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Content analysis of social, environmental reporting: What is new?

J. Guthrie
University of Sydney

Indra Abeysekera
University of Sydney, indraa@uow.edu.au

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Abstract

Purpose: The aim of this paper is to review the use of content analysis as a research method in understanding SEA and to examine current contemporary foci of this research tradition. Further, several research method issues relating to the use of content analysis are examined. **Methodology:** Contemporary focus and research issues are analyzed to provide some future directions for scholars in the field of SEA, by categorizing work in the SEA, social environmental reporting (SER) and intellectual capital reporting (ICR) literature, according to the following: normative literature/theory/commentaries; focus of empirical investigation; quality SER research; combined research methodologies; content analysis method issues. **Findings:** Literature indicates that few attempts have been made to combine other research methodologies with content analysis although it has proven fruitful with the limited investigation undertaken to examine aspects of SER. Further extending the performance reporting by combining SER with ICR may provide useful information. **Research implications:** Increasingly, researchers in the field of social and environmental accounting (SEA) need to be able to justify the specific research methods they use when collecting the empirical data that they examine in order to support and test opinions regarding the merit of different approaches to managing, measuring and reporting of SEA.

Keywords

content analysis, social and environmental accounting; social and environmental reporting

Disciplines

Accounting | Business | Social and Behavioral Sciences

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CONTENT ANALYSIS OF SOCIAL, ENVIRONMENTAL REPORTING: WHAT IS NEW?

By

Professor James Guthrie

**Discipline of Accounting and Business Law
Faculty of Economics
The University of Sydney
NSW 2006**

Email: J.Guthrie@econ.usyd.edu.au

and

Dr Indra Abeysekera

**Discipline of Accounting and Business Law
Faculty of Economics
The University of Sydney
NSW 2006**

Email: indraa@econ.usyd.edu.au

Correspondence details

Dr Indra Abeysekera
School of Business
Faculty of Economics & Business Building H69
The University of Sydney NSW 2006
Australia
Phone: +61 (0)417 405 399
Email address: indraa@econ.usyd.edu.au

Autobiographical Details

James Guthrie is a Professor of Accounting at The University of Sydney. His research and teaching interests include public sector accounting, auditing, accountability and management, social and environmental reporting and auditing, management of knowledge and intellectual capital and the measurement of intangibles. He also consults on public and private sector management, management of knowledge, intellectual capital, budget performance, and annual reporting strategies.

Dr Indra Abeysekera is a Senior Lecturer in Accounting at The University of Sydney. His teaching and research interests include accounting education, accounting profession, human capital, intellectual capital, and knowledge management. He has presented his ideas and research findings at numerous refereed international conferences, professional accountancy institutions and universities. His opinion on accounting and business matters has been sought and broadcast by radio, television and newspapers.

Abstract

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Methodology: Contemporary focus and research issues are analyzed to provide some future directions for scholars in the field of SEA, by categorizing work in the SEA, social environmental reporting (SER) and intellectual capital reporting (ICR) literature, according to the following: normative literature/theory/commentaries; focus of empirical investigation; quality SER research; combined research methodologies; content analysis method issues.

Findings: Literature indicates that few attempts have been made to combine other research methodologies with content analysis although it has proven fruitful with the limited investigation undertaken to examine aspects of SER. Further extending the performance reporting by combining SER with ICR may provide useful information.

Research implications: Increasingly, researchers in the field of social and environmental accounting (SEA) need to be able to justify the specific research methods they use when collecting the empirical data that they examine in order to support and test opinions regarding the merit of different approaches to managing, measuring and reporting of SEA.

Key words: content analysis, social and environmental accounting; social and environmental reporting

1. Introduction

The social environmental reporting (SER) literature has, since the 1970s, been concerned with how organizations interact with society at large via annual reports and other reporting mechanisms (Guthrie and Mathews, 1985). There is a large and complete literature on corporate social, ethical and environmental reporting (Gray, Kouhy and Lavers, 1995; Mathews, 1997) that uses content analysis as a method to gather data on disclosure in annual reports for twenty years (e.g., Guthrie and Mathews, 1985; Guthrie and Parker, 1990).

In this literature, the corporate annual report is viewed as a means by which organizations seek to establish an image in the public sphere through voluntarily reporting, emphasizing the role of the annual report in constructing and presenting a 'reality' of corporate life (Hines, 1989) and, seeking to promote the interests of an organization by providing a 'snapshot' of the mindset of corporate management (Gray et al., 1995).

