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Abstract: The proportion of business ethics literature devoted to accounting and the proportion of academic accounting literature devoted to ethical issues are both small, yet over the past two decades there has been a steady accumulation of research devoted to ethical issues in accounting. Based on a database of more than 500 articles gathered from a wide range of accounting and business ethics academic journals, this paper describes and analyses the characteristics of what has been published in the past twenty years or so. It identifies and explores patterns and trends in publication outlets and the type of research conducted. Furthermore, through a comparison with issues that have been raised in the general business ethics literature, it offers guidance to researchers who intend to take the field of accounting ethics forward using empirical methods.

Key Words: Accounting ethics; contents and categories; empirical research; literature review; publication patterns

Taking stock of accounting ethics scholarship: a review of the journal literature

Ethical issues have long arisen in the context of accounting, but accounting ethics did not receive much attention from researchers until the mid-late 1980s, when, for example, the American Accounting Association (AAA) instigated the annual AAA Ethics Research Symposium. Since then, although the proportion of business ethics journal pages devoted to accounting and the proportion of accounting journal pages devoted to ethical issues are both small, there has been a steady accumulation of research such that a corpus of relevant literature now exists in academic journals. It is sensible to take stock of that research, both to understand what has been achieved so far and to help determine future priorities.

However, unlike in the general field of business ethics, where several stocktaking articles have been undertaken (e.g. Collins, 2000;¹ Hosmer, 1996; Werhane and Freeman, 1999), the field of accounting ethics has been subjected to relatively little systematic review. Bernardi (2005) and Bernardi and Bean (2007) examined the level of accounting ethics research published over a 30 and 45 year period, respectively. They found that there had been an increase in the level of ethics research during the period examined, but that, in general, accounting ethics research had not kept pace with general business ethics research. This finding was corroborated by Uysal (2010), who conducted a bibliometric citation and co-citation analysis of accounting ethics publications. He identified articles that had been cited in peer reviewed journals a minimum of ten times over a 20 year period, in order to identify the most influential papers. Many of the earlier (1980s) papers have been heavily cited over the years and continue to be so (Uysal, 2010, p. 140).

Useful though these studies have been, it is important that we continue to reflect on a relatively young field such as accounting ethics (Uysal, 2010, p. 138). The current paper offers several additional areas of insight. In particular, since the earlier papers that Uysal identifies, there has been an increase in the number of outlets in which accounting ethics research can be published. Given this, what patterns and trends can be discerned? What kinds of topics have been covered? How has the research been pursued? Finding that a significant proportion of research has engaged in empirical investigation, we also seek to determine how that research measures up on dimensions that have been highlighted as areas of concern in business ethics research more generally.

The paper is structured as follows. The first section provides an overview of the ‘research method’, in that it describes how a bibliography for the literature review was constructed. The second section examines publication patterns and trends, paying particular attention to which journals feature most heavily, while the third analyzes the contents of the articles according to broad themes. A further section then concentrates on empirical research in accounting ethics, focusing on methodological issues that have been raised in the general business ethics literature. The conclusions of the paper are summarized in the final section.

Method: The literature search

In order to undertake a review of the relevant literature it is necessary to possess a suitable bibliography. The Centre for Accounting Ethics at the University of Waterloo in Canada has, for several years, made available an accounting ethics bibliography on its website. The bibliography provided some useful references. However, at the time of finalizing the research for this paper, it included no articles dated later than 1997.² In order to provide a review of the literature it was therefore necessary to undertake a more comprehensive, systematic literature search of our own. Although the literature search was UK-based, the coverage of academic journals was international (though limited to the English language).

The literature search was carried out using several different methods:

- CD-ROM utilizing Anbar/Emerald, European Business and BIDS;
- Internet search using Emerald and Proquest as well as backing up CD-ROM search on Anbar and BIDS;
- OPAC (a system for searching other library catalogues in the UK);
- Manual search of business and accounting academic journals in two UK university libraries;
- Manual search in Business Periodicals Index;
- Checking bibliographies of published articles;
- Current awareness services such as Zetoc from the British Library.

Database searches of titles, abstracts and key words were made using search terms {ethics and accounting/ancy/ants} and {ethical accounting/ancy}. The use of such terms limited the search to English language publications. As the research progressed, the initial literature search was followed up on a regular basis with both manual and internet searches for new articles in order to keep informed of any new developments in the field.

Although the bibliography is not necessarily exhaustive, the use of a variety of methods at different times provides some reassurance that it is reasonably comprehensive. Moreover, to the extent that we report patterns and trends, there is no reason to suppose that any particular bias is present in the bibliographic database.

Of course, almost any article in accounting could be argued to entail ethical issues at some level. However, the review was concerned with identifying, counting and analyzing only articles that paid some significant explicit attention to accounting ethics. Furthermore, two particular areas of accounting scholarship – which might be considered to have ethical relevance – were deliberately omitted from the bibliography, namely social/environmental accounting and critical accounting. There were two principal reasons for this. First, both are relatively unconcerned with enhancing the operation of current mainstream accounting practice. Their focus is on more radical critique or fundamental change. Second, the relevant scholarly output appears in a relatively limited range of journals. Hence is not difficult to find, and it has already been subject to systematic review (e.g. Gray et al., 1995; Gray, 2001; Mathews, 1997; Power and Laughlin, 1992). Consistent with this decision, it is notable that Collins (2000, p. 22, p. 28) separately identifies ‘accounting’ and ‘social accounting’ in the index to his business ethics review article.

The data collected from the literature search were then compiled in an Excel database that includes details of journal and article titles, volume details, author, and the subject matter of the article. Abstracts of the articles, where available, were also recorded in a separate Word database. The database contains more than 500 academic articles. The majority of the tables used in the analysis will concentrate on 520 articles collected for a particular project from which this paper is derived (i.e. those up to and including 2008).

Publishing patterns and trends

The articles identified as a result of the bibliographic search came from a wide range of journals, including both business ethics and mainstream accounting journals. Table 1 provides an indication of which journals have been at the forefront of publishing material on accounting ethics. It also includes the ratings from the (UK) Association of Business Schools' Journal Quality Guide (JQG) for information; the higher the number, the higher the perceived quality of the journal.

