

This article is downloaded from



CHARLES STURT
UNIVERSITY



CSU Research Output
Showcasing CSU Research

<http://researchoutput.csu.edu.au>

It is the paper published as

Author: D. McGrath and R. Mathews

Title: Developing an Analytical Tool for Classifying the Social and environmental accounting research literature

Editor: R. Burritt

Conference Name: The 7th Australasian Conference for Social and Environmental Accounting

Research: A-CSEAR 2008

Conference Location: South Australia

Publisher: University of South Australia

Year: 2008

Pages: 459-471

Date: 7-9 December 2008

Abstract: This paper utilises a matrix structure to categorise the contribution to social accounting research literature as suggested by Mathews (2004) but adds a further dimension of time and nation of origin to the model. The matrix model developed by Mathews (2004) builds on an earlier framework (Mathews 1997a) to organise the social and environmental literature by combining the underlying research philosophies, from critical theories to the "Business Case, with the nature of the research, extending across empirical studies to regulatory frameworks and other reviews. The inclusion of time and nation of origin, as quasi measures of the underlying social, economic and political forces, as additional dimensions, presents an opportunity to gain a greater appreciation of the drivers of social accounting research and thus to assist newcomers in the field to classify the research with which they are attempting to engage. Selected examples have been drawn from the literature in order to illustrate the application of this extension and not in an attempt to use the framework for empirical research in pursuit of any theoretical basis or to develop a predictive model.

Author Address: dmcgrath@csu.edu.au

mmathews@csu.edu.au

URL: <http://csear.econ.usyd.edu.au/2008/>

<http://csear.econ.usyd.edu.au/2008/program/>

http://www.unisa.edu.au/cags/ACSEAR_papers/program_abstract_booklet.pdf

http://researchoutput.csu.edu.au/R/-?func=dbin-jump-full&object_id=9680&local_base=GEN01-CSU01

<http://books.google.com/books?id=sgB2PgAACAAJ&dq=The+7th+Australasian+Conference+for+Social+and+Environmental+Accounting+Research>

CRO identification number: 9680

Developing an Analytical Tool for Classifying the Social and Environmental Accounting Research Literature

Dianne McGrath
School of Business
Charles Sturt University
Albury NSW 2640
Australia
dmcgrath@csu.edu.au
Ph +61 2 6051 9861
Fax +61 2 6051 9878

Prof Reg Mathews
Formerly Head, School of Accounting
Charles Sturt University
Bathurst, NSW 2795
Australia
mmathews@csu.edu.au

Developing an Analytical Tool for Classifying the Social and Environmental Accounting Research Literature

Abstract

In this paper the authors are concerned with developing a research tool to enable beginning researchers in the social and environmental accounting field with a mechanism to relate the many contributions to each other as well as to their specific emphasis.

This paper utilises a matrix structure to categorise the contribution to social accounting research literature as suggested by Mathews (2004) but adds a further dimension of time and nation of origin to the model.

The matrix model developed by Mathews (2004) builds on an earlier framework (Mathews 1997a) to organise the social and environmental literature by combining the underlying research philosophies, from critical theories to the 'Business Case', with the nature of the research, extending across empirical studies to regulatory frameworks and other reviews.

The inclusion of time and nation of origin, as quasi measures of the underlying social, economic and political forces, as additional dimensions, presents an opportunity to gain a greater appreciation of the drivers of social accounting research and thus to assist newcomers in the field to classify the research with which they are attempting to engage.

Selected examples have been drawn from the literature in order to illustrate the application of this extension **and not in an attempt to use the framework for empirical research in pursuit of any theoretical basis or to develop a predictive model.**

1 Introduction

Graduate students, research candidates, and other newcomers to the social and environmental accounting research literature are faced with a major task as they attempt to find their way around their chosen field. Attempts to provide reviews and evaluations of the literature have been provided by Mathews (1997a, 1997b & 2004a) as well as Gray et al. (1995). However, these evaluations are always capable of improvement. Mathews (1997) is a frequently cited review of the social and environmental accounting research literature over a twenty-five year period from 1970 to 1995. Mathews (2004) was an update for the period 1995 to 2000. In both cases the content of the research contribution was identified and the papers classified by group (empirical, philosophical, normative, regulatory, teaching materials etc.) without any attempt to identify any other dimensions.

Mathews (2004) used an additional dimension based on the apparent philosophical basis of the research, what appears to be the value system underlying the research, in addition to the grouping of types of research from Mathews (1997a) and Mathews and Reynolds 2004).

This paper provides an extension to the two dimensions used in Mathews (2004) by adding time (when the paper was published) and country of origin in order to assist newcomers to the field to classify the research with which they are attempting to engage. These new dimensions attempt to provide a model to link the literature to events and influences which drive the research beyond the underlying research philosophies and type of research.

In presenting the model a selection of papers drawn from the social and environmental accounting literature and represented in Figure 2 are provided for example only and do not constitute any attempt to use the framework for empirical research in pursuit of any theoretical basis or to develop a predictive model. The authors are concerned with developing a research tool to enable beginning researchers in the social and environmental field with a mechanism to relate the many contributions to each other and to the emphasis of their specific research issues.

The paper is organised as follows. Following the introduction, the two dimensions used in Mathews (2004) are discussed (grouping by type of research paper and underlying philosophical underpinnings). This is followed by an overview of the literature using these dimensions. The multi-dimension matrix approach is then introduced using time and country of origin as possible additions to the model. The sample literature is then used to demonstrate how the matrix could be used to relate the different aspects of social and environmental accounting research. The paper also provides some concluding comments outlining the contributions made by the paper.