The annual reports of organizations listed on stock exchanges have often become a source of raw data for SER studies, and therefore have served as an instrument for observing voluntary reporting. Annual reports are used because organizations commonly signal what they perceive as important through the reporting mechanism. Important issues are featured, reported and discussed, whereas less important items are absent or relegated to low profile sections of the report (Gibson and Guthrie, 1996). Furthermore, what organizations choose to include in (and omit from) their

annual reports is a conscious decision that communicates a significant message to stakeholders.

Researchers in the field of social environmental accounting (SEA) have, according to Parker (2005), used content analysis as the dominant research method for collecting empirical evidence. He based this observation on a study of the SEA literature published between 1988 and 2003. Parker identified other research method categories which have been less used: case, field or interview studies; surveys; literature, theory and commentary; and experiments.

Parker (2005) found that over the 1988-2003 study period, 52 per cent of papers published belonged to the 'literature, theory, commentary, methodological' category; and 48 per cent to empirical studies. Of the empirical studies, content analysis represented 19 per cent; case, field and interview studies 12 per cent; surveys 15 per cent; experimental studies 1 per cent; and combined 1 per cent. With respect to any major changes in these proportions between the pre-1999 period and the 1999-2003 period, content analysis fell from 23 per cent to 15 per cent of papers published. In spite of the drop in the percentage of papers using content analysis, it has remained a dominant research method in the SEA tradition.

The current paper does not evaluate the theoretical explanations of SER or critique the actual findings of previous SER content analysis studies. Rather, the aim of this paper is to review the use of content analysis as a research method in understanding SEA and to examine current contemporary foci of this research tradition. Further, it examines several research method issues relating to the use of content analysis.

The paper is structured as follows. Section 2 briefly revisits previous SER literature. Section 3 categorizes and analyzes some contemporary work in the SEA, SER and intellectual capital reporting (ICR) literature according to: normative literature/theory/commentaries; focus of empirical investigation; quality SER research; combined research methodologies; content analysis method issues. Section 4 provides future directions for scholars in the field of SEA.

2. Revisiting previous SER literature

Traditionally, content analysis has been used in the SER literature to evaluate the extent of disclosure of various items in annual reports of listed companies (i.e., Cowen Ferren and Parker, 1987; Gray et al., 1995; Guthrie and Mathews, 1985; Guthrie and Parker, 1990; Hackston and Milne, 1996; Zeghal and Ahmed, 1990). This literature has tended to report the level of disclosure of various social and environmental elements (e.g., energy usage, minority interests, labour practices, corporate governance, etc.). Often studies have contrasted these SER elements with previous national studies or comparative international surveys. The disclosure of these elements has dominated the use of content analysis in SEA.

Similarly, in the field of intellectual capital (IC), where organizations have voluntarily disclosed elements of IC, identification of the content of the disclosures made by organizations in their annual reports has become a dominant research method. For instance, several studies have focused on what is being reported, attempting to capture and organize diverse IC empirical data. National studies using annual reporting data and content analysis have attempted to capture the reporting of IC in Australia (Guthrie and Petty, 2000), Canada (Bontis, 2003), Ireland (Brennan, 2001), Italy

(Bozzolan, Favotto and Ricceri, 2003), South Africa (April, Bosma and Deglon, 2003), Sri Lanka (Abeysekera and Guthrie, 2004a, 2004b, 2005) and Sweden (Olsson, 2001).

Traditionally, the focus of content analysis has been narrow, chiefly associated with annual reports of listed companies. In the sections which follow, this paper proposes a broadening of the focus to include a variety of SEA materials and the combination of content analysis with other methods of data collection.

3. Contemporary foci for SEA and SER

This paper categorizes and analyzes some contemporary work in the SEA, SER and ICR literature, according to the following themes: normative literature/theory/commentaries; focus of empirical investigation; quality SER research; combined research methodologies; and, content analysis method issues. The purpose of this analysis is to provide some future directions, to be discussed in the subsequent section.

3.1 Normative: developing disclosure frameworks

In recent times several initiatives (from professional associations and others) have explored extended performance frameworks. For instance, the Institute of Chartered Accountants in England and Wales (ICAEW, 2004) undertook a major review in this direction. It reviewed a plethora of prescriptions and frameworks that abounded in the domain of reporting and performance measurement and management. The list of prescriptions and frameworks reviewed by the ICAEW (2004) included the following:

- Balanced scorecard – four perspectives
- Jenkins report – forward-looking information including non-financial measures, e.g., patents, trademarks, concessions, major contractual relationships plus opportunities and risks
- Tomorrow’s company – financial report, value chain report (information about customers etc.), a people document (information about skill level and knowledge bank), a sustainability document (community and environmental impacts)
- 21st century annual report – more framework-based, forward-looking financial information and better information as to risks
- Inside out – company ambitions, strategic direction, description of strategic decision-making process, preferred measures, key drivers of value, measures of performance appropriate to the business.
- Value dynamics – better disclosure of intangible assets, 54 boxes showing different kinds of assets-related information
- Global reporting initiatives (GRI) – should include vision and strategy, profile, governance structure and performance indicators
- Brookings Institute – value of intangibles, e.g., Lev’s value chain scoreboard – quantitative standardized and relevant measures
- Value reporting – moving beyond the earnings game
- Hermes principles – general requirement about disclosure of weighted average cost of capital (WACC) and ability to deliver returns ahead of WACC and cash-based reporting.