Journals which published more than five articles have been named individually in Table 1. All the others included in the 'Other refereed journals' category are detailed in a footnote to the Table. Although past publication patterns might reflect submission patterns and are not a complete guide to editorial policy, especially in the future, this information is likely to be of interest for scholars seeking to publish their research on ethical issues in accounting.

Insert Table 1 here

Two journals account for almost half the articles: Journal of Business Ethics (JoBE) and Research on Professional Responsibility and Ethics in Accounting (RPREA, which appears in the form of a book, usually on an annual basis). The significance of JoBE arises because it was published throughout the period (Business Ethics Quarterly and Business Ethics: A European Review began during the period under review) and, particularly in recent years, has published a very large number of pages per annum (see Collins (2000) for a review of its growth).

Thus, although a total of 119 articles represents a significant contribution to the bibliography, it is only a small minority of the total number of articles published in JoBE during the period covered. Not surprisingly, given its title, this is not the case with RPREA. First appearing in 1995 as Research on Accounting Ethics, all its articles were included in the bibliography except for the case studies published at the back of some of the later volumes. No other journal, in business ethics or accounting, has contributed an unusually high number of articles to the bibliography.

When the ABS ratings are examined, it is encouraging to note that, although a few of the journals are not included, a good number of them have good ratings. 188 articles (39.2% of those not in the ‘Other’ category) have been published in journals rated as 3 or 4, and 261 (54.4%) have been published in journals rated as at least 2. Such journals tend to have relatively high visibility within the academic community. (Further information about the rating system is included in a footnote to Table 1.)

Given that it accounts for almost a third of the bibliography, it is an interesting question whether the appearance of the specialist RPREA led to an increase in the amount of material published on accounting ethics. To come to a definitive judgment might require a suitable counter-factual and the figures are not suitable for rigorous statistical analysis. The figures in Table 2 are strongly suggestive that it did so, though, at least initially, with a general rise in the volume of accounting ethics articles published. However, the number of articles published outside of RPREA peaked in the mid-1990s, and since then the underlying trend has been downwards. There is no evidence in Table 2 that concerns about accounting ethics at the beginning of the 21st century, following several well-publicized scandals, led to an increase again. Perhaps no such effect is visible because of the length of time it takes to conduct research and get it published in refereed journals. However, by the end of the period under review some increase might have been expected, if it was going to happen at all.

Insert Table 2 here

There was possibly a slight upward trend in the number of articles during the first half of the 1990s (there was certainly a jump in 1994), but the appearance of RPREA does seem to be associated with a change in the total number of journal articles dealing with accounting ethics at that time. However, it is possible that some of the articles published in RPREA would otherwise have been published in other journals; they would otherwise have shown some increase. Another way of interpreting the data is to say that, even with the launch of RPREA, accounting ethics articles have

continued to appear in more generalist accounting and business ethics journals, but at rather low levels. Whether this is good for accounting ethics is debatable. On the one hand, it is useful to have a specialist periodical. Such a periodical might both help to increase the output of accounting ethics articles and provide an obvious point of reference for readers interested in the field. On the other hand, if it also attracts articles that would have been published elsewhere, it might contribute to a “ghettoization” of the literature, with less impact on scholars and readers who do not have an existing special interest in accounting ethics.

Table 2 also suggests that – leaving RPREA as a separate category – accounting journals have published more accounting ethics research than have business ethics journals. A perusal of the table suggests that this resulted from activity in accounting journals during the 1990s. The overall finding contrasts with the findings of Bernardi and Bean (2007). The difference may result from differences in criteria for deciding what counts as an accounting ethics article; as explained earlier, ours was a relatively simple, objective means of identifying accounting ethics articles. As such, it may have excluded articles that other researchers would include, and perhaps those articles are more likely to have been published in business ethics journals than accounting journals. However, there is no obvious reason for that to be the case.

In academic life, owing to disciplinary, methodological and other differences, different types of journals tend to display differences in the types of research and scholarship published. One very simple distinction that can often be observed is between empirical and non-empirical research approaches. This distinction can be over-drawn; for example, conceptual papers depend on empirical categories (Cowton, 1998) and empirical papers might contain conceptual developments. Nevertheless, it marks a significant distinction that has featured in several discussions of business ethics research. One reason for this is that work in a philosophical tradition tends to be non-empirical, whereas much social scientific research involves the collection and analysis of empirical data (Donaldson, 1994; Weaver and Trevino, 1994). Taking the articles covered by Table 2, Table 3 identifies the proportion of empirical articles published in accounting and business ethics journals, with RPREA shown as a separate category.

Insert Table 3 here

It might have been expected that, because of the social scientific orientation of much research in accounting, accounting journals would exhibit a stronger tendency than business ethics journals towards empirical research. However, a chi-square test at a significance level of 5% showed there to be no statistically significant difference. Overall, Table 3 shows that about half of the articles on accounting ethics include a significant amount of empirical research.

A further analysis was undertaken to ascertain whether there had been any significant change in the percentage of empirical articles published over time. Table 4 suggests that, although there are fluctuations from year to year, there does not seem to be any significant trend during the period under review. Overall, some sort of balance is being maintained.

Insert Table 4 here

Analysis of content

The analysis thus far has identified a significant, if not substantial, literature on accounting ethics published in many different journals, with an initial increase from the mid-1990s associated with the launch of RPREA. But there are many facets of accounting, and seeking to describe the current stock of accounting ethics journal literature prompts the question of what that literature addresses. This requires a method for categorizing the articles in the bibliography.