2 Mathews' two-dimension Matrix

2.1 *Research philosophies*

In an attempt to simplify the matrix model the underlying philosophies will be restricted to the four theoretical bases identified in Mathews (2004).

Critical Theorists

The critical theorists have generally made no major contribution to model building in the literature although Gray et al (1996) was noted by Mathews and Reynolds (2004) as being an exception to this general position. The input to the debate surrounding social and environmental literature of this group has been through philosophical discussion which has provided a basis for model development. One possible identifying characteristic of critical theorists may be embedded in the motive behind the stand adopted, as suggested by Mathews (1993, pp.51-52) and Mathews and Perera (1996, p.374) as a desire not to aid in maintaining the social status quo.

The Social Contract of Business with Society

This group of authors is motivated by arguments of a moral or exhortatory nature. The origins of the social contract are in political philosophy and described the process by which members of society accept influence over their individual freedoms in order to achieve collective goals (Mathews, 2004). Within this group are included the authors who have adopted the Political economy of accounting theory as their underlying philosophical base. Political economy, unlike agency theory, goes beyond the market. It involves an analysis of both the exchanges within institutional frameworks, and also the relationships between social institutions such as the government, law and property rights (Jackson 1982).

Organisational Legitimacy

Legitimacy theory maintains that in order to survive a firm must operate within societies values and norms (Dowling & Pfeffer 1975). A company uses publicly disclosed information to manage the pressure placed on the company to deal with the social and environmental responsibilities, public image and legitimacy (O'Donovan, 2002a; O'Donovan, 2002b). Legitimacy requires a reputation that must be retained and further that if the company is seen to be illegitimate then at best profits are short-term (O'Donovan 2002a; O'Donovan 2002b). Legitimacy is thus driven by what society views as the right thing to do.

Stakeholder theory is a popular theme within an organisational legitimacy philosophy but restricts its view of the world to the perspective of the management of the organisation and reflects the view that the corporation's continued existence requires the support of the stakeholders. Stakeholder approval is thus sought and the activities and actions of the organisation adjusted to ensure approval is gained (Gray et al., 1995).

Business Case

The Business case located in the positivist philosophy argues that business will respond and make changes to procedures and processes purely because it is profitable. This may be by reducing waste, or maintaining organisational legitimacy and is not driven by any notion of 'doing the right thing' (Mathews 2003). Mathews and Reynolds (2004) identified three perspectives, research which attempts to formulate models of action, studies exploring the adoption of standards of management and those studies exploring the growth in socially responsible investment funds.

A subset of the business case is Agency Theory, which attempts to explain the increased disclosure from a market based perspective. An agency relationship

exists whenever one person or entity does something on behalf of another. In this context it would be the corporation as the agent for stakeholders (the principals in the relationship). Agency theory is grounded in the premise that participants are self-interested. Agency theory would suggest that the reporting strategy chosen by an organisation would be aimed at maximising the wealth of the organisation (agent), not necessarily the wealth of the shareholder (Gray et al., 1995).

2.2 Nature of the Research

In keeping with the Mathews (2004) 2-dimensional matrix, the contribution to the literature was classified under seven contribution types based on his earlier analysis of the social and environmental accounting literature (Mathews 1997b; Mathews 2002). *Empirical studies* relate to those works where empirical research was presented without any attempt to build a general framework. *Normative statements* involved a clear statement by the author about what should or ought to be done, however, where the statement was not clear or theoretical matters were raised without a conclusion or recommendation by the author the work was classified as a *philosophical discussion*. The categories of *regulatory frameworks*, *non-accounting literature* and *teaching programmes and textbooks* are self explanatory. The final classification was included to allow for the possibility of an item of research being unable to be definitively classified in any other category.

3 An overview of the literature

The following discussion of the literature is intended to act as an overview of the literature in Social and Environmental Reporting and to provide an indication of the diversity and complexity of the literature.

3.1 Corporate Social Reporting in a theoretical context

Gray, Kouhy & Lavers' (1995) identified three broad theories that attempt to place the empirical investigation of Corporate Social Reporting (CSR) into a theoretical context:

1. Decision-usefulness studies;
2. Economic theory studies; and
3. Social and political theory studies.

Decision usefulness studies have examined the use of social and environmental information in terms of its effect on share price behaviour, and the perceived importance of the various accounting data presented. The main problem with this segment of studies is that CSR should not be motivated predominantly by the "needs, wants and whims of financial participants" (Gray et al., 1995, p.50).

Economic theory studies have been segmented into economic agency theory and positive accounting theory. Research in this area was not concerned with 'what should be' but assumed a free market which is counter to the fabric of social accounting (Gray et al., 1995). Indeed it is the matter of the failures of the market that are of such concern to proponents of CSR.

