if there are environmental consequences of a permanent or long-term nature. Here we have once again the problems which arise from a reliance upon the notion of values, set by the market through the transfer of private ownership rights, which cannot include the biosphere. Figure 6.4 shows the systems diagram of the accountant’s perception of the world, which may be compared with the systems world-view extended into the social and environmental domains as shown in Figure 6.5.

After discussing some of the reasons for the present condition of financial reporting; (b) require the addition of a compliance-with-standard report in order to capture the current legal framework of pollution regulation; and (c) in order to initiate a reorientation of the accounting from ownership toward stewardship and to enable the implementation of the Pearce proposals on natural and man-made capital, introduce a redefinition of assets and capital maintenance. (Gray, 1990, p. 128)
The emergence of environment economics and accounting

Should it be part of accounting?

Environment — Community — Legal values

Democracy — Sustainability — Labour — Society — Justice/fairness

Figure 6.3 Accounting, accountancy profession and environmental crisis.
Source: Gray (1991, p. 6).

Figure 6.4 A systems view of accounting, organizations and the environment (i).

accounting and environmental disclosure and the need for accountability based upon the acceptance that additional groups have rights to information, Gray (1991) provides suggestions for additional disclosures. The first group is taken from a United Nations initiative (Gray, 1991, p. 39):

**Financial information:**
- disclosure of amount spent on environmental matters (possibly enabling capitalisation due to spend impact on EPS), will possibly be split between regulated and voluntary costs;
- disclosure of environmental contingent* liabilities - most especially those arising from remediation costs under ‘Superfund’ type legislation;
- disclosure of anticipated pattern of future environmental expenditure (possibly split between regulated and voluntary costs).

**Non-financial information:**
- disclosure of environmental policy for the organisation;
- disclosure of organisational activity in the environmental field, including such matters as emissions statements.

The second group (Gray, 1991, p. 41) is much more detailed and is adapted from Gray (1990):

1. Compliance and ethical audits (meeting legal requirements and
3. Environmental budget (financial and non-financial targets and performance appraisal).

Gray (1991, p. 43) concluded with an examination of the distinction made by Pearce et al. (1989) and others between man-made capital and natural capital. He concluded (after Turner) that natural capital should be divided into critical natural capital and substitutable, renewable natural capital, noting (p. 44):

The critical capital must, by definition, be immutable in a sustainable world. It is only the 'other' natural capital that can be used for substitution, and then only up to the point where it goes critical.

Clearly, the last word has not been written on environmental or total impact accounting, but there are encouraging signs that many diverse, and potentially conflicting, groups are supportive of the continued development of green reporting.

Owen (1992) provides a timely discussion of environmental accounting issues from several perspectives. The book is divided into four parts, with almost all the papers in two of the sections. The first part consists of a lengthy paper by the editor setting out the implications which 'greenness' would have for the accounting function. Owen concludes that if a reformist (as opposed to a radical) perspective is adopted, then accountants can make contributions in both the internal and external reporting fields. First, by developing management information systems to assist organizations to control micro level responses to macro level initiatives, and secondly, to develop external reporting practices, including the audit function.

However, the world view of many accountants may be an impediment to these developments. Owen notes that a lot of time has elapsed since The Corporate Report (ASCC 1975) encouraged developments in the
social area. The overall message of the contributions is that the time for action has arrived.

The second part takes up about one-third of the book and is entitled 'The Future of Green Reporting'. The contributions are divided between various interest groups, including industry and commerce (three papers), the trade union movement (three papers), the accounting profession (three papers), green pressure groups (two papers), and the investor (two papers). A number of contributors include suggestions for reporting that are similar in intent (if not in detail); for example, management, trade unions and investors all favour environmental reports and audits. This congruence of views is both encouraging and, frankly, surprising.

The contributions of the representatives of the accounting profession are stated to be personal contributions in two out of three cases. This is unfortunate, since it does make for some confusion on the part of the reader. Are the professional bodies simply being cautious, or are they divided over the issue, or even opposed to disclosure (back to the world view impediment again)? The message given by each of the contributors in this section (apart from institutional advertising) is that there is clearly a role for people with skills similar to those of accountants to design systems that capture and disseminate information, and to audit disclosures. However, in some cases accountants will have to work with members of other disciplines in interdisciplinary teams.

The contributions from the green pressure groups are thoughtful and informative, not controversial. They argue for additional disclosures in many areas, as would be expected, but appear to avoid the more controversial issues, such as the charges that are often made that some multinational corporations ship goods no longer approved for use in their home markets to developing countries for sale there. Avoiding controversies of this nature may be desirable, but this reader was left with the impression that these were rather 'light green' papers.

Approximately one-third of the book is given to part 3, which deals with current trends in green awareness. This part could have been placed before the second part dealing with future trends; however, the order is not particularly important. Part 3 consists of five ungrouped papers dealing with: environmental disclosures in corporate annual reports in Western Europe; current trends in the reporting of green issues in the annual reports of United Kingdom companies; environmental management in practice; the social audit movement; and green investment.

The paper by Roberts concludes that European environmental reporting is voluntary but increasing in volume, with German corporations taking the lead. The contributions of the representatives of the accounting profession are stated to be personal contributions in two out of three cases. This is unfortunate, since it does make for some confusion on the part of the reader. Are the professional bodies simply being cautious, or are they divided over the issue, or even opposed to disclosure (back to the world view impediment again)? The message given by each of the contributors in this section (apart from institutional advertising) is that there is clearly a role for people with skills similar to those of accountants to design systems that capture and disseminate information, and to audit disclosures. However, in some cases accountants will have to work with members of other disciplines in interdisciplinary teams.

The contributions from the green pressure groups are thoughtful and informative, not controversial. They argue for additional disclosures in many areas, as would be expected, but appear to avoid the more controversial issues, such as the charges that are often made that some multinational corporations ship goods no longer approved for use in their home markets to developing countries for sale there. Avoiding controversies of this nature may be desirable, but this reader was left with the impression that these were rather 'light green' papers.

Part 4 on the further development of green reporting includes only one paper on the practical implications of developing green reporting systems. It covers the problems inherent in dealing with qualitative issues and 'soft data' in general.

SUMMARY

This chapter has considered the development and implementation of TIA. There are definite philosophical difficulties involved in the measurement and valuation of externalities. Many accountants and managers would experience grave concerns about the process of charging back to the entity costs which have 'escaped' into the public arena and may be co-mingled with other similar costs. The same difficulties are not so apparent in the reporting of SRA. However, the considerable difficulties outlined here may provide a spur to the development of measurement and disclosure procedures for TIA. From the difficulties detailed above, the TIA process needs further development before it could become part of a general evaluation of organizational performance. The conventional accounting system within the organization will not recognize externalities or public costs, unless they are converted into private costs by means of fines and/or charges for the release or discharge of noxious material. Of course, such a charge does not remove the nuisance. However, given a reasonably efficient market, the increased cost of production should help to bring about either a reduction in sales (and hence output) as a result of a rise in price, or to draw the attention of management to a worthwhile investment in efficient pollution abatement equipment.
the present time, is via Levels I and II of the AAA framework. That is, recognizing the sources of possible externalities and measuring them in non-financial terms. This information, if publicly available, would enable the community, via the government, to decide whether a penalty or charge should be imposed. This process forces recognition of the cost as a private cost, and enables accounting systems and management decision-making to function in the usual way. To attempt to measure the cost of externalities after the event, whilst still allowing the discharge (or other action) to take place seems rather shortsighted. Equally, to make an \textit{ex ante} valuation of the externalities over the total life of the programme or project would seem to be very difficult at this stage. To make an \textit{ex post} valuation might be easier, in terms of having more information available, but the firm will have distributed or reinvested the 'excess profits' and be unable to pay the fine when assessed at a later date.

The ultimate aim of TIA is to evaluate private organizational activities in terms of public cost. To do so, TIA must identify actions which are likely to produce social costs or externalities and then obtain both financial and non-financial measures of these externalities. These are then converted into financial measurements. There are many parallels between TIA and cost-benefit analysis (CBA) which is used in the public sector and is discussed in the next chapter. Eventually, the value of some form of TIA may lie in justifying the continued operation of a plant or process. Continued government intervention in the marketplace may result in private organizations taking the lead in using TIA to justify their operations. However, it must be recognized that the degree to which an economy conforms to a free-market model will have a major effect on the development of TIA. At the present time the valuation of externalities in accounting could be best described as having a very low priority with most organizations.

An examination of the models provided by the literature shows that in many instances externalities are not valued at the discounted value of future costs, but at the current historical cost. For example, the cost of environmental damage is valued at the amount which was not expended to stop the discharge and ignores the actual cost of damage to the environment of the discharges themselves.

Social audit was discussed in this chapter in order that disclosures under both SRA and TIA might be included. Very little evidence exists of systematic social audits on a large scale, except in the area of radical critiques of the activities of certain organizations. However, because this form is not sympathetic towards the continued existence of the current economic system it cannot be considered as part of any evolutionary strategy leading towards a more socially responsible accounting.
Socio-economic accounting (SEA)

INTRODUCTION

Socio-economic accounting (SEA) is concerned with a micro approach to the problems of project selection, operation, control and evaluation in the public sector. The term socio-economic accounting has been defined by Linowes (1968, p. 37) as follows:

Socio-economic accounting is intended here to mean the application of accounting in the field of social sciences. These include sociology, political science and economics.

Although Linowes was using the term within the private sector, the definition is more appropriate for use within the public sector and has been adopted for this purpose. This chapter establishes more clearly what is meant by SEA, in order to put it into context with other measures of public activities and to provide some idea of appropriate evaluation models.

In order to place SEA (a micro model) in an overall context, we shall first examine cost-benefit analysis (CBA) and planned programmed budgeting systems (PPBS), because these models have a longer-established literature and CBA has been widely used as a planning and decision-making tool for the selection of public projects. CBA and PPBS are alternative models for use in the public sector; however, it will be seen that they are, to a large extent, inadequate.

COST-BENEFIT ANALYSIS (CBA)

CBA attempts to evaluate entire projects using the Level III monetary quantification of costs and benefits relating to a specific project. The process has been used for a number of years, and government agencies justify specific projects on the basis of an analysis which is often very similar to capital budgeting in the private sector. One major difference lies in the discount rate used to bring future costs and benefits to present values. In commercial evaluations a discount rate related to the cost of capital (incorporating a risk factor) is most commonly used, whereas, in publicly funded activities, the rate may be a much lower social time preference rate or social opportunity cost rate. This occurs because commercial and community time-horizons and risk factors are different from those in the private sector.