The contents of the database were analyzed using the categories employed in the biennial British Accounting Review Research Register (Helliard and Gray, 2000), which lists accounting and finance lecturers in the British Isles by institution and provides further information about them, including their research interests. Those research interests are then classified for indexing purposes. Although there are other ways of classifying the literature, the categories provide a reasonable and well established overview of accounting research and hence are a useful starting point for exploring what kind of work lies within the general field of accounting ethics. The twenty categories used by the Register³ are as follows:

- Accounting Profession
- Accounting Theory
- Auditing

- Market Based Accounting Research
- Computing
- Education
- Financial Accounting and Reporting
- Government, Public Sector and Other Not-For-Profit Organisations
- Industries and Specific Organisations
- International Aspects
- Management Accounting
- Methodology and Methods
- Taxation and Law
- Other Aspects of Accounting and Finance Practice, Theory and Research
- Accounting History
- Critical, Social and Environmental
- Financial Institutions Instruments and Regulation
- Managerial Finance/Financial Management
- Financial Markets and Market Behaviour
- Other Business Finance

Having started with this well established set of categories, adjustments were made to suit the purpose and focus of the current paper. For example, the category of Industries and Specific Organisations was considered unnecessary as articles within this category could be placed in another (e.g. Accounting Profession, Management Accounting or Auditing) if they had significant accounting (and ethics) content. Several of the categories were felt not to be relevant to the theme of accounting ethics, especially the finance categories (e.g. Financial Institutions Instruments and Regulation, Financial Markets and Market Behaviour), and were therefore not used. As explained

earlier, it was also decided that the literature search would not include articles that fell in the Critical, Social and Environmental category.

Where an article covered more than one topic, if it was predominantly based on one area it was included in the total for that topic. However, if it covered two or more distinct areas in more or less equal proportions, it was included in the count for both topics. This led to 46 articles being 'double-counted' and explains why the total in Table 5 is different when compared with the earlier tables.

Insert Table 5 here

It is not claimed that Table 5 is definitive, since it does involve a significant degree of subjectivity, but it is useful as a general indication of the shape of the existing literature. It shows that the majority of articles are concerned with the accounting profession, auditing and education.

There were no significant differences between the numbers of articles in individual categories within business ethics and general accounting journals. However, as would be expected, the specialist education journals (e.g. *Issues in Accounting Education* and *Journal of Accounting Education*) concentrated on education, with little published in other areas. Although these specialist journals tended to dominate this subject, several other journals published a significant number of articles relating to ethics education (e.g. *Business and Professional Ethics Journal* and *Critical Perspectives on Accounting*).

The categories thus proved valuable for gaining an impression of the content of the literature. It is useful also to give some indication of what those categories contain. A brief indicative summary of the content of the various categories therefore follows. The objective of this summary is to describe the key themes or strands running through the main areas of interest, to identify areas of concern and to cite articles which serve as good examples of their kind. This is to give a flavour of some of the main results without trying to provide a comprehensive catalogue. The aim is to flesh out what the categories are about, and to illustrate the particular focus within the various categories.

Accounting and auditing profession

When conducting the literature review it became apparent that many papers did not make a clear distinction between the accounting and auditing professions, so for this reason it was decided to merge the categories for discussion purposes. Indeed, auditing can be seen as a subset of accounting, broadly defined.

Ethical issues concerning the accounting and auditing profession were given considerable coverage in a wide range of academic journals. Many of the articles on the accounting and auditing profession (e.g. Ponemon, 1990; Gaa, 1995; Sennetti et al., 2004) focus on the moral reasoning and ethical judgements of practicing accountants, examine the development of the ethical dimension of accounting, and look at the factors which affect decisions made by accountants, and why these factors are influential.

Several studies (e.g. Ponemon, 1990, 1992; Elias, 2002) have found that moral reasoning is higher at staff and senior levels in auditing firms and lower at management and partnership levels. As a corollary, older and higher income CPAs (members of the AICPA, the American Institute of Certified Public Accountants) are not as sensitive to ethical issues as their younger counterparts. Other research has also found lower moral reasoning ability amongst higher-ranked CPAs and CMAs (Certified Management Accountants) outside auditing firms (Ponemon and Gabhart, 1993; Etherington and Hill, 1998; Eynon et al., 1997).

However, it should be pointed out that these studies are cross-sectional rather than longitudinal. One of the problems of cross-sectional studies is that it can be difficult to identify the reason for a phenomenon, so it should not be inferred that individuals necessarily suffer a reduction in moral reasoning abilities as they progress in their career. Rather, it is possible that those with higher levels of moral reasoning leave the profession for various reasons. For example, Ponemon (1990) found that only those members of staff who had attitudes similar to those adopted by the organization were promoted to higher levels. Similarly, Cohen (1997) found that men and women who leave the profession voluntarily may do so because they do not wish to, or do not feel able to, reconcile their own personal ethical beliefs with those of the organization.

As in the general business ethics literature that examines the effect of gender, there have been several studies that suggest that female accountants respond with more ethical sensitivity to moral

dilemmas (Lampe and Finn, 1992; Shaub, 1994; Eynon et al., 1997). If it is accepted that women generally do exhibit a higher level of moral development than men and that fewer of them reach senior levels within the organization, for whatever reason, then this may be a further explanation for the phenomenon previously discussed, as there will be fewer women in top positions within the firm to moderate the lower levels of moral development found, on average, in their male counterparts.

However, worrying though a possible negative association between moral development level and organizational rank may be, what impact does this actually have on auditor behaviour? The influence of cognitive moral development (CMD) on auditors' ability to resist client demands and demonstrate independence has been examined in several studies (Windsor and Ashkanasy, 1995; Sweeney and Roberts, 1997; Falk et al., 1999). The results suggest that auditors with a higher level of moral reasoning are more likely to resist the demands of audit clients, be more sensitive to ethical issues, and be less likely to compromise their independence. It has also been shown (Arnold and Ponemon, 1991) that auditors with a more highly developed level of moral reasoning are less likely to be affected by fear of reprisal when considering whether to disclose audit findings which managers may not wish to be revealed.