The area considered to provide the most interesting and insightful theoretical perspectives are those adopting a Social and Political theory context, in particular stakeholder, legitimacy and political economy works (Gray et al., 1995). These three perspectives are viewed not as competing theories but as two overlapping

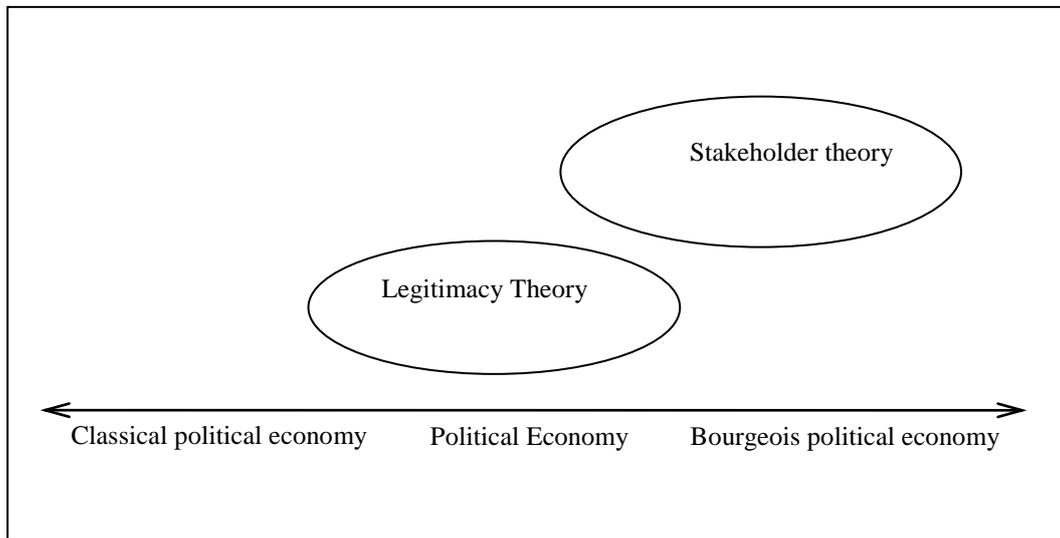
theories (stakeholder and legitimacy theories) set within a framework of the political economy (Gray et al., 1995). Political economy is defined by Jackson (1982, p.74) as:

" the study of the interplay of power, the goals of power wielders and the productive exchange system. As a framework, political economy does not concentrate exclusively on market changes. Rather it first of all analyses exchanges in whatever institutional framework they occur and, second, analyses the relationships between social institutions such as government, law and property rights, each fortified by power and the economy, ie the system of producing and exchanging goods and services ".

The criticisms and confusion of the literature (Gray et al 1995) based on political economy theories could be solved by defining two forms of political economy, the "bourgeois or vulgar political economy" and the "classical political economy" (Gray et al., 1995, p.53). The classical form is strongly linked to Marxism, whereby the "sectional or class interests, structural inequity, conflict and the role of the state" is at the heart of the analysis as compared to the diametrically opposite and thus irreconcilably different bourgeois political economy which "ignores these elements and perceives the world as essentially pluralistic" (Gray et al. 1995, p.53). The bourgeois political economy is not concerned with the processes that cause the mediation that it accepts as part of the relationships between the self interest groups. This pluralist approach sees the mediation as the story whereas the classical political economist views the systematic issues that construct the relationship or recognise the structural inequities, as the key issues.

The link between stakeholder and legitimacy theory perspectives is that they are both concerned with mediation, modification and transformation but each are approached from a different perspective (Gray et al. 1995). Stakeholder theory sees the world from the perspective of the management of the organisation; they are concerned with the continued existence of the organisation and see the support of stakeholders as crucial to that continued existence. They seek approval from the stakeholders and, as such, CSR from their perspective seeks to engage stakeholders and the organisation in dialogue. Legitimacy theory, in parts of the literature, is concerned with organisation-society negotiation reflecting a bourgeois political economy (Dowling & Pfeffer, 1975) while other literature (Patten 1992) focuses on the systematic responses as well as intra-system mediations, placing this area of the literature at the classical end of the political economy spectrum (Figure 1).

Figure 1: Theory development



In conclusion, it is suggested that the different theoretical perspectives need not be seen as competing explanations, but as sources of interpretation of different factors at different levels of resolution (Gray et al., 1995). In this sense, legitimacy theory and stakeholder theory enrich, rather than compete for, our understandings of corporate social disclosure practices.

3.2 Outputs of Social Accounting and Factors influencing Social Reporting Practices

In examining the literature the researchers note that reports to date, where they are formally prepared, fall into one of two types, Corporate Social Reports (also referred to in some literature as Corporate Social Disclosure) or Sustainability Reports. Corporate Social Reports/Corporate Social Disclosure (CSR/CSD) have been categorised as content specific, reporting on the social dimensions and excluding the financial aspects. Sustainability Reports (name adopted by reporting entities) incorporate all three aspects of the triple-bottom-line. A recent review of Canadian companies revealed a trend towards the adoption of Sustainability Reports with organisations moving from reporting solely on environmental performance to the inclusion of social and economic factors (Stratos Inc. 2001). Of course while these reports are titled “Sustainability reports” the existence of such a report does not mean an organisation is sustainable (Milne 2007; Milne et al. 2008)

A number of studies have examined the format of reports, principally in the arena of environmental reports and have found them to be predominantly descriptive (Gamble et al. 1995; Deegan et al. 2002; Deegan & Rankin 1996; Fowler et al. 1999; Kreuze et al. 1996; Hess et al. 2002).

Adams, Hill and Roberts (1998) examined the influences of size, industry grouping and country of origin on corporate social reporting. Country of origin had not been considered in previous studies but was considered to be a potential influence given the increasing globalisation of business and international

harmonisation of accounting standards. Adams Hill and Roberts' (1998) study, in addition to finding and confirming in some instances the significance of country and culture-specific factors (Hackston & Milne 1996), also revealed that size and industry grouping were significant influences on social reporting practices. There was also a significant inter-relationship between size and industry confirming the connection found by Hackston and Milne (1996) in a study of New Zealand corporations. In this same study the authors sought to explain this connection by reference to risk (Hackston & Milne 1996). Certain industry sectors are perceived to carry greater risks, specifically risk associated with the environment, than are other industry sectors. Stakeholders seek greater information and report preparers seek to meet the demand for information and to allay fears associated with the industry. Industries in the mining and resource extractive group are examples of those with higher risk, and have correspondingly higher reporting levels; those in retail and services with less perceived environmental risk (Hackston & Milne 1996) have less incentive to report. The banking sector as a service industry would have low environmental risk but could be considered to have higher incentives to disclose social aspects (McGrath, 2003).