Prest and Turvey (1965, p. 682) summarized the process of CBA very well:

Cost Benefit Analysis is a practical way of assessing the desirability of projects, where it is important to take a long view (in the sense of looking at repercussions in the further, as well as the near future) and a wide view (in the sense of allowing for side effects of many kinds on many persons, industries, regions, etc.), i.e., it implies the enumeration and evaluation of all the relevant costs and benefits. This involves drawing on a variety of traditional sections of economic study – welfare economics, public finance, resource economics – and trying to weld these components into a coherent whole.

The importance of CBA to this part of the book is that if a project has been accepted after CBA it will be easier to evaluate the actual performance, by socio-economic accounting or related techniques, because the cost and benefit data will be on record. Many of the benefits will be of a non-financial nature and are difficult to measure, but will be identified during the CBA. For example, if changes are made to an educational programme, as a result of an analysis of objectives, costs and benefits, the costs may be expressed in financial terms, but the benefits may be given in terms of greater teaching effectiveness or a lower dropout rate for students. The articulation of an objective for the programme will aid subsequent measurement and in some cases the routine nature of the post-operative analysis may act to prevent less-viable proposals from being put forward in the future.

The very detailed investigations of social costs in relation to the site of the third London airport (the Roskill Report: Commission on the Third London Airport, 1970) demonstrated some of the difficulties encountered with CBA. These difficulties may be illustrated by reference to three areas of valuation: noise, travelling time, and the value of ancient buildings. In attempting to calculate the cost of noise as a social nuisance the estimate was finally ‘based on the maximum loss that the home-owner in the noisier area is able and willing to bear in order to move out of the area’ (Estes, 1973, p. 259). Clearly, this is a compromise arrangement or assessment, since individual home-owners...
will react differently to the loss. Furthermore, potential losses as sur-veyed by researchers, and actual losses experienced when the property is sold, are not felt in the same way and it is difficult to determine the actual ‘zones of noise nuisance’ (Mishan, 1972, p. 465).

The valuation of travelling time is also a most interesting and controversial area of social measurement. In the investigation into a third London airport, consideration was given to the distance which aircraft had to fly, and the passengers had to travel on the ground, to get to and from the airport. If a site were further from central London, then it was argued that passengers were inconvenienced by the need to travel onwards from the airport to their destination. The cost of travel was both explicit (fares paid) but also implicit or imputed (less work or less leisure time). The crux of the assessment of this imputed cost was: what is the value of the time taken by a passenger in making the journey from central London to the site of the proposed airport and back? The Roskill Commission did not actually carry out an examination of travelling costs for air passengers, but based its calculations upon other studies which had shown a figure of 25% of income as the average value of travelling time. This figure was incorporated into a model which used an average value for air passengers’ income and an estimated increase in business and non-business incomes in real terms over a long period. An adjustment was made for the value of time for accompanying and assisting individuals. The cost of travel for business passengers was calculated as income plus 50% for employers’ overhead, and divided by a 40-hour week to give the cost per hour. There has been considerable criticism of the approach taken. Dasgupta and Pearce (1972, p. 230) concluded that: ‘research into the value of business and leisure time is not sufficient to support the use of precise figures in a Cost Benefit Analysis relating to air travel’. Mishan (1972, pp. 457–8) noted that the study values business time at ten times that of leisure time, and that the correct measure of business cost is the opportunity cost to the employer. If the employee has to travel in his/her leisure time, then the opportunity cost to the employer is nil and this should be used in the CBA calculation.

The difficulty of assigning values to existing capital goods, which might be altered or removed as a result of present and future developments, such as the building of an airport runway, is dealt with by Churchman (1971). The valuation of an historical structure might vary between an extant fire-insurance valuation as the lower bound, and as the upper level the present value of an investment made many hundreds of years earlier compounded at a realistic rate. The present value of the earlier investment forms the upper bound, with a great deal of room for other valuations in between these two outside figures.

Thus, the first of Dennison’s criticisms is the extreme claims made for PPBS. The second relates to the assumption of rationality for the
tion means by-passing the political dimension in decision-making and resource allocation:

Community needs do not allow themselves to be specified as a series of separate and unrelated components; alternative means of satisfying needs are often available but estimating costs and, in particular, benefits, to a sufficient degree of accuracy to demonstrate convincingly that one alternative is better than the other is rarely possible . . . (Ibid., pp 273-4)

The third criticism of the use of PPBS results from the adoption of a defence model in non-defence areas. The PPBS model was developed by the US Defense Department and, because it seemed to satisfy management needs there, it was moved into non-defence departments.

The rise in popularity of PPBS was attributed to the creation of an environment, through the publication of books and articles, which was highly favourable to the model. Its fall in popularity followed from the inherent weaknesses of the model and the earlier over-promotion. The model was not revolutionary but was presented as such; it could not answer the political questions about which programmes should have more support and which should have less, and finally the Defense Department model was inappropriate for wider use. The difficulties likely to be encountered by an education authority in using PPBS are outlined:

So it was the familiar pattern of a programme structure of activities in pursuit of specified objectives, a multi-year programme and financial plan, and an analysis of programmes (supported where necessary by analyses of alternative means of achieving objectives) which was recommended. (Ibid., p. 279)

Dennison goes on to illustrate the difficulties likely to be encountered in applying tight specifications of objectives to an education system. Despite drawing attention to weaknesses in traditional government budgeting systems, and to the advantages of longer-range plans and more clearly specified objectives, PPBS has declined in relative importance over the last few years.

SOCIO-ECONOMIC ACCOUNTING

Traditional government budgetary control models do not address resource-allocation and decision-making problems in a fully satisfactory manner. The alternative systems considered above - CBA and PPBS - have each claimed advantages and disadvantages. It is probably sufficient for the present purpose to suggest that even if these systems were more widely accepted, they would not address the issues which proponents of SEA are attempting to address. That is, how do we evaluate both input and output in respect of publicly funded projects?

Linowes (1968) favours a different treatment of government and semi-government activities. He argues for the use of accounting techniques and attesting procedures to improve the quality of the data used and the manner in which it is manipulated. This improvement is directed particularly at budgeting, forecasting and project-control activities. Improved measurement techniques are needed because of limited resources and the apparently unlimited demands for greater government involvement in society. Difficult choices need to be made and some programmes must be favoured ahead of others. Although political expediency will always be present, improved quality of information, in the planning, control and post-operational evaluation stages, may eventually lead to better decisions.

Linowes was supported by Mobley (1970) in the development of socio-economic accounting. However, Francis (1973) argues persuasively that many accountants do not have the training or background to deal with complex statistical tools in the social science area. Bimberg and Gandhi (1976) have made useful observations on this issue. Unfortunately, the advocates of SEA have not followed up the early theoretical work with concrete examples of evaluation models. Models of the social audit process have been produced but these are not exclusively designed for use in SEA (Corson and Steiner, 1974). In this chapter an educational evaluation model is discussed in the absence of accounting examples.

Socio-economic accounting models will be necessarily complex since they are required to assist in making decisions about the effectiveness and efficiency of publicly funded activities in the absence of market prices for outputs. Inputs may be valued in financial and non-financial terms, but output will often be limited to non-financial values, for example the number of employable school leavers, reformed prisoners, discharged patients or university graduates.

EVALUATION MODELS

Several models have been generated within the education evaluation literature, including models by Stake (1967), Stufflebeam (1968) and Provus (1971). This borrowing of models has been necessary because of the lack of suitable models in the accounting literature. The Stake model is a judgemental evaluation model, and may offer useful insights into the evaluation of publicly funded programmes by socio-economic accountants. Stufflebeam has provided the CIPP evaluation model which is a scheme for the classification of strategies for evaluating
Educational change. Provus uses a discrepancy model similar to management accounting budgetary control systems.

**THE STAKE MODEL**

The Stake model is shown in Figure 7.1. It is a data matrix, providing the evaluator with three kinds of data: antecedent, transactional and outcome. The antecedent data refer to the position which existed at the time the programme was implemented; the transactional data refer to the actual process which is taking place or has taken place as a result of the programme; and the outcome data record the results of the process. These results will include both positive and negative aspects.

In another dimension Stake is concerned with judgement as well as description; that is, an evaluation of actual against planned outcomes from the specific programme. The Stake model is not constrained by setting fixed objectives before beginning the programme, therefore changes of goal may be accommodated. Indeed, both the strengths and weaknesses of this model are to be found in the large amount of data which may be accommodated within the basic framework. The volume of data may be seen as a strength since we are dealing with both financial and non-financial measurements. Conversely, the volume of data makes presentation of a final judgement more difficult because of potential conflict between different aspects of the data. The data itself model also assists the judgemental function by making clear the criteria which are to be employed in making the judgement.

We have already indicated the role of antecedents, transactions and outcomes and the presence of both descriptive and judgemental aspects. The relationship between intents and observations (both part of the descriptive matrix) is given in Figure 7.2. It will be noted that the comparison between the intended variables and those which are observed in practice will provide a measure of the internal success or congruence of the programme. The relationship between the descriptive matrix and the standards provides a basis for making judgements about the programme.

The evaluation model tests for logical consistency between the intended antecedents, transactions and outcomes. In other words, given the antecedents which exist when work begins and the transactions which will be undertaken, is it logical that the intended outcomes will eventuate? If not, why not? Furthermore, what is the degree of congruence between intended and observed variables? Finally, given the observed antecedents and transactions, is there an empirical consistency between the two and between the observed transactions and outcomes? Once this process has been undertaken the analyst may compare the observed variables with the standards and make judgements.
EXAMPLES OF THE USE OF A STAKE MODEL APPROACH IN SOCIO-ECONOMIC ACCOUNTING

As indicated above, socio-economic accounting is intended to be effective in evaluating short- and medium-term publicity-funded programmes, where a judgement must eventually be made about the continued operation of the programme. Examples could be taken from education, work experience and health programmes.

The work experience programme is perhaps a suitable example to consider. If a government agency arranges a work experience/training programme for young people presently unemployed, public funds are being expended which must have an alternative use elsewhere: there is an opportunity cost attached to the resources used. Such a programme will have a number of objectives and expected outputs that should be made explicit at some point in the planning process. The evaluation of a scheme such as work experience or a training programme could be carried out under existing government accounting systems. However, these systems would be mainly concerned with how much money was spent, compared to the amount authorized, and whether the spending took place in the approved accounts. A more modern approach, such as a planned programmed budgeting system, would still not view the input-output relationships in the same manner as does the Stake model. In this context the use of the Stake model would be, first, to examine the rationale for the programme, and then to consider in detail the descriptive and judgemental matrix. The descriptive matrix would be concerned with:

1. antecedents: what resources were planned or intended to be allocated to the programme, compared to those observed to be actually used in the operations;
2. transactions: did the processes and procedures which were originally intended or planned actually take place? To what extent did the observed procedures differ from those intended when the programme was planned?
3. outcomes: an outcome was planned. Perhaps in this example it was young people who were ‘more employable’ than before they started the programme. This concept would need to be operationalized and quantified in terms which could be measured. The observation would be of the number who did meet the criteria, compared to the number who did not and therefore remained unemployable.