If those at the top of the organizational structure do indeed exhibit lower levels of moral development, then what effect might this have on the self-regulation of the profession, given that those in charge of self-regulation may well be those same senior individuals? The self-regulation of the profession has been investigated by Mitchell et al. (1994, 1998), with particular attention being paid to a perceived lack of sanctions against firms involved in audit failure, alleged unprofessional conduct, and the involvement of larger accountancy firms in money-laundering exercises. The profession's claim to professional status is examined and conclusions drawn that this claim is largely rhetoric and does not hold up to examination because of the professional accountancy bodies' failure to take effective action against offending firms. Mitchell et al. (1994) found that, although many audit firms of various sizes were investigated and 45% of these criticized, no audit partner involved had been barred from practice. They concluded that self-regulation was an

ineffective defence against abuses of power and that the profession should be subject to independent regulation.

However, a counter-argument to this was put forward by Moriarty (2000) in a US study investigating the trend of sanctions against AICPA members. He found that there was an increased incidence of sanctions being imposed on firms which provided sub-standard service and that there was a trend towards more suspensions coupled with a much more consistent approach to imposing sanctions.

The status of the accounting profession has been damaged over the last few years, partly because of the accounting scandals that have undermined confidence in it (for example Enron, WorldCom and Parmalat) and partly because of unease over the self-regulation of the profession, with many feeling that self-regulation amounts to no regulation. Regulatory developments and other initiatives, both domestically and internationally, offer some prospect of reducing the risk of further problems occurring. However, the most effective way forward would be for accountants to develop the ability to think and behave ethically, without necessarily having recourse to detailed regulations and standards. The findings of the research to date, particularly regarding the moral development of many senior accountants, are not encouraging. Understanding the behaviour of accountants when in ethically challenging situations and how best to develop the ethical maturity of accountants, especially those in key positions, would appear to be issues worthy of further research.

Ethics education

Education is a key factor in influencing the future of the accounting profession. The subject of the moral education of accounting students, trainee and practicing accountants has been featured on a regular basis in academic journals, to the extent that Uysal (2010, p.137) refers to it as a “sub-discipline”. The education debate covers two main areas of research. The first is whether accounting students have a higher or lower moral standard than other students. The second is whether the teaching of ethics should be an integral part of accountancy courses and, if so, whether it has any long-term effect on moral reasoning or whether the benefits – if any – are merely

transitory (Loeb, 1991; McCarthy, 1997). There have also been papers exploring pedagogical issues (though some of these might not be viewed as 'research papers' as such) and the issue of academic ethics and the possibility of an academic code of ethics (though it is questionable how many of the issues related to this are accounting-specific).

Several studies (e.g. St. Pierre et al., 1990; Ponemon 1993; Lampe, 1996) have assessed the moral development of accounting students, with reference to the Defining Issues Test (DIT) and Kohlbergian moral development, finding no discernible difference in levels of moral development after ethical intervention, which suggests that moral reasoning may be defined by other factors such as environmental influences rather than intervention.

This has been contradicted in other studies which have reported positive results from the inclusion of ethics (Hiltebeitel and Jones, 1992; Armstrong, 1993). The results of these studies may be open to question, not least because the method and ethical content of the intervention would have differed in the various studies, and a study which found that the effects of ethics intervention were long-lasting may have had a higher level of ethics or better taught material than a study which found the benefits to be negligible or transitory. The question may not simply be whether intervention is effective or not, but rather the nature of the intervention (Bampton and MacLagan, 2005, p. 295).

The issue of whether accounting students have higher ethical perceptions than other students has been examined in several studies. Fulmer and Cargile (1987) and Green and Weber (1997) found that accounting students exposed to the AICPA's Code of Professional Ethics had a higher level of moral reasoning than other business students, and Jeffrey (1993) verified that accounting students had a higher level of moral development than business or liberal arts students. However, students exposed to the AICPA code were found not to have their ethical development enhanced by it in another study (McCarthy, 1997). Conflicting results have also been found in other studies which have shown that accountancy students have a lower level of moral development than other students (Lampe and Finn, 1992; Ponemon, 1990; Shaub, 1994). The reasons for these different results could include factors such as the moral atmosphere and type of educational institution (e.g. the moral atmosphere of an institution may be related to its size – students enrolled at smaller

universities may be less likely to indulge in unethical behaviour because they do not have the same degree of anonymity as they would at a larger institution), gender differences, regional variations, and students' inability to relate to the research methods used (e.g. DIT).

The gender issue is again identified, with particular reference to whether females demonstrate a higher moral standard than their male counterparts, with some empirical research showing a higher moral standard from female accounting students (e.g. Ponemon and Gabhart 1993; Shaub, 1994; Eynon et al., 1996). Another study (Cohen et al., 1998, p. 201) showed that women viewed "questionable actions as less ethical and indicated a lower intention to perform these actions than did men". However, Rogers and Smith (2001), Geiger and O'Connell (1998) and Stanga and Turpen (1991) found there to be no statistical differences in the way that male and female accounting students responded to ethical dilemmas.

As indicated in Table 5, education has been a relatively popular focus for accounting ethics research. In addition to its intrinsic importance, the convenience of conducting research in connection with teaching activities might be attractive to many scholars. This is one area where the use of students as research subjects does not amount to a mere 'convenience' sample. They are not being used as proxies for practicing accountants. However, the results so far are somewhat mixed, perhaps because of inadequacies of research design. Furthermore, in the case of research which aims to discover whether accounting students are more or less ethical than others, or whether females are more ethical than males, any firm findings will be of some interest but probably of limited practical value to teachers. For example, a teacher could not change the gender mix of the class in the light of such knowledge and, because the results indicate tendencies (rather than inviolable laws of nature), male and female students could not be taught differently on the basis of gender, even if it were considered politically acceptable to do so.

In the case of research that seeks to discover whether accounting ethics education has any long-lasting impact, as explained above much depends on the nature of the ethics intervention. Studies need to be clearer about the nature of the intervention if academically valid and useful conclusions are to be drawn. Indeed, we suggest that the empirical research in this area needs to move beyond asking whether ethics content in educational programs has an impact; it needs to explore what sorts

of interventions, in what sorts of combinations and in what circumstances, have what sorts of impacts (if any) on what sorts of people. The challenges of research design and analysis in such research are formidable, but if the existing work has proved anything, it is that future research work needs to take a more sophisticated and nuanced approach.