Study of disclosures by BHP over a 15 year period found that management used positive social information to counter unfavourable media attention (Deegan et al., 2002). The basis of using media attention as a gauge for management's motivation was the belief that the media reflects and/or shapes community concerns (Deegan et al., 2002). Management was aware of media coverage and felt a necessity to respond to issues raised by the media (O'Donovan, 2002a). A strong association was noted between disclosure policy and community concern as reflected by media reporting (Deegan et al., 2002). Previous studies found reporting of social and environmental disclosures has been generally qualitative and favourable (Deegan et al., 2000).

O'Donovan (1999) found that reports in the news media affected what information management disclosed and that managers acknowledged that they used the annual report to respond to perceived public concerns. Further, "corporate management believe, to some extent, that the annual report is an effective way for informing and educating the public of the corporation's view about certain environmental issues" (O'Donovan, 1999, p.82). The function of the report as an information source is maintained but it is the potential manipulation of content and the veracity of the message from the reports that raises concern with the current position of voluntary and unregulated disclosures.

In summary, the literature reveals two broad foci, studies examining what drives the organisation to report and studies of the outputs. The drivers of reporting are captured under decision useful studies, economic studies and social and political studies while the outputs examine the nature of the information reported, and the characteristics of organisations most likely to publish resulting in two types of reports.

3.3 *Regulatory requirements*

There is no mandatory requirement to report social and environmental information under current Australian accounting standards. The Statement of Accounting Concepts No 2 (SAC 2) paragraphs 16 to 20 does, however, recognise that users of

general purpose accounts are resource providers inclusive of employees, lenders, creditors, suppliers and investors, recipients of goods and services and parties performing a review or oversight function which recognises the expanded definition of stakeholders. This is in contrast to New Zealand's Financial Reporting Standard 2 (FRS 2) which does not require disclosure of non-financial information and restricts the definition of users to those with a financial interest in the company.

While accounting standards are yet to recognise social and environmental reporting Section 299(1)(f) of the *Corporations Act 2001* requires the annual directors' report to detail compliance with environmental regulations.

Further, the *Intergovernmental Agreement on the Environment, Commonwealth Act 1992* requires local, state and national government bodies in Australia to adopt the concept of ecologically sustainable development. The importance of governments in respect of environmental developments can not be underestimated, since it is at the local government level that the majority of development decisions are made and thus it is at this level that the greatest potential for environmental accounting exists (Burritt 1999).

Financial sector organisations have also been subject to some mandatory reporting requirements under the *Financial Services Reform Act 2001*. Section 10 13 DA requires the preparation of Product Disclosure Statements (PDS). The statement details the extent to which labour standards, environment, social or ethical considerations are taken into account in the selection, retention or realisation of the investment. If such issues are not considered then this must also be disclosed.

Internationally, the Global Reporting Initiative (GRI 2002 and 2006) set out a comprehensive list of possible reporting categories for social and environmental reporting. The indicators were developed in order to support the ten Valdez Principles formulated by the Coalition for Environmental Responsible Economies (CERES). The ten principles being:

1. Protection of the biosphere
2. Sustainable use of natural resources
3. Reduction and disposal of waste
4. Wise use of energy
5. Risk reduction
6. Marketing of safe products and services
7. Damage compensation
8. Disclosure
9. Environmental directors and managers, and
10. Assessment and annual audit

Social Accountability 8000 (CEPAA 2000) - US Council on Economic Priorities, EMAS ISO 1400 and the Institute of Social and Ethical Accountability (ISEA 1999) AA 1000 provide guidelines for benchmarking performance and a best practice measure against which organisations and external parties may judge the validity of ethical claims (Mathews 2002).

3.3.1 Mandatory Disclosures

The advantages of having a statutory mechanism to require reporting include:

- ♦ most of the information is extractable from existing internal accounting and information systems and would be virtually costless to produce;
- ♦ it avoids the problem of trying to persuade individual companies to be the first to make voluntary disclosures, as all would be affected from the same commencement date;
- ♦ disclosures would be substantially uniform and comparable amongst companies; and,
- ♦ standardised disclosures could be used by researchers to determine whether in fact social responsibility information is used by interested parties (Eddie, 1983).

Burritt (2002, p.70) offers the following in support of mandatory reporting:

- ♦ a voluntary system has left Australia behind best international practice in respect of environmental reporting;
- ♦ mandatory reporting adds little cost if companies make the information available in electronic form, the information is already gathered for other regulators;
- ♦ the list of countries with mandatory reporting is growing.

However, it is not expected that disclosures would be easy to implement as the list includes sensitive information and it could be expected that some organisations/managers would resist publication. Any resistance adds to the argument that current voluntary disclosures are really public relations statements. Deegan (2002) was apprehensive because studies consistent with legitimacy theory indicated that unless specific concerns are raised then no accountability appears to be acknowledged. Unless community concerns were raised (perhaps as a result of a major social or environmental incident attracting media attention), there will be little or no corporate disclosure.