The judgemental matrix compares what has been observed, with some sort of standard or expectation, in order to make a judgement about the event.

The Stake approach may be used to evaluate hospitals and medical services, provided that input and output measures can be agreed upon. Many factors which are left unexamined at the present time would be taken into account by the Stake model if it were applied to socio-economic accounting exercises. An important part of such an evaluation would be non-monetary quantitative measurements, which are frequently ignored by accounting-based evaluations at present. It is not suggested that this form of socio-economic accounting is appropriate to all circumstances, or that it should be used in place of more conventional forms of financial reporting. However, the added dimension is required to enable better decisions to be made and to monitor their implementation. The current pressure for greater accountability for public expenditure, which is being experienced in many countries, will require new systems similar to those described above.

INSTITUTIONAL PERFORMANCE EVALUATION

Socio-economic accounting is further exemplified by the literature dealing with institutional performance evaluation, which involves the use of financial and non-financial, qualitative and quantitative measures to evaluate the attributes of an educational institution. The specific area discussed is that of higher education, generally the university sector, which is suffering from reduced funding, often larger student inflows and a call from governments for more accountability. This area of research is quite compatible with the others in this chapter because non-traditional measurement methods are employed in evaluating a public-sector activity.

Sizer (1980, p. 5) noted the importance of measures of effectiveness as well as of efficiency:

Is an institution of higher education effective if it achieves objectives which are appropriate to the economic, socio-political, technological, ecological, and educational environment in which it operates? Should its objectives be congruent with the long-term needs of society?

To agree on notions of effectiveness implies the acceptance of a common set of objectives, at least at the institutional level, and this would enable planning and evaluation by non-profit indicators to be undertaken. This has not been generally possible, and consequently the popularity of PPBS and CBA has declined. Sizer suggests that ‘partial’ performance may be used:

Whilst it may not prove possible to agree objectives, measure outcomes and develop performance indicators for an institution as a
<table>
<thead>
<tr>
<th>Focus of measure</th>
<th>Conceptual content</th>
<th>Tells</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>Amount and type of course, research facility, or central service provided.</td>
<td>What can be obtained.</td>
<td>List of services available in Careers Advisory Service; list of facilities and opportunities available in academic department; number, capacities, and locations of lecture and seminar rooms.</td>
</tr>
<tr>
<td>Awareness</td>
<td>Knowledge of user population of existence; range and correct type and amount of service rendered, course offered, or research undertaken.</td>
<td>Who knows about what is available?</td>
<td>Knowledge of prospective students of courses offered by an academic department. Demand for courses: number and quality of applicants; mis-match between computing facilities required and available; comparison of class sizes to lecture and seminar room capacities.</td>
</tr>
<tr>
<td>Appropriateness</td>
<td></td>
<td>Is quantity and/or quality of facility offered that required?</td>
<td></td>
</tr>
<tr>
<td>Efficiency</td>
<td>Compares resource inputs with outputs.</td>
<td>How much resource was used such as:</td>
<td>Cost per client service in medical centre. Cost per FTE student by course. Cost per literature search. Cost per meal served.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- how much did it cost per unit?</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- how much did it cost in total?</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- how much time did it take?</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- what grade of employee was used?</td>
<td></td>
</tr>
<tr>
<td>Effectiveness</td>
<td>Compares accomplishment with objectives (or what was intended)</td>
<td>Characteristics</td>
<td>Comparison of planned with actual: % utilization of lecture and seminar rooms; number of students graduating; number of graduates employed; ratio of actual utilization to planned utilization of computer; comparison of budgeted cost of central service with actual cost; comparison of actual cost per FTE for course with planned cost; comparison of planned course content with actual course content; actual wastage rate compared with planned wastage rate.</td>
</tr>
<tr>
<td></td>
<td>- qualitative</td>
<td>Duration</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- comparative</td>
<td>Content</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Effect</td>
<td></td>
</tr>
<tr>
<td>Outcomes</td>
<td></td>
<td>Proportion served</td>
<td>Increase in earnings arising from attendance at/graduating from course; benefits to society of successful research into previously incurable disease; benefits to local community of cultural programme; patents and copyrights registered.</td>
</tr>
<tr>
<td>Benefits</td>
<td></td>
<td>Variances from budgets, standards</td>
<td></td>
</tr>
<tr>
<td>Impacts</td>
<td></td>
<td>Monetary effects.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Non-monetary effects.</td>
<td></td>
</tr>
<tr>
<td>Acceptability</td>
<td>Assess match of service/course/research outcomes with user/participant preference.</td>
<td>User satisfaction with service; Student satisfaction with courses; Client satisfaction with outcome of sponsored research.</td>
<td>Demand for courses; number of complaints to Librarian; course evaluation at end of lecture programme; repeat sponsoring of research.</td>
</tr>
</tbody>
</table>

*Note: FTE denotes full-time equivalent student.*

*Source: Adapted from Sizer (1980).*
### Table 7.2 Process measures in higher education indicator system

<table>
<thead>
<tr>
<th>I: Institutional</th>
<th>II: Subject grouping level</th>
<th>III: Subject level</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General data</strong></td>
<td><strong>General data</strong></td>
<td><strong>General Data</strong></td>
</tr>
<tr>
<td>1-1 Number of FTE students</td>
<td>1-9 Number of FTE students</td>
<td>1-13 Number of FTE students</td>
</tr>
<tr>
<td>1-2 Number of academic posts</td>
<td>1-10 Number of academic posts</td>
<td>1-14 Number of academic posts</td>
</tr>
<tr>
<td>1-3 Annual budget</td>
<td>1-11 Direct expenditure by subject grouping</td>
<td>1-15 Direct expenditure by subject</td>
</tr>
<tr>
<td>1-4 Space provision</td>
<td>Expenditure indicator</td>
<td>1-16 Total of teaching hours</td>
</tr>
<tr>
<td>1-5 Proportion of staff costs within the total budget</td>
<td>1-12 Direct expenditure per FTE student</td>
<td>1-17 Space provision</td>
</tr>
<tr>
<td>1-6 Amount of resources obtained from third parties in relation to the annual budget</td>
<td></td>
<td>Expenditure indicators</td>
</tr>
<tr>
<td>1-7 Expenditure at subject grouping level within the annual budget</td>
<td>1-18 Direct expenditure per FTE student</td>
<td></td>
</tr>
<tr>
<td>1-8 Academic orientation (proportion of liberal arts subjects in terms of student numbers)</td>
<td>1-19 Indirect expenditure per FTE student</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** FTE denotes full-time equivalent student.

Source: Adapted from Elstermann and Lorenz (1980).

---

**Value-for-Money (VFM) Auditing**

**INTRODUCTION**

Earlier sections of this chapter examined briefly CBA and PPBS. Each was found to be inadequate as a means of monitoring, controlling and reporting on short- and medium-term publicly funded activities. CA is intended to facilitate decision-making by discounting future costs and benefits/applications, and to build these into the planning and reporting system.

**Value-for-Money (VFM) Auditing**

7.1 are process measures. Sizer argues that the standards developed by the American Accounting Association could be applied to the American higher education. This is an important question, not only for higher education performance measures (both progress and process types) but also for all measures which may be included in socio-economic accounting. Sizer (1980) developed partial performance indicators for institutions of higher education. This scheme, reproduced in Table 7.1, is based upon the characteristics for performance indicators developed by Sorenson and Grove (1977). These are: availability, awareness, accessibility, extensiveness, appropriateness, efficiency, effectiveness, outcomes/benefits/impacts. Although many of the partial performance indicators shown in Table 7.1 are process measures, Sizer argues for the development of performance indicators, directed towards measuring institutional and program efficiency, which would assess the quality of institutions and programs. At the present time there is a strong case for developing measures of performance in addition to process measures of output. The problems of setting objectives, identifying and measuring the component parts of the institutions, and of evaluation may be applied at all forms of measurement, traditional and non-traditional, of financial and non-financial.
benefits to the present in order to determine net cost or net benefit. In addition to the problems of making estimates and determining discount rates, decisions will be impacted by political expediency. Attempts to convert non-financial data to financial measurements involve subjectivity to perhaps an unacceptable degree. Furthermore, CBA has very little to say about the control of projects once they have been implemented. PPBS is intended to facilitate the control of projects, once a decision to implement them has been made by the political authorities. A number of deficiencies of this approach have already been discussed. In terms of the overall objective of this chapter it should be noted that PPBS is intended to control inputs in monetary terms without reference to outputs, which can be both monetary and non-monetary. The concept of socio-economic accounting is concerned with input-output relationships using both financial and non-financial quantification. This section examines value-for-money (VFM) audits to see if they are a viable alternative to the SEA model.

THE DEVELOPMENT OF VFM

Value-for-money auditing as a general practice has a relatively short history of some 15 to 20 years, which corresponds to that of most developments reviewed in this chapter. Although there are variations in approach from one country to another, which are described in the next section, all are concerned with the review of publicly funded programmes from the perspective of the ‘three Es’. These are economy, efficiency and effectiveness, and are defined in the following terms:

- **Economy**: The acquisition of resources in appropriate quantity and quality at the lowest cost.
- **Efficiency**: The relationship between the goods or services produced and the resources used to produce them.
- **Effectiveness**: The extent to which programmes or goods and services produced achieve their objectives.

The criticism levelled at VFM is that, although the reviews of economy and efficiency are thorough, those of effectiveness are often inadequate. Grimwood and Tomkins (1986), for example, question whether VFM audits do address the issue of effectiveness.

Before considering the strengths and weaknesses of this approach to evaluating publicly funded projects it is necessary to consider the origins of VFM and national variations in practice.

A COMPARISON OF VFM APPROACHES

Glynn (1985) has surveyed VFM auditing practices in six countries, thus providing a valuable introduction to the area. The countries are: the UK, Canada, Australia, New Zealand, the US and Sweden.

In the UK the Local Government Finance Act 1982 provided for the audit of publicly funded activities to determine ‘that local authorities have made proper arrangements for securing economy, efficiency and effectiveness in the use of their resources; and to report on matters of public interest (undefined) which come to his attention’ (Glynn, 1985, p. 114). A different part of the Act set up an Audit Commission to carry out most of these audits through the District Audit Service. A different but comparable operation is carried out in Scotland. There has been considerable criticism of the VFM audits of local government which are seen as part of the restrictive monetary policy operated by the central government and also because the audit is incomplete, since:

In only a few years important moves have been made with respect to two important aspects of value for money: economy and efficiency. However, the third most important element, that of effectiveness, appears so far to be only of secondary importance.