Management accounting

Management accounting is “concerned with the provision of information to people within the organization to help them make better decisions and improve the efficiency and effectiveness of existing operations” (Drury, 2004, p. 7). It is a major subject area within accounting, but in Table 5 it appears not to be well represented.⁴ Published literature on management accounting ethics originates mainly from the USA, but there is not a great deal of material available. Little research has been carried out into the ethical development of management accountants or into the dilemmas that management accountants encounter in their everyday working life and the issues that cause them concern. Exceptions to this include Ponemon and Gabhart (1993), Etherington and Schulting (1995), and Etherington and Hill (1998) (ethical development of CMAs). Fisher and Lovell (2000) also undertook UK-based research sponsored by CIMA, the Chartered Institute of Management Accountants, on the dilemmas faced by practising management accountants.

Given the nature of management accountants’ work within businesses and other organizations, much general business ethics literature will also be highly relevant to the situations in which they find themselves. However, the limited amount of specialist work published to date makes it likely that there is significant scope for further research that either examines specific management accounting problems (e.g. using transfer pricing to avoid tax; capturing environmental and social impacts in capital investment appraisal), or addresses familiar business ethics issues where there are features of particular significance to management accountants (e.g. whistle-blowing over expenses claims; ethical purchasing of raw materials and supplies).

Summary

Beginning with Table 5, this section has attempted to give an impression of the contents of the accounting ethics journal literature through the use of some basic categories. As indicated, the main areas of focus have been ‘accounting and auditing profession’ and ‘ethics education’. Some of the particular areas of focus within these have been identified and illustrated. As well as the above main areas of interest there are several other areas (e.g. financial reporting, computing, international issues and taxation) that are covered in less detail, and which will not be discussed in this paper. Of course, given the relative paucity of journal literature on accounting ethics (approximately 500 articles is a useful start, but only that), there are likely to be many topics and issues still to be covered in a satisfactory manner. Examples might include earnings management (to be addressed from an explicitly ethical rather than technical perspective), whistleblowing by accountants and auditors, and internal auditing. As the literature on accounting ethics continues to develop, it will be important – given the comments above – not to be unduly influenced by the shape of the existing literature. There is certainly something to build on and questions that remain to be answered, but it is important that the research agenda takes appropriate account of the many other potential influences (see Cowton, 2008), including debates in moral philosophy, research in other management disciplines, stakeholder concerns and the issues faced by practitioners.

Empirical research: a comparative assessment

The previous sections have concentrated on describing how the literature search was carried out, examining journal activity, categorizing the existing literature and discussing the articles within those various categories. Some evaluative comments have been made, but in a paper of this length it is not possible also to provide a full critical review of the literature. Indeed, there are many bases on which such a review could be conducted. However, Table 3 shows that about half of the articles captured by the bibliography contain empirical research, and since the quality of empirical research has been a notable area of concern in the business ethics literature, in this final main section a brief critical examination of empirical research in the field of accounting ethics will be made.

The analysis of empirical research in accounting ethics was carried out with reference to previous critical commentaries on empirical work in business ethics (e.g. Randall and Gibson, 1990; Weber,

1992; Robertson, 1993). Such reviews have tended to express two types of concern (Cowton, 1998): first, over the particular challenges entailed in researching sensitive issues; and second, regarding the general social scientific quality of the research. Some of the most prominent issues are:

- the domination of questionnaire style data collection methods and a resulting lack of qualitative data (Weber, 1992; Robertson, 1993);
- the lack of validity of research instruments (Randall and Gibson, 1990; Weber, 1992; Robertson, 1993);
- little research into actual behaviour rather than attitudes (Robertson, 1993);
- a heavy reliance on convenience sampling (Randall and Gibson, 1990; Weber, 1992);
- low survey response rates (Randall and Gibson, 1990; Weber, 1992);
- insufficient attention paid to the possibility of non-response and social desirability
- response bias (Randall and Gibson, 1990; Randall and Fernandes, 1991; Fernandes and Randall, 1992);
- the absence of a theoretical framework or explicit hypotheses (Randall and Gibson, 1990; Weber, 1992; Robertson, 1993).

The characteristics of the empirical research in accounting ethics with respect to the issues listed above are discussed in the following sub-sections.

Data collection methods

It was found that there was a domination of questionnaire style data collection methods in the accounting ethics empirical work (94% of surveys), with very few personal interviews being conducted. This is consistent with the business ethics findings of Randall and Gibson (1990), who found that only four surveys relied solely on personal interviews. The likely reasons for this reliance on questionnaire data are well-documented (Robson, 2002); questionnaires are relatively cheap, quick and easy to administer. Analysis of the results is also relatively simple in comparison

with the analysis of data collected from personal interview, particularly where the data from the questionnaire is largely quantitative (e.g. counting responses). In addition, most questionnaires tended to rely on close-ended questions, which again is similar to the business ethics literature and indeed is standard practice in questionnaires designed for self-completion (Bryman and Bell, 2003). This is appropriate to certain types of theory testing (see below), where various possible responses are well defined, but it is less suitable where research is more exploratory – which is often the case in accounting and business ethics research, given their relative immaturity and the complexity and subtlety of some of the issues involved.

The use of more open-ended questions in questionnaires would allow individuals to express their own perspective rather than selecting an answer that only approximates their view, but such questions are not always popular and might discourage responses. Semi-structured or unstructured interviews are a better technique for more probing, exploratory research (Liedtka, 1992) but, as in business ethics, they have been little used in accounting ethics research. Similarly, focus groups might prove a useful research technique, and approaches like ethnography would open up vistas ignored by questionnaire surveys, such as organizational cultures as symbolic representation, wherein many of the explanations for behaviour lie (Brigley, 1995).