3.3.2 Voluntary Disclosure

Support of a mandatory reporting process would appear to contradict the ideology of western democratic governments encouraging globalisation and free markets:

"In a political climate with a government that has demonstrated its belief in minimising as much as possible the amount of social responsibility and accountability legislation, it is obviously in the interest of both government and business to demonstrate that further legislation is not necessary. Thus, voluntary disclosure has little to do with social responsibility and accountability, but may be seen as a useful way of re-inforcing the Government's 'free-market' ideology and anti-legislative stance" (Adams, Hill & Roberts, 1998, p.17).

Arguments against a mandated reporting system include that:

- ♦ The directors' report is inappropriate. This argument presupposes the purpose of the directors' report is to comment on financial matters only. If a broader view of reporting is adopted then the directors' report should encompass all activities that impact on the company. Currently it is common for non-financial matters to be included in the company reports as part of the directors' comments and/or in statements on the future direction of the organisation.
- ♦ There are no safeguards against liability claims based on disclosure.
- ♦ Organisations must already disclose *material* information that affects the prices or value of securities: but how is material defined?

- ♦ It adds unnecessary cost and there is no evidence that voluntary reporting is not working.

4 A multi-dimensional matrix approach to classification

4.1 Time and Country of origin dimensions

Previous sections have discussed the underlying philosophical approach and classification by the nature of the research, extending from empirical studies to regulatory frameworks and other reviews. Clearly there has been a varied approach to the study of social and environmental accounting. The Mathews (2004) matrix combined the two approaches, underlying philosophical approach and the nature of the research in order to develop a framework within which to organise social and environmental accounting literature.

In the same way that early empirical researchers attempted to identify, measure and report what was being disclosed in the annual reports and financial statements, there was little attempt made to determine in the early years the motivation of those making disclosures (Mathews, 1993). The matrix model attempts to provide some insight into the influences and motivations behind the research undertaken in an attempt to better understand the drivers of the research by providing a model to link the literature to events and influences which may drive the research beyond the research philosophies and content type.

An understanding of the drivers of the research into social and environmental accounting will assist in providing a better understanding of the knowledge development in the area of social accounting and specifically will provide greater insight into understanding the proposals for action and models for changes proposed (Mathews 2003).

This paper offers an improved model adding the additional dimensions of time and country of origin as quasi measures of the underlying social, economic and political forces. The country of origin was considered as representing the political and institutional frameworks and cultural influences common to a regional group thus adopting a policy convergence perspective (Bernard 1996). Time places the research into an historical context and provides an easy connection to align the research with physical, political and social events and in order to explore potential causal relationships and drivers of social and environmental research.

The authors country of origin was grouped based on regions for convenience and reflects cultural and regional similarities. Six national groups were identified for the purposes of presenting the matrix model: Australia/New Zealand (Aus/NZ), United Kingdom (UK) Canada (Can), United States (US), Europe (Eur) and Asia. A further category of International was included where the research was not clearly identified as emanating from one nation or national grouping. Time was based on the date the paper was published. The decision to base on publication date was for consistency as not all papers indicated the time of the study or when the paper was originally sent for publication. While this may be a limitation when interpreting the model it was adopted in the model illustration for consistency.

4.2 An Illustration of the Extended Matrix

In order to illustrate the application of the matrix a small selected sample of authors (Table 1) were classified and represented in Figures 2 and 4. The sample was selected to provide an example of the application of the model and not to draw any conclusions regarding motivation. Figure 2 graphically represents the inclusion of time and presents a snapshot based on the selected sample, of the underlying philosophy and the contribution to the literature.

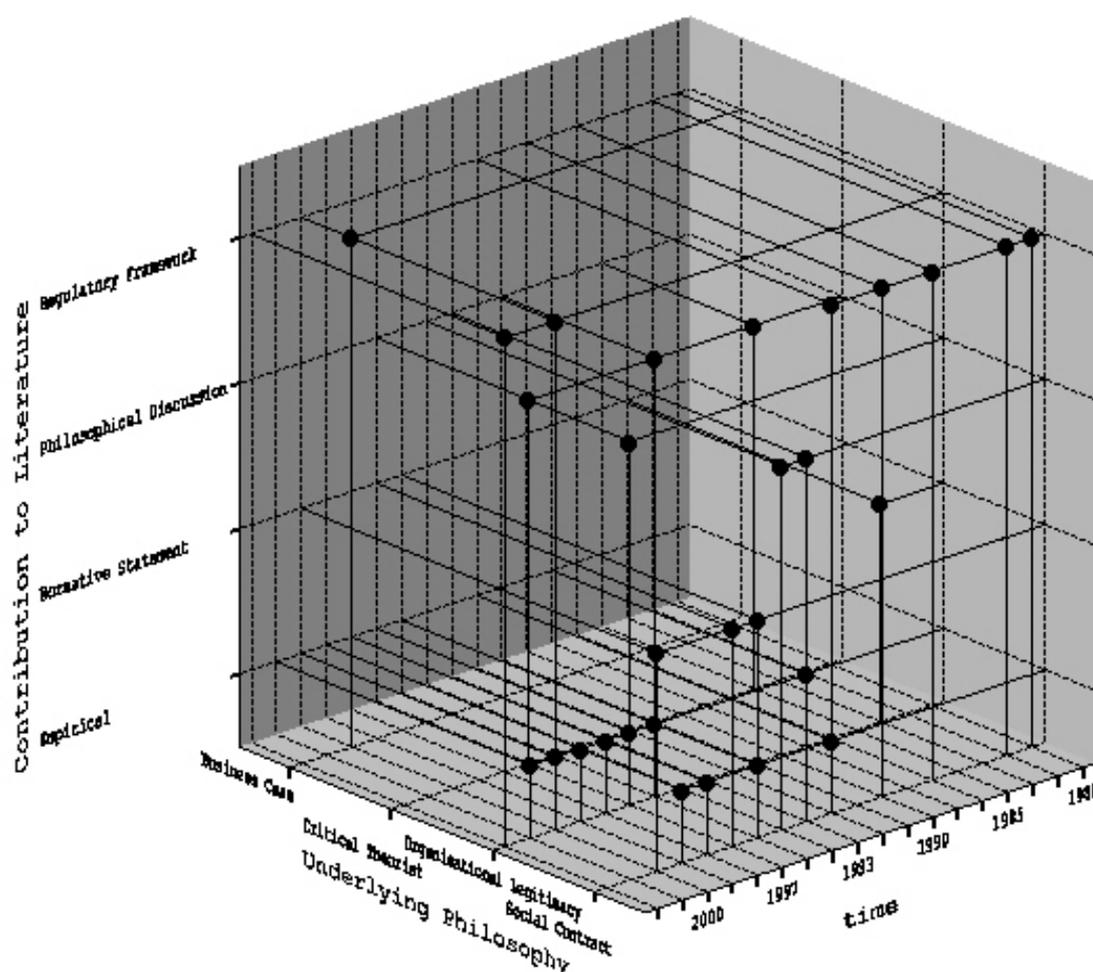
Table 1: Selected sample of Social and Environmental Accounting Authors