Although there are significant bodies of research on the utility of the various frameworks, SEA researchers appear to be hesitant to provide normative models for

managing, measuring and reporting SER in combination with other voluntary reporting in organizations. But Yongvanich and Guthrie (2005), in a recent study in which they briefly reviewed three extended reporting approaches (IC, balanced scorecard and SER) demonstrated that the emphases of these reporting approaches, although diverse, were complementary to one another and could be integrated. They developed an extended performance reporting framework which provides both economic and non-economic performance information and is expected to provide a more complete account of the performance of an organization.

Also, Adams and Guthrie (2005) outlined several issues associated with corporate social and environmental measurement and reporting (SEMR). The chapter identified several benefits from SEMR and, postulated why SEMR is important to environmental management in an organization. They noted that in the previous decade, a great number of professional and other environmental reporting and social accounting guidelines have been released.

Guthrie, Boedker and Cuganesan (2005), focusing on extended performance reporting by an Australian public sector organization, argued that organizations engaged in performance reporting provided mainly a 'demand' side perspective. In contrast, the authors considered a 'supply' side perspective, discussing the motivations of an Australian public sector organization for engaging in extended performance reporting.

The research outlined above points to an emergent approach rather than a 'normative' approach to SER through extended performance reporting. In advancing the idea of an emergent, as opposed to a normative approach to establishing extended performance

reporting practices, the contributions of this paper are two-fold. First, it provides a perspective using content analysis on performance reporting context that contrasts to the narrative context in prior literature. Second, it examines how performance reporting might be extended using content analysis beyond the domain of accrual accounting reports and outcomes to measure the activities of an organisation in managing its SEA.

3.2 Focus of the empirical investigation

Traditionally, the source of SER material has been the annual report. Although annual reports are important, there are, of course, other sources of material, such as stand-alone environmental reports, internet material, strategy plans, business plans and newspaper articles. In the context of voluntary reporting of IC, Guthrie, Yongvanich and Ricceri(2004) identified differences in types of reporting and variations in reporting frequency, attempting to develop a greater understanding of the reasons why some organizations voluntarily report whilst others do not. Such an approach can be adopted with regard to the contemporary SER literature. Further, identifying differences in reporting SER and IC in an integrated fashion may provide more insight into the contemporary SEA literature.

3.3 Quality SER research

Although contemporary research in SEA has used materials other than annual reports, the latter have remained a dominant source. There are two main approaches to measuring disclosure in annual reports. The first approach uses content analysis, which is a method of codifying the content or text of a piece of writing into categories based on chosen criteria (Weber, 1988). However, and as indicated below, one of the limitations of content analysis has been its focus on quantity rather than quality of

disclosure. The second approach is the use of disclosure indices to assess, compare and explain differences in the extent and comprehensiveness of disclosure in annual reports (Marston and Shrikes, 1991). A disclosure index is a research instrument comprising a series of pre-selected items which, when scored, provide a measure that indicates a level of disclosure in the specific context for which the index was devised (Coy, 1995). An annual report is considered sufficient and meaningful if all relevant information – both financial and non-financial – has been reliably reported (Coy, Dixon and Tower, 2001; Tower, 1993).

There is an established accounting literature that examines and measures the extent of annual report disclosure. Most of these studies have concentrated on the disclosure of specific items deemed important for accountability (e.g., Baker and Haslem, 1973; Buzby, 1974, 1975; Cerf, 1961; Choi, 1973; Chow and Wong-Boren, 1987; Copeland and Fredericks, 1968; Craig and Diga, 1998; Engstrom, 1988; Robbins and Austin, 1986; Wallace and Naser, 1995; Zarzeski, 1996). Disclosure indices have also been used in the examination of environmental disclosure in annual reports (e.g., Adhikari and Tondar, 1992; Wiseman, 1982). However, aspects such as value creation and performance measurement have been neglected in the SEA literature, a gap that future research in SEA can fulfil.