Validity of research instruments

Some accounting researchers have developed their own instruments, which they pretested on a sample population relevant to the proposed target population, whereas others have used previously validated test instruments. A significant percentage of studies (around 25% of all survey questionnaires) into accounting ethics used Rest's Defining Issues Test (DIT) (Rest, 1986). The principal reasons for the popularity of the DIT are that it has been used by many researchers in different fields, and it is also easy and quick to administer. However, despite extensive use, questions have been raised as to its validity and, in particular, its suitability for use with both qualified accountants (Sweeney and Fisher, 1999) and accounting students (Ponemon, 1993). The Sweeney and Fisher study found that the DIT 'P' scores could be influenced by an 'imbedded political content'. In other words, the scoring reflected a particular, perhaps contestable, set of

values or view of the world, which resulted in the moral judgment of conservative and moderate accountants being understated and that of liberal accountants being overstated. The authors state that this does not necessarily invalidate the DIT, but they do suggest that it may be time it was altered in order to reflect more up-to-date ethical scenarios.

A more recent critique of the DIT (Bay, 2002) also suggests that some of the dilemmas are dated (for example, the Vietnam War) and so could be lacking in relevance for some people. Bay also examines whether the DIT may be subject to certain biases – including gender, politics, culture and religion – and criticizes the DIT on the basis that respondents are given pre-prepared responses to the dilemmas which may not represent what they actually feel (see the general point about close-ended questions above). The paper also questions whether people would actually react in the same way to a real life ethical dilemma as to a fictional scenario. More research into actual behaviour of accountants in the workplace would certainly be welcome. However, scenarios will remain important as a research tool, in which case it is important that they are realistic, relevant and engaging.

Behaviour vs attitude

It is notable that empirical work in accounting ethics focuses more on stated attitudes than actual behaviour. The reasons for this are understandable. Asking individuals what they would do in a given situation is more likely to elicit a response than asking why they behaved in a certain way, particularly if the behaviour was unethical. Furthermore, there are practical and ethical challenges in accessing unethical behaviour directly. Exceptions include Loeb (1971), who found a strong correlation between some attitudes and behaviours. The critical point is that, even if an attitude is truly known (i.e. there is no social desirability response – SDR – bias), it is questionable whether a researcher has gained an insight into the research subject's behaviour.

The issue of SDR bias, where individuals portray themselves as more ethical than they actually are, is particularly important where ethical attitudes are being assessed (Randall and Fernandes, 1991; Fernandes and Randall, 1992). Where it was considered in the accounting ethics empirical

literature, the key factors used to deal with it were those of confidentiality and anonymity. Such assurances might help reduce SDR, but they do not necessarily eliminate it. More scientific methods can be used to address SDR bias. For example, Duncan and Knoblett (2000) used Paulhus' Balanced Inventory of Desirable Responding-Version 6 (BIDR-6). SDR bias was also measured on the basis of the differences between what action an individual stated they would take and what action they considered their peers would take ('halo effect'). Generally speaking, SDR bias is an issue that needs to be considered more seriously in both accounting ethics and business ethics research.

In the field of moral development, Kohlberg (1981, p. 40) argues that knowledge and action are the same, based on the Socratic notion that 'to know the good is to do the good', whereas Rest acknowledges that his DIT, developed from Kohlberg's ideas, relates more to moral judgment than actual behaviour. Part of the reason for this is that attitude is not the only factor to influence an individual's decision-making and actions; other personal and situational characteristics will also have an influence.

Sampling and response rates

Bryman and Bell (2003) state that, in the design of questionnaire surveys, "sampling constitutes a key step in the research process" (p. 91). They suggest that convenience samples are very common in business and management studies. A large proportion (36%) of accounting ethics research surveys used convenience sampling rather than probability sampling (e.g. a simple or stratified random sample), administering questionnaires to students in classroom time or accountants during training sessions. The problems of this method of collecting data are well documented (Rosenthal and Rosnow, 1975; Robson, 2002), the main objection being that it is unrepresentative, thus making it difficult to generalize the findings to a population – though a convenience sample might be very useful as a pilot study (Bryman and Bell, 2003).

It is even more contentious to suggest that the results of surveys using students' responses to questionnaires involving business scenarios are reliable as proxies for practitioners, as it may be

difficult for students to respond adequately to situations they know little about in practical terms (Weber, 1992). However, this will, to a large degree, depend on the student group as some groups (for example postgraduate) may contain individuals who have relevant experience. It may also be possible to counter the problem by attempting to make questionnaires/vignettes more relevant to the student with the inclusion of academic ethical scenarios as well as business scenarios. Furthermore, the use of student samples is perfectly acceptable in some cases – “...student samples are appropriate if they comprise the population of interest or if the population of interest is similar to the student sample...” (Randall and Gibson, 1990, p. 463). This is the case for a significant proportion of accounting ethics research for, as shown earlier, ethics education has been a major area of interest. However, the issue about generalizing beyond the convenient sample of students to other students still remains.

Not surprisingly, convenience samples often have high response rates – an unweighted mean of 83% in the studies reviewed here, though it can be argued that the response rate for any non-probability sample is of limited relevance, since generalization is not an option. However, response rates are very important in probability sampling. In order to ensure satisfactory analysis and representativeness, response rates should ideally not be below a certain level. A response rate of 50% is viewed as ‘barely acceptable’ by Mangione (1995, p. 61). However, the empirical surveys analyzed for this paper show a far lower response rate, with over three-quarters of mail surveys achieving response rates of 50% or below. It was most common for the response rate to fall in the 21%-30% band. Perhaps when dealing with an area involving ethics, response rates may be lower than would normally be expected because of the subject matter involved. It may also be the case that, due to high levels of survey research, respondents have become disinclined to complete survey forms – so-called ‘questionnaire fatigue’ or ‘survey fatigue’.

It is difficult to make a direct comparison with the findings from the business ethics literature reviews, because Randall and Gibson (1990) do not separate response rates of mail and non-mail samples. They found the overall mean to be 43%, which was slightly higher than that found in the accounting ethics mail surveys. However, bearing in mind that this included results from convenience samples, the average response rate from the accounting ethics mail surveys was

probably higher than the equivalent covered by Randall and Gibson. Randall and Gibson (1990) also found that the middle bands (21%-50%) were the most common, which is consistent with the accounting ethics mail surveys. Weber (1992) found response rates for random sampling ranged from 21% to 76%, which again is broadly in line with the accounting ethics literature (we found 10% to 70%). Unfortunately, Weber does not give the mean figure, which would provide a more meaningful comparison.