| Authors | Underlying Philosophy | Contribution to Literature | Time | National group |
|--|------------------------------|-----------------------------------|-------------|-----------------------|
| Adams | OL | Em | 1998 | UK |
| Brown and Deegan | OL | Em | 1998 | Aus/NZ |
| Buhr | SC | Em | 1998 | Can |
| CERCLA - Comprehensive Environmental Response Compensation and Liability Act | SC | RF | 1980 | US |
| CICA | SC | RF | 1990 | Can |
| CICA Canadian Institute of Chartered Accountants | SC | RF | 1992 | Can |
| Deegan and Gordon | OL | Em | 1996 | Aus/NZ |
| Deegan and Rankin | OL | Em | 1996 | Aus/NZ |
| Deegan and Rankin | OL | Em | 1999 | Aus/NZ |
| Deegan et al | OL | Em | 2000 | Aus/NZ |
| Elkington | OL | PD | 1997 | UK |
| EMAS | BC | RF | 2000 | UK |
| Environmental Protection Act | SC | RF | 1990 | UK |
| Frost and Wilmshurst | | Em | 1996 | Aus/NZ |
| Gray et al | SC | NS | 1996 | UK |
| GRI Global Reporting Initiative | OL | RF | 2000 | Int |
| GRI Global Reporting Initiative | OL | RF | 2002 | Int |
| Guthrie and Parker | OL | Em | 1989 | Aus/NZ |
| Mathews | OL | NS | 1984 | Aus/NZ |
| Mathews | SC | PD | 1993 | Aus/NZ |
| Mathews | SC | PD | 1995 | Aus/NZ |
| Mathews | SC | NS | 2000 | Aus/NZ |
| Mathews | SC | NS | 1997 | Aus/NZ |
| Milne | SC | Em | 1992 | Aus/NZ |
| Neu et al | OL | Em | 1998 | Can |
| Owen et al | CT | PD | 1997 | UK |
| Parker | CT | PD | 1991 | Aus/NZ |
| Patten | OL | Em | 2000 | US |
| SARA - Superfund Amendment and Reauthorization Act | SC | RF | 1986 | US |
| Savage | OL | Em | 2000 | Can |
| Tilt | OL | Em | 2001 | Aus/NZ |
| Tinker | CT | PD | 1985 | Aus/NZ |
| Tinker et al | CT | PD | 1991 | Aus/NZ |

| | | | | |
|---|----|----|------|--------|
| UEC - Européenne des Experts Comptables Economiques et Financiers | SC | RF | 1983 | Eur |
| Verschoor | SC | Em | 1998 | US |
| Walden and Schwartz | OL | Em | 1997 | US |
| Williams | SC | Em | 1999 | Aus/NZ |

| | | |
|------|------------------------------|-----------------------------------|
| Key: | Underlying Philosophy | Contribution to Literature |
| | BC Business Case | Em Empirical |
| | CT Critical theorist | NS Normative statement |
| | OL Organisational Legitimacy | PD Philosophical Discussion |
| | SC Social Contract | RF Regulatory Framework |