(Ibid., p. 113)

The Canadian VFM system originated earlier than that in the UK. It dates from developments in the mid-1970s which led to the appointment in 1979 of a Comptroller-General and a Royal Commission of Financial Management and Accountability, and subsequently to the development of the ‘comprehensive’ approach to auditing. The Canadian Federal Audit Office defines comprehensive auditing as:

- the term is used by the office of the Auditor-General and others to describe the broad-based auditing approach which is aimed at systematically reviewing and reporting on accountability relationships and on the supporting activities, systems and controls employed by management in fulfilling its responsibilities. (Office of the Auditor General of Canada, 1981, p. 42, cited by Glynn, 1985)

The Canadian Comprehensive Auditing Foundation (1983, cited by Glynn, 1985) has described comprehensive auditing as follows:

- financial, human and physical resources are managed with due regard to economy, efficiency and effectiveness; and
- accountability relationships are reasonably served. The comprehensive audit examines both financial and management controls, including information systems and reporting practices, and recommends improvements where appropriate.
This clearly extends the traditional transaction audit process to involve both physical resources and measures of effectiveness. Consequently, a link with socio-economic accounting may be discerned in this definition of VFM auditing.

The position of VFM audits in Australia is complicated by the federal system of government. The Auditor-General for the Commonwealth of Australia is appointed under the 1979 amendment to the Audit Act of 1901. Although efficiency and economy in the use of resources are included as part of the Act, there is no requirement to examine programme effectiveness, although this activity has not been overlooked:

The review of effectiveness falls within the purview of the Department of the Prime Minister. The efficiency audits reported upon to date have been undertaken as discrete projects separate from any other audit coverage by specialist staff of the Efficiency Audit Division. (Glynn, 1985, p. 119)

The various Australian states also have the office of Auditor-General. At present no official holding that position enjoys an effectiveness review function, although New South Wales employs the Premier's Department for this purpose. The Auditor-General of Victoria is able to become involved in comprehensive auditing by virtue of the Audit Act 1958, which refers to effective and economic auditing although this does not appear to involve effectiveness auditing. However, it has been argued that efficiency and effectiveness are not so different and therefore the Act could be used or readily modified to permit or require effectiveness audits (Glynn, 1985, p. 120). Glynn reports that this position has not been resolved. In a review of the Australian VFM experience, Parker (1986, p. 82) noted that:

The debates which have occurred in Australia over the role of the Auditor-General and the appropriate areas of responsibility for effectiveness reviews appear to suggest some level of political resistance to this concept . . . Of concern also is the fact that Canadian, U.K. and New Zealand interest in VFM auditing appears to have been initially sponsored by a politically motivated concern to restrict public sector expenditure and to reduce costs as far as possible.

VFM auditing is less developed in Australia than in Canada (and perhaps in the UK) and may have the same defects as are alleged to occur in the UK in terms of the extent of the programme evaluation process and concern that the process is subject to political influence.

In New Zealand the Audit Office has been set up under the Public Finance Act 1977 to provide for an independent audit agency, with personnel and an organization whose independent role is guaranteed.

The authority to conduct value-for-money audits is provided under Section 25(3). However, most of the work of the Audit Office is organized within a structure called CARE:

C Control - the evaluation of management controls over the resources for which it is responsible;
A Attest and Authority - the expression of an opinion on financial transactions;
R Reporting - to Parliament, ministers and other external parties on matters arising from audits;
E Effectiveness and Efficiency - the giving of an opinion on whether audited entities have applied their resources in an effective and efficient manner consistent with the policy of the governing body of that entity. (Glynn, 1985, p. 121)

Glynn notes the broad nature of the New Zealand mandate. The majority of the work of the Audit Office is concerned with the first three parts of the acronym. The audit of effectiveness and efficiency is undertaken on a project-by-project basis as time and staff are available. Suitably prepared staff are in short supply and Glynn notes that: The Audit Office has often acknowledged the fact that it cannot perform adequately in the value for money auditing area solely with accounting based skills’ (ibid., p. 122).

The United States has several organizations concerned with the control and audit of public-sector accounts. These include the Office of Management and the Budget (OMB) which is responsible for the supervision, control and administration of the budget and the financial programmes of the government, and the General Accounting Office (GAO). The GAO is supportive of independent reviews of efficiency and effectiveness, which are termed ‘program results reviews’. The review has been defined differently as demonstrated below. First, the GAO stated, in 1972, that there were three levels of audit:

Level I (Financial and compliance) - An examination of financial transactions, accounts and reports, including an evaluation of compliance with applicable laws and regulations. (Purpose: to evaluate whether operations and resources are properly accounted for and presented in reports and whether legal requirements are being met.)

Level II (Economy and efficiency) - A review of efficiency and economy in the use of resources. (Purpose: to evaluate whether the management operates with due regard to conserving its monetary, property and human resources.)

Level III (Program results) - A review to determine whether desired
results are effectively achieved. (Purpose: to evaluate the extent to which statutory or other goals are being achieved and whether alternative methods of operation should be considered.)
(Grimwood and Tomkins, 1986, p. 251).

Second, in a 1978 Exposure Draft entitled 'Comprehensive Approach for Planning and Conducting a Program Results Review', the GAO defined their approach:

A program results review is a process or approach by which qualified individuals can determine the level of program effectiveness and, if necessary, identify areas for improved program performance.

A program results review extends beyond traditional audit theory into the realm of activities commonly known as evaluation and analysis. Program results review activities are neither constrained to the conventional audit of information and control systems nor as pervasive as the wide range of activities associated with evaluation and analysis. (Glynn, 1985, p. 123)

Managers of particular projects are allowed to develop effectiveness measures within their organizations, and auditors are charged with satisfying themselves about the systems which are implemented. However, Glynn (1985, p. 24) has commented that many of the in-depth investigations are 'ad hoc' and 'atypical' of the GAO approach.

In Sweden, the main body dealing with VFM audits is the National Audit Bureau, which carries out both financial and effectiveness auditing. These audits have been defined by the Auditor General of Sweden as follows:

Financial auditing of a government agency shall result in a professional and impartial opinion on the agency’s financial statement and records.

Effectiveness auditing in the central administration involves examining the effectiveness and productivity of an agency or an activity. One purpose of this is to check that activities are being carried out in a functional, systematic and economically satisfactory way. Effectiveness auditing should also give rise to ideas and incentives for improvements at all levels of the central administration. The ultimate goal of the audit is to promote effectiveness in public administration. (Ibid., p. 124)

There are clearly a number of similarities between the intentions behind the various approaches outlined above. Some of the difficulties (obtaining the necessary funds and staffing resources to carry out appropriate audit and deficiencies in tendency to concentrate on economy and efficiency to the detriment of effectiveness, and allegations of political interference) are also common to several of the examples. The next section considers these alleged deficiencies in greater detail.

DEFICIENCIES OF VFM AUDITS

Sherer (1984) has drawn attention to both conceptual and practical problems in respect of VFM audits of local authorities. The component parts of economy, efficiency and effectiveness are interrelated, with effectiveness the most important (in Sherer’s view). Effectiveness is also the most difficult attribute to measure because of (1) the problem of finding suitable measures with which to evaluate the service under examination; and (2) the problem of commenting on the political decisions made by members of elected bodies, for example local councils. Sherer has noted that in response to these difficulties auditors tend to adopt narrow definitions of effectiveness which appear to be capable of verification, rather than broader definitions which impact on the final objectives of local authorities such as environmental health or the educational attainment of pupils: ‘Indeed it may be thought that measures such as these can be interpreted as efficiency rather than effectiveness measures; at best they attempt only to quantify the intermediate outputs of a service’. (Sherer, 1984, p. 8)

Sherer has also objected to auditing the other attributes of economy and efficiency because the processes of VFM audits are dominated by the ideology of profit: ‘The use of accounting technologies, including VFM audits for local authorities, introduces a ‘bottom line’ measure, equivalent to (and sometimes identical with) the net profit figure found in private sector financial accounts’ (ibid., p. 18). This has an effect on employment policies and the willingness to provide public services despite the problematic nature of the profit determinations. McSweeney and Sherer (1985, p. 3) have made similar observations:

Many of the reports published thus far demonstrate an asymmetry in the recommendations of VFM auditors. A great deal of attention is given to possible cost savings that can be made achieving the same or lower levels of service quality, if best management practice is adopted. In contrast much less attention is given to an evaluation of the effectiveness of local authority activities . . .

In the remainder of their paper McSweeney and Sherer reiterate many of the arguments against VFM audits: the difficulty of setting standards; a tendency to concentrate on economy and efficiency and not effectiveness as though these were separable; the fear that political and economic concerns are dominating technical concerns in the implementation of VFM.
Gray, Owen and Maunders (1987, p. 155) have noted that the VFM audit is:

unlikely to provide a significant improvement in public accountability. Its focus on spending - generally unrelated to performance measures - might improve the efficiency of services from local authorities etc., but appears to have little to do with the quality of service and virtually nothing to do with the broader issues of the community, the labour force, and general accountability.

The problems inherent in the term ‘value for money’ have been brought out by Jones and Pendlebury (1984, p. 10): ‘Strictly speaking it relates output (value) to input (money) and is therefore another way of saying efficiency.’

The author has concluded that although the concept of VFM is much closer to the concept of SEA than the other monitoring and controlling systems examined earlier in the chapter, the reality of implementation means that the distance is still quite wide. SEA is envisaged as a system which monitors both inputs and outputs in financial and non-financial modes. The implementation of VFM, as reported in the literature, suggests that in practice a greater proportion of attention is given to the financial measurements and that effectiveness is not given the same degree of attention as economy and efficiency.

SUMMARY

This chapter has expanded the arguments used in support of socio-economic accounting by examining areas of measurement and disclosure which presently employ, or could employ, non-traditional techniques. Cost-benefit analysis and planned programmed budgeting systems have been examined and found wanting. The need for the conversion of costs and benefits into financial terms and subsequent discounting of present monetary values means that CBA is dependent upon a number of assumptions, such as which flows to include and the discount rate to be used. There is also the problem of data manipulation to suit decisions which have already been made. Planned programmed budgeting systems are also financially based and require agreement about objectives. Proponents of PPBS have already made exaggerated claims, and applications have been less than fully successful as a result of the defence-based model, which did not transfer easily to other fields, and the difficulty of reaching agreement on institutional objectives. Furthermore, PPBS does not provide for an examination of input-output relationships.

Socio-economic accounting has been placed into a different category to CBA and PPBS in this study, since it used Level I and II measurements as well as financial measures. SEA may be regarded as a form of social audit of publicly funded programmes, and prototype models may be found in the educational evaluation literature (the Stake model, for example), and the institutional performance evaluation indicators produced by Sizer and others. Value-for-money auditing was also examined, because this approach to programme evaluation appeared to be very close to the concept of SEA. However, a study of the literature revealed that in practice VFM often stops short of the end result envisaged for SEA. There is some concern that VFM is not leading to a more socially responsible accounting.