Thus it seems that researchers conducting surveys on accounting ethics face similar challenges to researchers in business ethics. Convenience samples are a tempting source of research data, but they raise questions over generalizability, whereas the attempt to gain greater validity for research findings by means of probability sampling risks a low response rate. Nevertheless, papers with low response rates are published. However, as discussed in the next sub-section, the quality of the data then takes on even greater significance.

Non-response bias

The possible presence of non-response bias (NRB) is an important issue, especially when response rates are low. Those who do not respond may be significantly different from those who do – particularly in the field of ethics, where many topics involve sensitive questions. In surveys which should have considered it – for example mail surveys, particularly those with low response rates – only 45% mentioned NRB. Of these, only 3% admitted that there was a probability of NRB being present, with the other 42% testing for it but finding no evidence of it. Although tests for NRB are far from perfect, these figures seem encouraging, especially given that Randall and Gibson (1990) found that only one of 34 business ethics survey papers reported on the possibility of NRB. Nevertheless, that still leaves a majority of accounting ethics survey papers (55%) that did not address the issue of NRB.

NRB can be prompted by, inter alia, the tendency of some potential respondents not to wish to reveal certain types of answer. Alternatively, some respondents might provide answers that are not accurate (see the earlier sub-section on ‘behaviour vs attitude’).

Lack of theoretical framework

Around 32% of accounting ethics surveys used hypotheses as a way of testing theories, but the majority just stated their findings and developed conclusions from those findings. This figure is only slightly higher than that found by Randall and Gibson (1990) and Weber (1992), who found, respectively, that 25% and 19% of business ethics work had a stated hypothesis. This finding might be symbolic of the fact that accounting ethics is an emerging field, similar to that of the business ethics field ten or so years ago, with much exploratory survey work being carried out. In cases where hypotheses are not being tested, it is particularly important that researchers link their findings back to previous literature in order to contribute to building theory that can be subsequently tested and developed.

Conclusion

The aim of this paper has been to take stock of the journal literature on accounting ethics. It has demonstrated that there is already a literature of significant if not substantial size available to draw upon for those who would seek to take forward the debate on accounting ethics, even though ethics does not feature strongly in the academic accounting journals and accounting does not represent a major strand in the business ethics journals. About a third of the journal literature is contained in one specialist, annual periodical, while the remainder is to be found in a wide variety of other journals.

The bibliography we have assembled and on which this paper is based is not likely to be exhaustive. One limitation, stated earlier, is that attention is concentrated on English-language journals. Another is that this study was restricted to academic journals and did not consider professional publications or books. Nevertheless, even without including articles on social and environmental accounting and critical accounting – which can be argued to represent major types of literature in their own right – we have identified and analyzed over five hundred articles. Moreover,

while there may be some omissions from the bibliography, the various search strategies used mean that there should not be any serious biases in the analyses presented in the previous sections. The main patterns and trends discovered were as follows:

- the majority of published articles are in the accounting profession, auditing and education areas;
- two journals account for just over half the articles: Research on Professional Responsibility and Ethics in Accounting (RPREA, formerly Research on Accounting Ethics) and Journal of Business Ethics, although in the latter case accounting ethics represents only a small proportion of its total output;
- there was an increase in the number of articles published annually from around 1995, probably because of the launch of Research on Accounting Ethics, but the annual number of papers is still not high; and
- overall, about half of the articles include empirical research.

The relationship between empirical and non-empirical research in business ethics has been subject to some debate (e.g. Cowton, 1998; Donaldson, 1994; Weaver and Trevino, 1994). The focus of the latter part of the paper on empirical research should not be taken to imply that we consider it more important than other approaches. Indeed, our view is that there is much scope, for example, for serious moral philosophical analysis of accounting concepts and practices. However, there is a strong tradition of empirical research in accounting in general which, together with previously voiced concerns about the quality of empirical research in business ethics, motivated an analysis of the significant proportion of the bibliographic database that contained empirical research.

Although the majority of accounting ethics literature appears in accounting journals, which have a well-established tradition of publishing empirical research, the research seems to suffer from some of the same problems that the business ethics research has been criticized for in the past. However, it does seem to be better in some areas, such as stating hypotheses and testing for non-response bias. In order that the field of accounting ethics might develop with an appropriate contribution from empirical research, we recommend that:

- where convenience samples are used, they should be used primarily as pilot studies, especially if the research subjects do not have experience appropriate to the issue under examination;
- future research should include more accounting-based scenarios, targeted at the appropriate research subjects;
- researchers should re-evaluate the use of the DIT, perhaps up-dating and adapting it for use in contemporary accounting contexts;
- more qualitative work should be undertaken, perhaps through interviews, focus groups or ethnography, focused on examining issues and research questions that are not amenable to investigation by questionnaire surveys using close-ended questions;
- if research is conducted in a quantitative tradition, attention should be paid by both authors and referees to its rigour (e.g. more theory-testing, checking for non-response bias); and
- there should be an increased emphasis on research which considers behaviour rather than attitudes, or at least more use of techniques for controlling or checking for social desirability response bias.

There is much work still to be done on accounting ethics. For the benefit of future researchers, this paper has attempted to describe the foundation that has already been laid and to provide guidance regarding how that foundation might be built upon.