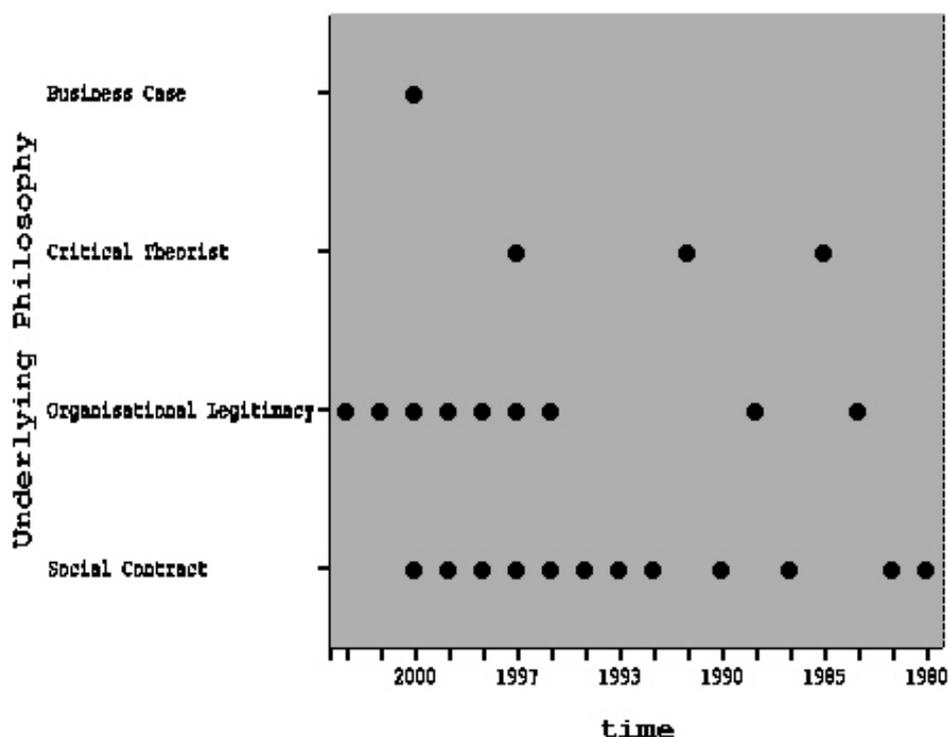
Figure 2: A Three-dimensional Matrix Approach to the Classification of the Social and Environmental Accounting Literature combining the Underlying Philosophy, Type of Contribution and Time dimensions



Based on the small selected sample presented in Table 1 there was a strong move to Empirical Studies based on Organisational Legitimacy in the late 1990's to 2000. A clearer representation can be seen in Figure 3 where the 3-dimensional

figure has been rotated to display the Contribution to Literature and Time axis only.

Figure 3: Two dimensions of the Matrix with Underlying Philosophy and Time



A Rotation of the Three-dimensional Matrix Approach to the Classification of the Social and Environmental Accounting Literature combining the Underlying Philosophy, Type of Contribution and Time dimensions.

When Country of Origin replaces Time a similar diagram could be produced although not represented in this paper. Based on the sample used in this paper it would indicate that Empirical Studies utilising Organisational Legitimacy and Social Contract originate in the US, Canada and Australia/New Zealand. Philosophical Discussion predominates through the work of the Critical Theorists in the UK and Australia/New Zealand.

Combining all four dimensions gives a greater depth but more complexity to the model and can be achieved by combining the 3 dimensional matrix produced in this paper. Reproduction of the matrix in a readable hard copy form is problematic due to the complexity of the model but can be achieved by the use of different coloured dots or shapes for the dots within the matrix.

The purpose of the paper was to present a multi-dimensional matrix model as a tool to assist newcomers to the field of social and environmental accounting research to classify and engage with the literature and to gain a greater understanding of the literature and potential drivers of the type and nature of the research undertaken to date. It is recognised that classifying the literature into the groupings discussed in this paper can be subjective, indeed challenging at times, and it is not proposed that the classifications used as examples are definitive, or that any of the findings discussed in this paper, based on the selected sample, are truly reflective of the literature to date. The matrix presents an innovative mechanism to identify clusters of activity worthy of further investigation about the motivations for the underlying philosophy and the type of contribution including political pressures for social reform, changes to economic policy and significant social or environmental actions as examples. Further, trends in publication may be able to be identified giving insight into areas of research interest displayed by the editors of accounting journals.

5 Concluding comments

Organising a massive volume of literature published over a period of more than thirty years is a formidable task for most graduate students and beginning researchers; the intention of the matrix project is to provide researchers, especially those with less experience, with a system for the classification of the Social and Environmental Accounting literature. The paper proposes an extension to the matrix model developed by Mathews (2004) to include time and nation of origin as further dimensions. Time and nation of origin may be construed to be quasi measures of the underlying social, economic and political forces, and as additional dimensions, presents an opportunity to gain a greater appreciation of the drivers of social accounting research. The model presented includes examples to show the potential usefulness of the extended matrix providing the opportunity to both categorise the literature and identify trends in the literature. Application of the model to sub-disciplines within social accounting, for example environment or human resources would also provide valuable insight into the development of the research. Expanding the underlying philosophical dimensions beyond those identified by Mathews (2004) may further enhance the multi-dimensional model developed in this paper. Further, the model has the potential to act as a tool for any discipline, particularly multiple discipline fields where there are a range of underpinning philosophies and where political, economic and cultural influences over time would be expected.

As researchers gain experience within their chosen field they can make informed changes and modifications to the model presented here. This model is intended to be a help, and not rigid or a hindrance to creativeness.