The area of government-funded programmes is seen as fertile ground for evaluation models, using both financial and non-financial measurements and criteria, aimed at promoting efficiency and effectiveness. The use of models developed by other disciplines is not considered a problem, since these would be modified by experience and adapted to the particular nature of the problem under examination. The importance of an earlier reference to partial performance indicators should not be underestimated. To a large extent all measurements result in partial indicators of performance. This applies to financial accounting reports as well as to less-traditional forms of reporting. The socio-economic accounting discussed in this chapter is an attempt to convert unreported performance to a partial reporting of performance by publicly funded organizations. As such, it would be a major advance in the overall usefulness of accounting to society, thus leading to a more socially responsible accounting.
INTRODUCTION

This chapter is concerned with the review of a further division of the social accounting field. Socio-economic accounting (the use of accountants and accounting techniques to improve project selection, operation and control, and output evaluation in the public sector) is at a micro level. The corresponding macro approach is referred to as social indicators accounting. Social indicators accounting may be applied where the stated objectives of a social system (expressed via the political process) are to have a healthier, wealthier and better-educated population. This is to be achieved by a series of public programmes (each perhaps influenced by socio-economic accounting), where progress towards these objectives ought to be capable of measurement. These measurements may vary in scope and time-scale, as outlined below; in particular there may be a distinction between national, regional and local measures.

Social indicators research may be tracked back at least as far as the work of Bauer (1966) and has generated a substantial volume of published material, only a small part of which may be regarded as belonging to the accounting area. Glatzer (1981) provided an overview of the development of social indicators, whilst Parke and Peterson (1981) discuss the development of social indicators in the United States. The remainder of this chapter on social indicators accounting will be devoted to an examination of the work of Terleckyj (1970) as an example of long-term social indicators accounting at the national level, and reviews of the contributions of Glatzer (1981), and Parke and Peterson (1981).

GOAL INDICATORS AND DATA DEFICIENCY

GOAL INDICATORS

In several important papers Terleckyj has addressed the problems of measuring social change directed towards specific goals. Terleckyj (1970) was concerned with measurement and the data needed for goal analysis. He provided a series of hypothetical national goals which were to be attained over a ten-year period. To achieve these goals a number of activities would have to be undertaken and these in turn should be monitored. It is the monitoring process, as well as the goal performance, with which SIA is concerned. In respect of goal analysis and the monitoring of activities Terleckyj (1970, p. 766) noted:

Two kinds of data are needed for this analysis:

1. the data defining and measuring the output indicators, and
2. the much more voluminous and complex data which would permit estimation of the effects of activities on output indicators and of the cost of the activities.

The goal output indicators developed by Terleckyj are given in Table 8.1. The areas shown are concerned with nationally determined goals in the fields of domestic concerns that are relevant to a ten-year programme. The process by which the goals are chosen is not within the control of the SIA system, but the majority of the areas of goal concern should be those acceptable to most people and arise out of the political process. However, the goal output indicators may be more difficult to define. This is accepted by Terleckyj (1970, p. 766): 'Identification of areas of goal concerns and the corresponding selection of output indicators are neither absolute nor immutable. The selections should vary with their purpose, and the time when they are made.'

DATA DEFICIENCY

When considering the availability of data in support of the principal indicators of goals output shown in Table 8.1, Terleckyj stated that the goals analysis was not supported by the statistical information system available at that time. The general impressions of data availability are summarized in Table 8.2. The view expressed by Terleckyj is in contrast to the review of data sources given by Glatzer (1981). The conflict can be resolved in terms of the availability of data to enable an accounting-type examination of goals and degrees of achievement.

The principal indicators shown in Table 8.2 are assisted by auxiliary indicators, which clarify the significance of changes in the principal
Table 8.1 A summary list of areas of national goals concern and the corresponding principal indicators of goals output

<table>
<thead>
<tr>
<th>Area of goals concern</th>
<th>Principal indicators of goals output</th>
</tr>
</thead>
<tbody>
<tr>
<td>I Freedom, justice &amp; harmony</td>
<td>Not yet defined.</td>
</tr>
<tr>
<td>II Health and safety</td>
<td>Health mean life expectancy at birth</td>
</tr>
<tr>
<td>Health public safety</td>
<td>Number of persons with chronic disability conditions</td>
</tr>
<tr>
<td>III Education, skills and income</td>
<td>Health index of average achievement and mathematics, grade 12</td>
</tr>
<tr>
<td>Basic schooling</td>
<td>Percent of age group completing college</td>
</tr>
<tr>
<td>Advanced learning</td>
<td>Average earnings</td>
</tr>
<tr>
<td>Skills</td>
<td>Number of persons outside mainstream of the labour force</td>
</tr>
<tr>
<td>Adequacy and continuity of income</td>
<td>Number of persons below poverty standard</td>
</tr>
<tr>
<td>IV Human Habitat</td>
<td>Number of persons in near-poverty conditions</td>
</tr>
<tr>
<td>Homes</td>
<td>Number of persons with permanent losses in levels of living over 30%</td>
</tr>
<tr>
<td>Neighbourhoods</td>
<td>Quality of environment</td>
</tr>
<tr>
<td>Access</td>
<td>Recreation percent of persons regularly taking part in recreation</td>
</tr>
<tr>
<td>Quality of environment</td>
<td></td>
</tr>
<tr>
<td>Recreation</td>
<td></td>
</tr>
<tr>
<td>V Finer things</td>
<td></td>
</tr>
<tr>
<td>Beauty of nature</td>
<td>Number of areas of preservation of beauty</td>
</tr>
<tr>
<td>Sciences</td>
<td>Number of scientists active in basic science</td>
</tr>
<tr>
<td>Arts</td>
<td>Number of active artists</td>
</tr>
<tr>
<td>Leisure</td>
<td>Average time free from work and chores</td>
</tr>
<tr>
<td>VI Economic base</td>
<td>GNP</td>
</tr>
</tbody>
</table>

Note: These categorizations are being used in the ongoing study and are subject to change. The choice of indicators describing comparative conditions of people between the absolute number and proportion of population was based on judgement regarding which formulation corresponds better to the actual goals concern.

Source: Adapted from Terleckyj (1970, p. 770).

Table 8.2 Checklist for selected goals orientated output indicator statistics

<table>
<thead>
<tr>
<th>Goal output indicator</th>
<th>Existence of national-level statistics</th>
<th>Local area availability</th>
<th>Quality of analytical information</th>
<th>Principal source of federal statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health and safety</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>life expectancy</td>
<td>yes</td>
<td>yes</td>
<td>Good</td>
<td>National Centre of Health Statistics</td>
</tr>
<tr>
<td>disability</td>
<td>yes</td>
<td>yes</td>
<td>Good</td>
<td>National Centre of Health Statistics</td>
</tr>
<tr>
<td>violent crime</td>
<td>yes</td>
<td>yes</td>
<td>Good</td>
<td>National Centre of Health Statistics</td>
</tr>
<tr>
<td>Education, skills &amp; income</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>education index</td>
<td>no</td>
<td>no</td>
<td>Fair</td>
<td>Office of Education</td>
</tr>
<tr>
<td>college completion</td>
<td>yes</td>
<td>yes</td>
<td>Fair</td>
<td>Office of Education</td>
</tr>
<tr>
<td>ability to earn</td>
<td>no</td>
<td>no</td>
<td>Fair</td>
<td>Office of Education</td>
</tr>
<tr>
<td>average earnings</td>
<td>yes</td>
<td>yes</td>
<td>Fair</td>
<td>Office of Business Economics</td>
</tr>
<tr>
<td>number of poor</td>
<td>yes</td>
<td>yes</td>
<td>Fair</td>
<td>Social Security Administration</td>
</tr>
<tr>
<td>number of near-poor</td>
<td>yes</td>
<td>yes</td>
<td>Fair</td>
<td>Social Security Administration</td>
</tr>
<tr>
<td>number with income loss</td>
<td>no</td>
<td>no</td>
<td>Fair</td>
<td>Social Security Administration</td>
</tr>
<tr>
<td>Human habitat</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>houses</td>
<td>yes -</td>
<td>yes -</td>
<td>Poor</td>
<td>Bureau of the Census</td>
</tr>
<tr>
<td>neighbourhoods</td>
<td>no</td>
<td>no</td>
<td>Poor</td>
<td>Bureau of the Census</td>
</tr>
<tr>
<td>access</td>
<td>no</td>
<td>no</td>
<td>Poor</td>
<td>Bureau of the Census</td>
</tr>
<tr>
<td>pollution</td>
<td>no</td>
<td>no</td>
<td>Poor</td>
<td>Bureau of the Census</td>
</tr>
<tr>
<td>Recreation</td>
<td>no</td>
<td>no</td>
<td>Poor</td>
<td>Bureau of the Census</td>
</tr>
<tr>
<td>Finer things</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>science</td>
<td>yes</td>
<td>yes</td>
<td>Fair</td>
<td>National Science Foundation</td>
</tr>
<tr>
<td>art</td>
<td>no</td>
<td>no</td>
<td>Poor</td>
<td>Natl. Foundation on Arts and Humanities</td>
</tr>
<tr>
<td>nature</td>
<td>no</td>
<td>no</td>
<td>Poor</td>
<td>Department of the Interior</td>
</tr>
<tr>
<td>leisure</td>
<td>no</td>
<td>no</td>
<td>Poor</td>
<td>None</td>
</tr>
<tr>
<td>Economic base</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GNP or local indicator</td>
<td>yes</td>
<td>yes</td>
<td>Good</td>
<td>Office of Business Economics</td>
</tr>
</tbody>
</table>

Source: Terleckyj (1970, p. 771)
addition, Terleckyj noted that all indicators have differing degrees of usefulness at national and local levels.

In conclusion, Terleckyj (1970, pp. 775-6) referred to five specific points:

(i) Articulation of social goals is important for ascertaining whether they are being reached, and even for reaching them.
(ii) The existing statistical systems are not geared to articulating and reporting social goals, either nationally or locally.
(iii) Development of simple systems which would reflect progress towards some of the generally accepted goals is feasible locally as well as nationally.
(iv) If such systems are to serve as aids in policy information or as vehicles of information for the general public, they have to be simple and clear-cut.
(v) Development of larger systems, encompassing a larger variety of indicators and aiming at consistency or compatibility of data systems developed and used by different policy units, depends on progress in basic work that remains to be done.