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TABLE 1
Distribution of accounting ethics journal articles, by academic journal

Journal	ABS rating^a	No.	%
Accounting, Auditing and Accountability Journal	3	13	2.5
Accounting Education	2	15	2.9
Accounting Educators' Journal	n/a	5	1.0
Accounting Horizons	3	12	2.3
Accounting, Organizations and Society	4*	18	3.4
Advances in Accounting Education	n/a	5	1.0
Business and Professional Ethics Journal	1	16	3.1
Business Ethics: A European Review	2	12	2.3
Critical Perspectives on Accounting	3	19	3.7
Issues in Accounting Education	2	29	5.6
Journal of Accounting and Public Policy	3	7	1.3
Journal of Accounting Education	2	17	3.3
Journal of Business Ethics	3	119	22.8
Managerial Auditing Journal	1	16	3.1
RPREA ^b	n/a	163	31.3
Teaching Business Ethics ^c	n/a	14	2.7
Other refereed journals ^d		40	7.7
Total		520	100.0

Notes:

n/a = either not ranked or no longer published.

a The ABS (the Association of Business Schools, the leading UK organization for business schools) produces a well-established Journal Quality Guide. Unlike several other 'journal lists' it is relatively inclusive, comprising over 800 English-language journals across business and management studies. Version 4 (March 2010) can be summarized as describing journals as follows: 4* = elite; 4 = a top journal in its field; 3 = highly regarded; 2 = well regarded; 1 a modest standard journal. For further information, see http://www.associationofbusinessschools.org/sites/default/files/abs_lightningwintro.pdf.

b *Research on Professional Responsibility and Ethics in Accounting*; formerly *Research on Accounting Ethics*.

c Ceased publication with Volume 7 (2003); now incorporated in *Journal of Business Ethics*.

d Abacus; Accounting and the Public Interest; Accounting Forum; Accounting Historians Journal; Accounting Perspectives; Accounting Research Journal; Accounting Review; Advances in Accounting; Advances in Management Accounting; Asian Review of Accounting; Auditing; A Journal of Practice and Theory; Behavioral Research in Accounting; Contemporary Accounting Research; Corporate Communications: An International Journal; International Journal of Accounting; International Journal of Educational Management; International Journal of Management; Irish Accounting Review, Journal of Accounting, Auditing and Finance; Journal of Management Accounting Research; Public Money and Management; Science and Engineering Ethics.

TABLE 2**Accounting ethics journal articles published, by year and journal type**

Year	RPREA^a	Accounting Journals	Business Ethics Journals	Other Journals^c	Total
pre-1984	-	2	-	-	2
1984	-	5	-	-	5
1985	-	1	1	-	2
1986	-	1	2	-	3
1987	-	3	-	-	3
1988	-	3	3	1	7
1989	-	7	3	-	10
1990	-	8	6	-	14
1991	-	5	9	-	14
1992	-	10	9	-	19
1993	-	11	4	-	15
1994	-	14	10	-	24
1995	24	15	8	-	47
1996	16	11	10	1	38
1997	13	15	8	-	36
1998	14	11	7	1	33
1999	23	8	5	-	36
2000	28 ^b	9	9	-	46
2001	-	5	10	1	16
2002	10	7	12	1	30
2003	-	6	7	-	13
2004	10	12	1	-	23
2005	7	5	13	-	25
2006	10	5	7	-	22
2007	-	5	9	-	14
2008	8	7	8	-	23
Total	163	191	161	5	520

Notes:

a RPREA = *Research on Professional Responsibility and Ethics in Accounting*; formerly *Research on Accounting Ethics*.

b In 2000, two volumes of *Research on Accounting Ethics* were published

c Five articles were published in journals that could not be classified as either business ethics or accounting journals (e.g. *Corporate Communications: An International Journal*)

TABLE 3**Accounting ethics journal articles published, by research style and journal type**

Journal type	Empirical	Non-Empirical	Total
Business ethics	87 (54.0%)	74	161
RPREA ^a	84 (51.5%)	79	163
Accounting	94 (49.2%)	97	191
Other ^b	1 (20.0%)	4	5
Totals	266 (51.5%)	254	520

Notes:

- a RPREA = *Research on Professional Responsibility and Ethics in Accounting*; formerly *Research on Accounting Ethics*.
- b Five articles were published in journals that could not be classified as either business ethics or accounting journals (e.g. *Corporate Communications: An International Journal*)

TABLE 4**Accounting ethics journal articles published, by research style and year**

Year	Total	Non-Empirical	Empirical	% Empirical
Pre-1987	12	9	3	25
1987	3	-	3	100
1988	7	6	1	14
1989	10	8	2	20
1990	14	6	8	57
1991	14	8	6	43
1992	19	10	9	47
1993	15	5	10	67
1994	24	14	10	42
1995	47	29	18	38
1996	38	15	23	61
1997	36	17	19	53
1998	33	15	18	55
1999	36	23	13	36
2000	46	24	22	48
2001	16	1	15	94
2002	30	12	18	60
2003	13	6	7	54
2004	23	12	11	48
2005	25	14	11	44
2006	22	6	16	73
2007	14	7	7	50
2008	23	6	17	74
Totals	520	253	267	51

TABLE 5
Accounting ethics journal articles published, by topic area and journal type

Category	Business Ethics Journals	Accounting Journals	RPREA^a	Other Journals	Total
Accounting Profession	60	62	46	1	169
Auditing	26	35	37	1	99
Computing	0	0	9	0	9
Education	44	66	31	1	142
Financial Accounting/Reporting	19	14	15	2	50
Government and Public Sector	1	3	2	0	6
International Aspects	8	6	5	0	19
Management Accounting	8	9	5	0	22
Taxation and Law	2	2	8	0	12
Other Aspects	8	7	23	0	38
Totals	176	204	181	5	566^b

Notes:

- a RPREA = *Research on Professional Responsibility and Ethics in Accounting*; formerly *Research on Accounting Ethics*.
- b 46 articles were double-counted because they fell into more than one category, hence the total equals 566.

NOTES

¹ However, although it involves more than 1500 articles, Collins' review is focused solely on the Journal of Business Ethics.

² The bibliography has since been updated. It can be found at <http://cae.uwaterloo.ca/citation.php>.

³ With their original spelling

⁴ This impression was borne out by a statistical check. An analysis of the specialisms of academic staff listed in the British Accounting Review Research Register found that 63% gave Financial Accounting or Auditing, compared with 37% for Management Accounting. These figures were then compared with the relevant percentages of published literature. A chi-squared test found that management accounting was significantly under-represented in the accounting ethics bibliography.