Reference List

- [1] Adams, C. A. & Frost, G. R., "The development of the corporate web-site as a medium for communication on ethical and social and environmental issues: A comparative analysis of Australia, Germany and the United Kingdom" 13th CSEAR Congress (2003).
- [2] Adams, C. A., Hill, W & Roberts, C.B., "Corporate social reporting practices in Western Europe: legitimating corporate behaviour?" **British Accounting Review** (1998), 30, pp. 1-21.
- [3] Bernard, M., "States, social forces, and regions in historical time: toward a critical political economy of Eastern Asia" **Third World Quarterly**, (1996), 17(4), pp. 649-665.
- [4] Burritt, R., "Thinking local: towards an environmental standard" **Australian CPA**, (1999), pp. 57-59.
- [5] Burritt, R., "Stopping Australia killing the environment - getting the reporting edge" **Australian CPA**, (2002), 72(3), pp. 70-72.
- [6] Deegan, C., "The legitimising effect of social and environmental disclosures - a theoretical foundation" **Accounting, Auditing & Accountability Journal**, (2002), 15(3), pp. 282-311.
- [7] Deegan, C. & Rankin, M., "Do Australian companies report environmental news objectively? An analysis of environmental disclosures by firms prosecuted successfully by the Environmental Protection Authority" **Accounting, Auditing & Accountability Journal**, (1996), 9(2), pp. 50-67.
- [8] Deegan, C., Rankin, M. & Tobin, J., "An examination of the corporate social and environmental disclosures of BHP from 1983 – 1997" **Accounting, Auditing & Accountability Journal**, (2002), 15(3), 312-343.
- [9] Deegan, C., Rankin, M. & Voight, P., "Firm's disclosure reaction to major social incidents: Australian evidence" **Accounting Forum**, (2000), 24(1), pp.101-130.
- [10] Dowling, J. & Pfeffer, J., "Organisational legitimacy: Societal values and organisational behaviour" **Pacific Sociological Review**, (1975), 18(1), pp. 122-136.
- [11] Eddie, P. H., "Social accounting and social disclosure: A loss of enthusiasm" **Accounting Forum**, (1983), March.
- [12] Fowler, M., Hart, C. & Phillips, C., "Social and Environmental reporting: a snapshot of New Zealand" **Australian CPA**, (1999), Dec 69(11), pp30-33.
- [13] Gamble, G. O., Hsu, K., Kite, D. & Radtke, R. R., "Environmental disclosures in annual reports and 10Ks: An examination" **Accounting Horizons**, (1995), 9(3), p. 34.
- [14] Gray, R., Kouhy, R. & Lavers, S., "Corporate social and environmental reporting: A review of the literature and a longitudinal study of UK

- disclosure” **Accounting, Auditing & Accountability Journal**, (1995), 8(2), p. 47.
- [15] Hackston, D. & Milne, M. J., “Some determinants of social and environmental disclosures in New Zealand companies” **Accounting, Auditing & Accountability Journal**, (1996), 9(1), pp. 77-108.
- [16] Hess, D., Rogovsky, N. & Dunfee, T. W., “The Next Wave of Corporate Community Involvement: Corporate Social Initiatives” **California Management Review**, (2002), 44(2), pp. 110-125.
- [17] Jackson, P. M. (1982). *The political economy of bureaucracy*. (Philip Alan, Oxford).
- [18] Kreuze, J. G., Newell, G. E. & Newell, S. J., “Environmental disclosures: What companies are reporting” **Management Accounting**, (1996), 78(1), p. 37.
- [19] Mathews, M. R., **Socially responsible accounting**. (Chapman and Hall, London, 1993).
- [20] Mathews, M. R., “Towards a mega-theory of accounting” **Asia-Pacific Journal of Accounting**, (1997a), 4(2), pp. 273-289.
- [21] Mathews, M. R., “Twenty-five years of social and environmental accounting research Is there a silver jubilee to celebrate?” **Accounting, Auditing & Accountability Journal**, (1997b), 10(4), pp. 481-531.
- [22] Mathews, M. R., “A Brief Description and Preliminary Analysis of Recent Social and Environmental Accounting Research Literature”. Working Paper, Charles Sturt University, (2002), No. 14/02.
- [23] Mathews, M. R., “Ethical Accounting to Measure, Manage and Enhance Performance: An attempt to relate underlying philosophies/motivations and models/operating systems”. Working Paper, Charles Sturt University, (2003), No. 25/03.
- [24] Mathews, M. R., “Developing a matrix approach to categorise the social and environmental accounting research literature” **Qualitative Research in Accounting and Management**, (2004), 1(1), pp. 30-45.
- [25] Mathews, M. R. & Perera, M. H. B., **Accounting theory and development**. (3 edn. Thomas Nelson, Melbourne, 1996).
- [26] Mathews, M. R. & Reynolds, M. “Attempting to relate underlying philosophies/motivations and social and environmental disclosures” Fourth Asia Pacific Interdisciplinary Research in Accounting Conference, Singapore, (2004)
- [27] Milne, M. J.. Downsizing Reg (Me and You)! Addressing the 'real' sustainability agenda at work and home. In R. Gray & J. Guthrie (Eds.), *Social Accounting, Mega Accounting and beyond* (pp. 49-66). St Andrews: The Centre for Social and Environmental Accounting Research (2007)

- [28] Milne, M. J., Ball, A., & Gray, R. (Wither Ecology? The Triple Bottom Line, the Global Reporting Initiative, and the Institutionalization of Corporate Sustainability Reporting Paper presented at the Accounting and Finance Association of Australia and New Zealand conference (2008).
- [29] McGrath, D., "Aspects of social accounting: bank disclosures". Working Paper, Charles Sturt University, (2003), No.12/03.
- [30] O'Donovan, G., "Managing legitimacy through increased corporate reporting: an exploratory study" **Interdisciplinary Environmental Review**, (1999), 1, pp. 63-99.
- [31] O'Donovan, G., "Environmental disclosures in the annual report: Extending the applicability and predictive power of legitimacy theory" **Accounting, Auditing & Accountability Journal**, (2002a), 15(3), pp. 344-371.
- [32] O'Donovan, G., "The social bottom line" **Australian CPA**, (2002b), Dec, pp. 66-69.
- [33] Patten, D. M., "Intra-industry environmental disclosures in response to the Alaskan oil spill: a note on legitimacy theory" **Accounting, Organizations & Society**, (1992), 17(5), pp. 471-475.
- [34] Stratos Inc. "Stepping forward, Corporate sustainability reporting in Canada", published November 2001 <<http://www.stratos-sts.com/pages/publica010.htm#SteppingForwardReport>> [Accessed 15 Jan. 2005].