The papers reviewed above form an important contribution to an understanding of SIA and the extent of potential involvement for social accountants. There are a number of aspects to the logical sequence described by Terleckyj where accounting principles and techniques may be employed: determination of goals; selection of principal and auxiliary output indicators; and the organization of data collection and aggregation. The involvement of accountants in social indicators research needs to be selective, because the area covered by SIA is only a part of the total area devoted to social indicators research. This is evident from an examination of the literature and is confirmed by the particular use of 'social accounting' by Parke and Peterson (1981).

MACRO-SOCIAL INDICATORS – AN INTERNATIONAL OVERVIEW

Glatzer (1981) has provided an extensive review of the work on social indicators in several countries. In contrast to Terleckyj (1970), who referred to data deficiency, Glatzer has compiled a list of references which amounts to almost an oversupply of data. However, relatively little of the data is intended for use by accountants, although some aspects of the social indicators movement are probably appropriate for exploration by those in the profession who are seeking to develop a more socially responsible accounting. Glatzer (1981, p. 219) stated that: "The dominating interest of social indicators research is social reporting, explanatory knowledge about societal problems and developments for social guidance", and progress may be distinguished in three areas. These are: measurement of quality of life and welfare; the monitoring of social change and socio-economic development; and the conduct of evaluations and forecasts.

Measurement of the development of quality of life and welfare requires agreement on a number of normative positions. The subjective nature of this area of study suggests that there is not a major role for any form of accounting, whether dealing with the quality of life and welfare of the whole population or of specific groups of disadvantaged persons. The area of social indicators research which is concerned with monitoring social change and socio-economic development might provide an opportunity for the application of accounting techniques. However, Glatzer (1981) reports that social indicators are used without a goal or output orientation, which would make the application of achievement measures very difficult.

The most important area of social indicators research for accountants would appear to be the work on forecasting and evaluating the results of social policies. The effect of public-policy decisions on the social fabric of the country should be evaluated:

evaluation research is interested in the ways in which specific amounts of public expenditure (the 'input') contribute, through the additional provision of goods and services (the 'output') to the achievement of objectives and goals (the 'outcome'). (Glatzer, 1981, p. 226)

This aspect of social indicators research has also been commented on by Sheldon and Parke (1975, p. 695) in a manner which suggests that they do not want to see too much work devoted to this form:

One view sees social indicators as providing a basis for the evaluation of government programs. However, the development of evaluation research, particularly social experimentation, of social research as a distinct type has attenuated the expectation that social indicators are to serve the purpose of program evaluation.

Attention to this area would, presumably, draw resources away from another major area, that of measuring social change itself without any reference to goals. Glatzer (1981, p. 228) listed the characteristics which he discerned as belonging to social indicators research in the following way:

- An empirical and quantitative interest rather than a purely theoretical interest in societal phenomena; a tendency to investi...
widely used after the work of Bauer (1966), and that a frequently used definition is that of the US Department of Health Education and Welfare, which described social indicators as: 'in all cases . . . direct measure(s) of welfare' (Parke and Peterson, 1981, p. 225). This description is not considered satisfactory by Parke and Peterson because it does not include many of the variables central to an understanding of changes taking place in the society' (ibid., p. 236).

There is, therefore, the possibility that the parts of social indicator research which are concerned with the setting of goals and the measurement of their achievement through social policies could become part of a social accounting development.

THE DEVELOPMENT OF CHANGE INDICATORS

Parke and Peterson (1981) noted that the term 'social indicators' became widely used after the work of Bauer (1966), and that a frequently used definition is that of the US Department of Health Education and Welfare, which described social indicators as: ‘in all cases . . . direct measures of welfare’ (Parke and Peterson, 1981, p. 225). This description is not considered satisfactory by Parke and Peterson because it does not include many of the variables central to an understanding of changes taking place in the society’ (ibid., p. 236).

There is a major difference of approach between those researchers of social indicators, who would confine their attention to direct measures as far as possible, and the users of those indicators. The users would accept data obtained indirectly and by inference, if they cannot obtain them directly. SIA is usually concerned with direct measures of social activity.

Parke and Peterson (1981) is divided into three sections: social measurement, social accounting, and social reporting. In the area of social measurement, at a macro social indicators level, researchers are attempting to develop a series of quantitative measures of social change, since ‘a prerequisite to the advancement of social indicators, however defined, is the quantitative measurement of social change. Such measures make possible empirical findings about current social conditions and social processes’ (ibid., p. 236).

The specific examples of categories in which data collection is proceeding are: social mobility; educational achievement; victimization by crime; and the subjective well-being of individual respondents. However, the authors comment:

Impressive as these data collection efforts are, they do not by themselves produce the indicators that are needed. For this, we need improvement of instrumentation, improvement of access to data, and assessment of the value of the data as a measure of phenomena of interest. (Ibid., p. 238)

From an examination of their section on the subject, it is evident that Parke and Peterson use the term ‘social accounting’ in a different context from that in which the same term is used in this book and in the accounting literature. They refer to four areas: an expansion of the national income accounts to include externalities such as the value of household production as a part of gross national product; time-based accounts, a concept of social accounts incorporating time as an expenditure; national goals accounting, including the work of Terleckyj; and finally, demographic accounts. It appears that only the work of Terleckyj is really a study of macro measures using accounting techniques, and it is work of this type which fits into the framework of this book.

There has been, according to Parke and Peterson, little interrelationship between the social measurement and social accounting research work: ‘the interests of those engaged in social measurement and those working in social accounting have led to little joint work’ (ibid., p. 241). Their section on social reporting refers to notable reports on social indicators that have been published in the United States since 1933. The discussion included the manner in which findings are communicated to a wider public. The authors noted that: ‘Significant improvements in social reporting, beyond those already in evidence, must depend first of all on improvements in the indicator measures themselves and this will be accomplished primarily by social scientists’ (ibid., p. 243). Parke and Peterson concluded that careful measurement is needed, supported by appropriate instruments and processing, together with suitable reporting.

It is evident, from an examination of this and other survey articles, that only a small part of the literature of social indicators research is relevant to a study of social indicators accounting as the term is used here. Furthermore, a lengthy time-period for measurement may be involved, together with a regional dimension or scale. All these factors contribute towards making this an area which is, apparently, of less interest to accounting researchers than those considered in the earlier chapters. However, the potential fragmentation of the social indicators research area referred to by Glatzer (1981) cannot be ignored.

LINKING MACRO AND MICRO INDICATORS

The two areas of socio-economic accounting and social indicators accounting are related, in that SEA refers to short-term disclosures and
A number of writers in the area of social accounting have adopted a larger dimension than any of the others considered previously. This wider view is termed ‘societal accounting’ and takes a ‘global’ view of the relationship of society and accounting, tempered by the recognition that any accounting system must be related to the society in which it exists, and is therefore nationally or culturally dependent.

THE GLOBAL VIEW

MATTESSICH

One theorist who has attempted to construct an integrated overarching theory of accounting is Mattessich. In an early work Mattessich (1957, p. 330) referred to the search for a general theory of accountancy:

the next step would be to bring all existing and imaginable accounting systems to a common denominator. This process would mean developing a general basis valid for all these systems, out of which the features and peculiarities of any individual system could be derived through the introduction of additional axioms and definitions.

The axiomatic foundation of accountancy, it was argued, underlies all those accounting systems shown in Figure 9.1. The scheme was viewed as incomplete, since ‘even the possibility of creating new accounting systems for specialised purposes can be expected’ (ibid., p. 331). Presumably this statement refers to the area designated ‘non-monetary accounting’ which corresponds to the social responsibility accounting and other dimensions already discussed, as the context of Figure 9.1
Figure 9.1 Accounting systems and their relationships. Adapted from Mattessich (1957, p. 331).

Mattessich acknowledged the incomplete nature of his model at the same time as he indicated the directions in which accounting may develop.

In a much later work Mattessich (1972) continued the task of developing a general theory of accounting. The spread of accounting research was acknowledged, together with the potential dangers inherent in this development:

If the many fugitive parts and pieces of our discipline can be held together and integrated, accounting as an academic discipline will survive, if not it might dissolve, and be absorbed by neighbouring fields. (Mattessich, 1972, p. 482)

This warning may be applied in exactly the same way to the constituent parts of social accounting. Mattessich concluded with a reference to the need for developing and testing alternative theoretical structures by reference to empirical verification:

This testing of a general accounting theory by way of the empirical verification or reputation of its interpreted systems, seems to me the only way of conforming to the requirements of an empirical discipline. (Ibid., p. 486)

GAMBLING

The global view has also been expressed by Gambling (1974, p. 9): ‘What is needed is nothing less than the redefinition or clarification of “accounting” as the data base for all aspects of social measurement and control.’

Recognition of the cultural basis of accounting may be seen in the following statement by the same writer:

Even between societies whose values are not dissimilar, it is possible to find basically different approaches to income recognition; primarily between those who are prepared to [take] account of managerial attentions (as in Germany and the Netherlands) and those who seek some internal accounting standards (as in Great Britain and the United States). (Ibid.)

Gandhi (1976, p. 199) has expressed similar views: ‘On a larger scale, accounting seeks to clarify for the society as a whole a certain dimension of societal properties which are under the process of decision-making.’

Gambling (1974, p. 208) discusses the need for an overarching theory of accounting, and some of the reasons why we do not have one at the present time:

Just as the present day aversion to ‘overarching theories’ prevents the useful further development of social indicators the absence of such theories provides a justification for continuing to use the self-financing corporation. Any thinking man can see that a firm’s activities have social costs and social effects that feed back to the firm itself: it is very hard to present absolutely convincing estimates of what those effects might be precisely because we do not have theories about how the whole society works ... If one did attach credence to any one overarching theory, one could then proceed to produce a comprehensive taxonomy of the variables needed to describe the issues facing society, and so produce accounting statements that would tell us more clearly how existing institutions were supposed to be affecting that society.

The global nature of societal accounting means that all time-scales and all forms of ownership and enterprise must be included in the model. This all-embracing theory is required to supplement the shorter-term processes which are more easily defined, and which make up the first four categories of activities embraced by social accounting in this book.
Thus, societal accounting may be regarded as an abstract intellectual phenomenon, rather than a concrete activity, and must be accepted as such. It should be noted that societal accounting, according to Gambling, attempts to view the activities of the individual (mini-accounting), the firm (micro-accounting) and the public-enterprise or government activity (macro-accounting), within an interlocking framework, whereby the interrelationships are noted and in some way measured.

The sheer magnitude of such a data collection and measurement/aggregation task ensures that we are examining a theoretical model in order to gain insight into the overall complexity of the accounting process. Gambling (1985) has acknowledged that the search for an understanding of the complexities of the model will need to be continued. The implications for what we normally regard as accounting will be far reaching.

**ACCOUNTING AND SYSTEMS THEORY**

Gambling's interrelated macro-micro-mini accounting system appears to be strongly related to general systems theory which views the world as a series of systems: supra-system, system and subsystem. These systems are open in the societal accounting approach and interrelated across their boundaries. Each system may be seen as containing strategic, co-ordinating and operating subsystems or levels, together with inputs and outputs across the organization boundary to the environment or to other subsystems. The role of internal (management) accounting may be seen as providing the information system for the co-ordinating and operating subsystems. The specialist information systems for marketing management, capital budgeting and financial management assist the strategic subsystem. The intrusion of environmental forces is best viewed in terms of external regulation by government agencies requiring information, or even specific action, at any or all of the subsystem levels. The role of internal accounting may be easily reconciled with Figure 9.2.

The societal accounting theorist has a view of accounting in which all economic activity (and a great deal of social activity as well) forms a vast supra-system. Systems (or industries?) operate within the supra-system and individual enterprises form subsystems (and within them even smaller divisions exist). These diverse units are linked together by inputs and outputs of resources which include various kinds of information. The interaction of the system with the environment (or supra-system) is only partly demonstrated by existing systems of financial accounting. The current environment towards which information is directed is frequently limited to shareholders, debt-holders and

![Figure 9.2](image-url)
accounting which integrated all aspects of the discipline, although this view did not appear to be inclusive of non-monetary flows at the time.

Societal accounting can perhaps be better described by reference to systems theory, which views the world as a series of subsystems, systems and supra-systems, all interacting to a greater or lesser extent, according to the degree of openness or closedness of the system. The subsystem, consisting of strategic, co-ordinating and operating activities, is maintained by the use of the internal accounting and information systems, which are entitled the management accounting, capital budgeting and financial management functions, and decision support systems. The relationships between systems (other organizations) and between the system and the supra-system (society) is indicated through financial accounting and forms of statutory reporting, which may also extend back into the subsystem. The basis of societal accounting is the recognition that there are non-financial flows involved and that the system currently in use is therefore partial and incomplete. The different categories used in the previous chapters recognized that the process of intra- and inter-system resource movements may be better visualized through smaller-scale specific techniques. The systems-theory view of societal accounting puts the various techniques in perspective as part of an overall resource-flow monitoring system. Consequently, the notion of societal accounting is basically an intellectual extension of all the other conceivable forms of social and conventional accounting processes and techniques for resource flow identification and measurement, and not a blueprint for system implementation.
Concluding comments and directions for future research

This book has investigated two of the major issues of contemporary social accounting, namely, the justification of further expenditure of resources on additional disclosures (Chapters 1-3) and the provision of a structure to aid research and implementation (Chapters 4-9).

CONCLUDING COMMENTS ON CHAPTERS 1-3

Before developing the framework which forms the major part of the book it was necessary to address the basic issue of what justifications may exist for extending accounting measurements and disclosures beyond traditional limits. Three forms of justification were suggested.

First, it was proposed that there is a market-related consideration that disclosures of a socially relevant nature may have information content for use in the market place. Shareholders and other market participants, it was argued, could benefit from the increased amount of information available. Although a large number of studies have been undertaken using data from both social responsibility accounting reports and that supplied by independent bodies such as the CEP, few are decisive in their conclusions. The data sources, degree of aggregation and disaggregation, tests performed and overall statistical manipulation employed are all open to challenge. Although on balance it may be argued that there is some evidence that social responsibility disclosures have information content in the capital markets, because above- or below-standard returns may be obtained it has been concluded that there is insufficient certainty to put this forward as a major justification for new forms of accounting.

Secondly, it was argued that wider audiences (employees, customers, suppliers and the general public) were entitled to information about the operations of the enterprises because of the existence of a social contract between business and society. A number of the philosophical issues were examined, including varieties of social permission theory (social contract, organizational legitimacy) and individual contract theory, which is offered as a justification for a free-market, non-interventionist model.

Social permission theory, in its various forms, provides a firmer conceptual foundation for social accounting developments than either the earlier literature, which asserted that social accounting was 'a good thing to do', or some of the literature relating to markets and information content, which has been referred to above. Social permission theory lays the groundwork from which to develop non-traditional forms of measurement and reporting in both the private and public sectors. The social contract approach enables a justification to be put forward for many types of disclosure on the grounds that the basis for the contractual relationship is changing. The organizational legitimacy view justifies the development of social accounting disclosures by management to protect the interests of the shareholders, and not because of any philosophical commitment to a social contract between business and society.

The social permission theory approach provides a justification for developing social accounting disclosures which is part of the current organizational and societal structure. This approach seeks to modify and amend our present systems of private and public control and associated reporting practices. It does not seek to replace them in the manner advocated by adherents of the radical paradigm. It supports evolution rather than revolution. This partial support for the status quo is both a strength and a weakness of the social permission theory approach. It is a strength because a large number of groups in society can accept this position to a greater or lesser extent. These include managers, shareholders, many employees and customers. It is a weakness because existing wealth endowments are taken as given and power relationships are viewed as unproblematic. Those groups not involved in society as employees or customers (such as the very poor) tend to be ignored.

Thirdly, the radical paradigm was examined because, although regarded by the author as inappropriate as a justification for the adoption of social accounting at the present time, there is no doubt of the powerful intellectual qualities of the arguments put forward by radical advocates. The radical view is that accounting acts to support the status quo and social accounting should move away from this position. In particular, the acceptance of marginalist economic positions, the use of an efficient market model, and a lack of recognition of the pre-disposition of wealth endowments are of concern to these theorists. Whilst there is no doubt of the intellectual challenge, there are considerable problems inherent in setting non-traditional accounting disclosures.
accepted. An acceptance of radical approaches by social accountants would only exacerbate the position. The challenge of the radical paradigm is strong when confronting issues of wealth endowments, power relationships and the hierarchical nature of Western capitalism. However, most radical theorists have not put forward models of their own to set against those reviewed in many of the sections of this book. The theoretical proposals discussed in a number of recent papers do not generally provide any critique of what current social accounting in its various forms is trying to do, except to say that it defends the status quo (in whole or in part) and is therefore unacceptable. This book has taken what the author thinks to be a more positive approach by describing and critiquing what has been attempted in this field.

CONCLUDING COMMENTS ON CHAPTERS 4-9

Chapters 4-9 have considered developments in social accounting by dividing the total range of activities into the following areas:

1. social responsibility accounting;
2. total impact accounting;
3. socio-economic accounting;
4. social indicators accounting;
5. societal accounting.

The second major objective of this book has been to provide a framework which might assist researchers in the area of social accounting. The approach to policy formation set out by McDonald (1972) indicated that normative frameworks require a clarification of values, a means-end analysis and the incorporation of all relevant data. The division of 'social accounting' into social responsibility accounting, total impact accounting, socio-economic accounting, social indicators accounting and societal accounting assists in the identification of the ends, and consequently of the means.

Social responsibility accounting (Chapters 4 and 5) was shown to have been the most active dimension of social accounting, with a large number of both conceptual and operational models available to theoreticians and practising accountants. A number of organizations have employed SRA in their annual reports to shareholders or employee reports to employees or to works councils. The use of SRA varies in both type and extent from country to country, and this variation may be partly the result of cultural factors as well as the relative stage of development.

Social responsibility accounting is the area most widely researched and practised. SRA research exhibits many of the characteristics of descriptive (theories of) accounting. This may be a productive approach, given the amount of data available. However, it is suggested that further research should concentrate on the extent of disclosure, relationships between the size and type of industry and SRA disclosures, the audit of disclosures, disclosures and security market prices, and the views of the participants. Currently, the work is frequently deficient because of the subjectivity of many of the measures used. Any form of non-traditional disclosures made by a private-sector organization has the prospect of being a social responsibility accounting disclosure as defined in the literature. However, there is often a fine dividing line between those disclosures which may be included as SRA, because they have many of the characteristics of accounting data, and those which should be excluded because they are self-serving or uncritical in approving of company policy.

Much of the analysis completed to date is likely to be incapable of replication because the precise details of the techniques employed have not been disclosed. There are exceptions which have been noted in the test. However, even though the techniques have been imperfect and the analysis suspect, it is hoped that the examination of reported SRA disclosures will continue.

Total impact accounting (Chapter 6) involves the addition of externalities to private costs to yield the costs of operations. An examination of the early literature revealed relatively little use of this form of accounting, even by theoreticians. Clearly, there are empirical difficulties connected with identification, measurement and, finally, the valuation of externalities. However, one of the major issues appears to be a philosophical one: should accountants be involved in this area at all? Opinions are sharply divided on this issue, although those in favour appear to be gaining in strength. In dealing with total impact accounting we must confront the philosophical debate over whether shareholders are being required to pay for social responsibility or, on the other hand, whether the general public is entitled to protection from externalities. Identifying the ends (in this case the valuation of externalities to convert public costs to private costs) does not immediately indicate the means to be employed. Although data on general externalities may be available, the isolation and valuation of special enterprise-related externalities is more problematic. Research into this area may begin by looking at the externalities attached to single-enterprise communities. However, the issue of the valuation of externalities must still be addressed. The degree of pollution in some parts of the industrialized world demands that action of some sort be taken to repair the damage because the market model cannot cope with externalities. There are legislative and administrative solutions, such as legal sanctions against the discharge of externalities and licensed discharge under limiting conditions. In both cases there is a need to monitor discharges and consequently for
work in the area of total impact accounting. It is extremely probable that a financial dimension would be recognized and attached to the organization in order that the total cost would be the same in both private and public calculations. In many ways, the likely outcome of the recognition, measurement, valuation and attachment of externalities is closest to the experience of accountants in the industrial sector. Recent developments in this area include the work of environmental economists who have drawn attention to intergenerational effects and sustainable development, and environmental accountants (Gray, 1990, 1991) with recommendations for new disclosures.

Socio-economic accounting (Chapter 7) was the term used to cover the evaluation of publicly funded projects. Although there have been attempts to provide for improved decision-making, implementation and control of the work of the public sector using CBA, PPBS and, latterly, VFM audits, so far the problems involved have not been overcome, in particular, the problem of measuring and evaluating effectiveness (in comparison with economy and efficiency). The end to be addressed by socio-economic accounting is the evaluation of publicly funded programmes by techniques other than those used at present. The main problem (of means) is an almost complete lack of accounting models that enable the analyst to deal with financial, non-financial and qualitative inputs and outputs. Research in this area must begin with the development of the models themselves. Some assistance may be obtained from other areas such as the institutional performance indicators research in education. Socio-economic accounting will require a new institutional performance indicators research in education. Socio-economic accounting will require a new institutional relationship to replace that which currently persists in the public service. The experience which government accountants are having with value-for-money (VFM) audits may provide a good training ground from which models for SEA may be developed. Value-for-money audits make some progress towards finding models, but the implementation is often inadequate because effectiveness is frequently not evaluated. The lack of specific models will slow the development of this important area.

The study of social indicators accounting (Chapter 8), which is concerned with short- and medium-type publicly funded activity, is complementary to social indicators accounting which takes the longer-term perspective. The literature relating to social indicators was found to be largely in the hands of non-accountants. However, it may be argued that there is a place for accounting in an area which is concerned with recording data, making comparisons with plans and reporting outcomes. Social indicators accounting has, as an 'end' product, data from which the progress towards socially agreed goals may be determined. The level appropriate to accounting involvement must be determined and the goals identified; the goals indicators may then be developed. The processing of the indicators will be dependent on the availability of the underlying data. Research is needed into both of these 'means', the data to develop the indicator and the indicators themselves.

Finally, the endeavours of a number of accounting theoreticians to develop an overarching theory of accounting, was examined in the chapter dealing with societal accounting (Chapter 9).

Although SRA is currently the most 'populated' area, the other areas are deserving of support, because therein lie some of the most important challenges for academic accountants. There is considerable scope since, as Gandhi (1976, pp. 199-200) has expressed it:

Accounting as an information system transfers images which are a necessary precondition to any individual or collective behaviour. These images constitute a knowledge structure which included inputs and outputs of information, symbols and language. By providing such knowledge structures of various economic entities accounting furthers the societal process of adaption in which the society tries to adapt itself to its larger ecological environment. Simultaneously, it also adapts that environment.

This statement sums up the larger approach of societal accounting. However, accounting at present is still very much on a micro scale, whether it is for a business enterprise, a local authority or a government department. It is micro in the sense of small, but also narrow in the degree to which it recognizes information as a suitable input to the system. One of the purposes of this book has been to review some of the attempts to broaden the view of accountants towards information which should be available to government departments and social programmes.

This book has examined some of the newer ideas in accounting, many of which are usually discussed under the general heading of social accounting, and others which are not discussed in the mainstream accounting literature. The intention has been to show how these ideas are different and a scheme is presented which relates the new ideas to each other and to present-day accounting. Recent work on the disclosure of socially relevant information is described. The pursuit of many of the issues covered in this book would indeed result in a more socially responsible accounting.

It is apparent that to combine these into a coherent whole would require the amalgamation of the public and private sectors, macro- and micro-scale activities, and monetary and non-monetary measurements. It must also be recognized that some data will be 'hard' and some 'soft'.
Concluding comments and directions for future research

Towards reintegration

Reconciliation of these complex and conflicting developments has been attempted in Figures 10.1 and 10.2. Figure 10.1 shows the impact of social responsibility accounting and total impact accounting on individual organizations. The individual organization is represented by the rectangle called 'The Firm' which employs some form of cost and management accounting process, or even a management information system, to maintain internal control. The firm operates within an environment affected by company legislation, accounting standards and case law, as well as less-formalized expectations held by customers, shareholders, employees and government agencies. The firm interacts with the formal constraints through financial accounting reports, and with the less formal expectations of other constituencies by means of financial actions in the market-place and by means of media releases. Conformity with other legal restraints on employment practices and the discharge of waste is assumed.

The future environment is unknown, in respect of both formal and less-formal expectations, although it is reasonable to speculate that present constraints will not be reduced and that the expectations of the various constituencies are likely to increase over time.

In the lower part of Figure 10.1 the three possible areas of increased reporting are given under appropriate headings. Thus increased reporting, which might be required in conventional annual reports, includes (as examples only) new valuations of existing disclosures and new inclusions valued in dollar amounts. Social responsibility accounting reports, written in both financial and non-financial terms, would disclose a whole range of items not included at the present time. Some suggestions about content are given in the figure. The total impact accounting report would provide for measures of positive and negative externalities, converted where possible into financial quantities.

Figure 10.2 illustrates the place which might be occupied by socio-economic and social indicators accounting in the evaluation of publicly funded activities. The shorter-term micro social indicators accounting tends to be similar to socio-economic accounting, although the latter...
would be concerned with a specific programme, rather than the measurement of a general phenomenon, which would provide indicators for future action in respect of a number of programmes. The figure should be viewed as follows: the public activities represented by the upper-right rectangle are instituted as a result of a political decision process which may be influenced by cost-benefit analysis in a particular situation. The decision-making processes may be sharply influenced by political factors. However, once instituted, the programme is controlled both internally and externally. The external control may be by a conventional fund accounting system or a later type, such as a planned programmed budgeting system. In all cases the control system is financially based and concentrates on the input of resources in financial terms while tending to ignore non-fictional inputs and outputs. Future control processes, it is argued, should take the form of mixed financial and non-financial measurements of inputs and outputs for individual projects. This process has been termed socio-economic accounting and the process is given in the lower right-hand quadrant of the figure.

On a macro scale, as shown on the left of the figure, control is exercised at the present time by means of a financial budget and fund accounting system. There is little or no measure of overall effectiveness of the macro programme (examples might be health and education). It is suggested that the use of social indicators accounting would assist in determining the overall effectiveness of programmes in achieving socially determined objectives.

IMPLICATIONS FOR ACCOUNTANTS, ACCOUNTING STUDENTS AND ACCOUNTING EDUCATORS

Even if we confine our attention to the three most likely developments - social responsibility accounting, total impact accounting and socio-economic accounting - it is most unlikely that the present structure of the profession could cope with the changes that acceptance of these new techniques would bring. It would be necessary to incorporate new material into existing academic and professional development programmes to allow for areas of knowledge in which accountants would initially be deficient. For social responsibility accounting, it would be necessary for future accountants to be less reliant upon monetary quantification and to move into wider areas of non-monetary quantification. An awareness of the measures used by the social and physical sciences may also be necessary. Auditing of the new measures would eventually be needed, and this too would either require a wider expertise from the auditor or place reliance upon specialist personnel. A social audit specialist, for example.

In the area of total impact accounting, the future accountant will not have to forgo monetary measurement, but it may be a new type of accounting based upon the valuation of externalities that requires expertise in econometrics, sampling theory and the construction of models. Once again, the audit problem will be of the same magnitude and nature. Gray (1990, 1991) and Owen (1992) have given some indication of a system of additional disclosures which would be based upon non-financial statements.

It is probably the area of socio-economic accounting which brings the greatest challenge to theorists and teachers of accounting and to their students. It is clear that this area of evaluation and control is not being pursued by accountants at present. To come to grips with the problems involved, the accountant will require specialist training. The socio-economic accountant will require a good knowledge of government policy-making and administration, business accounting and investment management, the social sciences in general and social statistics in particular. However, the rewards will be commensurate with the difficulties, since increasing the efficiency of government spending and programme formulation and control is something from which all taxpayers should benefit. There is an opportunity for accountants to exert a major influence upon the efficiency and effectiveness of government operations.

FUTURE DIRECTIONS

The wide-ranging contents of this book mean that a large number of relatively discrete areas may be identified for further research. These are listed below using the same format as is employed for the structure of the book:

1. Additional market-related studies are needed to establish whether relationships exist between specific disclosures and the reactions of market participants. At present the results of such studies are equivocal.

2. The philosophical arguments which may underlie additional disclosures (such as social permission theory, the social contract between business and society, and organizational legitimacy) provide opportunities for further research. At present the normative-deductive arguments are unsupported by empirical research into the motivation of those managers who use annual reports to provide non-traditional disclosures to a variety of audiences. Also, the reaction of users of annual reports needs to be considered, although this is done to some extent through the market studies referred to above.

3. Social responsibility accounting disclosures are currently made
Concluding comments and directions for future research

by a number of organizations, and there is a literature relating to the measurement of the type and extent of these disclosures. As noted elsewhere, the research methods employed require further refining in order to provide for greater replicability of results by independent researchers. In addition, there are a number of specific SRA-related issues that need further attention, including human resource accounting, employee reports and industrial democracy/power sharing, and the means by which pollution may be recorded.

4. Total impact accounting, involving the identification, measurement and valuation of externalities, is considerably underdeveloped at the present time. Consequently, opportunities exist for further research into the means by which externalities may be measured and valued. The problems associated with a compensation system using non-market mechanisms, whereby parties affected by externalities can seek redress, is a difficult but necessary research area which may be pursued. The recently developed areas relating to the division of capital between man-made and natural offer challenges to accounting theorists.

5. Socio-economic accounting provides for the integration of non-financial quantification and financial measurements in the evaluation of publicly funded projects. The search for measures of effectiveness in areas where there is no market for the end product/service offers many opportunities for research, especially in areas which are politically sensitive, such as educational systems and the provision of health care. Models to assist in the evaluation of the wider aspects of these activities have yet to be developed.

6. In the area of social indicators accounting, further work is needed to map out specific problems of measurement and reporting which may be assisted by an accounting approach. The databases currently available may be deficient and unable to support the type of information which is considered necessary in order to measure progress towards agreed socially desirable goals.

7. The macro aspects of accounting systems, which were referred to under the heading of societal accounting, are culturally determined or, at least, strongly influenced by the national culture. Consequently, research may be undertaken to compare systems with each other and to investigate what are the main factors impacting upon a particular national accounting system.

References

1: Introduction to socially responsible accounting


2: Justifications for additional disclosures


References


Willmott, H. C. (1986) Organising the profession: a theoretical and historical examination of the development of the major accountancy bodies in the UK, Accounting, Organizations and Society, 11(6), 555-80.


3: The classification of social accounting


4: Social responsibility accounting


Diekema, M. (1979) Corporate social reporting in Germany: conceptual develop


Ernst and Ernst (1972–8) *Social Responsibility Disclosure: Surveys of Fortune 500 Annual Reports*, Ernst and Ernst, Cleveland.


Robertson, J. (1976) When the name of the game is changing, how do we keep the score?, *Accounting, Organizations and Society*, 1(1), 91–5.


Trotman, K. T. (1979) Social responsibility disclosures by Australian companies, Chartered Accountant in Australia, 49(8), 24-8.

5: Social responsibility accounting in practice
Benston, G. J. (1982a) Accounting and corporate accountability, Accounting, Organizations and Society, 7(2), 87-105
Benston, G. J. (1982b) An analysis of the role of accounting standards for enhancing corporate governance and social responsibility, Journal of Account...


Hofstede, G. (1983b) The cultural relativity of organisational practices and theories, Journal of International Business Studies,


Mueller, G. G. (1968) Accounting principles generally accepted in the United States versus those generally accepted elsewhere, International Journal of Accounting Education and Research,


Robertson, J. (1977) Corporate social reporting by New Zealand companies, Occasional Paper no. 17, Faculty of Business, Massey University.

References


---

6: Total impact accounting (TIA)


---


7: Socio-economic accounting (SEA)


8: Social indicators accounting (SIA)


9: Societal accounting


10: Concluding comments and directions for future research