At its simplest, and using a binary coding system, the disclosure index provides an aggregated measure of the quantity of disclosure within the annual report and facilitates a cross-sectional analysis of the frequency of disclosure between annual reports. A disclosure index can be constructed to make allowance for variations in the quality of individual disclosures. That is, the perceived quality of disclosure is

assessed using an ordinal scale ranging from, for example, poor to excellent. Several studies have recognized that some disclosure items are more important than others and that it is therefore undesirable to treat all items as being of equal value (Coy, Fisher and Gordon, 2001; Ryan, Stanley and Nelson, 2002). Useful future research in SEA could focus on the disproportionate importance of particular reporting elements, and the impact this has on various outcomes such as accountability, value creation and performance measurement.

3.4 Combining research methodologies

The key to combination of research methodologies is to use dissimilar research methodologies that do not share the same methodological weaknesses (i.e. errors and biases) to increase the confidence in results (Singleton and Straits, 2005, p. 382). As reported by Parker (2005), few publications in the SEA literature have combined research methods. Those that do include work carried out by Meyer (1982), Larrinaga-Gonzalez, et al. (2001), and Rowbottom, Lymer and Wilkins (2006). Examination of these limited studies indicates that combining other research methodologies with content analysis in SEA literature is a new phenomenon which could be adopted by researchers, although other research paradigms, such as IC, have already done so, as will be outlined in the next paragraph. Recent attempts to combine different methods of data collection in IC research can be outlined in two broad themes. The first is the use of content analysis of annual reports together with semi-structured interviews. The second is the combination of various types of information sets with content analysis and other research methods.

The combination of research methods has been successfully applied to investigate voluntary reporting in IC, which can provide useful guidelines to SER in examining

and speculating about disclosure patterns. Using the method of content analysis and semi-structured interviews, Abeysekera and Guthrie (2004a; 2004b; 2005) reported on ICR practices in a sample of firms in Sri Lanka, a developing nation. They first aimed to examine the disclosure patterns of ICR observed in the Sri Lankan sample, and to explain the differences in disclosure patterns between Sri Lanka and developed nations; second, they speculated upon the differences in disclosure patterns. The aims of their research were to: develop IC disclosure content categories from the research literature, providing a tool that would then be used to assess the type, amount and quality of ICR disclosures; apply this IC disclosure content tool to a sample of Sri Lankan firms' annual reports; use the results to contribute to the development of ICR in developing nations, with a view to making several recommendations for ICR practice. Thus this research included aspects of sections 3.1 and 3.2 above, and the combined approach discussed in section 3.3.

Also, Abeysekera and Guthrie (2004a; 2004b) found that empirical analysis demonstrated inconsistency between an organization's internal IC management issues and practices and its external ICR practices. It showed that strategically important information about the organization's management challenges, knowledge resources, knowledge management activities and IC indicators was not disclosed to external stakeholders in the organization's annual reports. This study exemplified the significance of the provision of information on human capital to external stakeholders, highlighting to public policy makers the relevance of extending existing reporting policies to incorporate disclosure requirements for organizations to include information on IC in annual reports.

The second of the two broad themes into which different methods of data collection have been grouped is the combination of various types of information sets with content analysis and other research methods. Guthrie, Boedker and Cuganesan (2004) investigated IC management, measurement and reporting practices at the NSW Department of Lands. The research study incorporated three related data sets: semi-structured interviews with senior managers and executives; content analysis of the Department's annual reports; content analysis of the internal documents including the corporate plan, divisional business plans and target business model document.

Similar studies have been attempted in contemporary SEA which can set a useful future direction for SER. Haigh, Carlin and Guthrie's (2005) report provides a benchmark on the effectiveness of social reporting practices by Australian corporations and financial institutions that issue investment products to Australian consumers. The report presents contemporary analyses of the significance of governance and corporate social responsibility information disclosures for financial investment management practices, compares Australian reporting and management practice to international practices, and provides evidence for public policy debates. Their study is the first in-depth research of this type in Australia.

The broad theme of ethics has come to the forefront in social reporting and may be extended to environmental reporting in future studies. The business press and scholarly literature use terms such as 'ethical', 'green', 'mission-directed', 'societal', 'sustainable', 'socially responsible investment' and its acronym 'SRI' to describe managed investment products screened against social considerations. Haigh et al., (2005) used the terms 'social fund' and 'social investment product' in their report to

denote a managed fund that markets its use of self-defined governance, social or environmental guidelines to construct portfolios. Although their content and application may differ between funds, such guidelines are referred to collectively as 'social considerations'. This research combined a number of methods (content analysis, interviews and external rating information) to achieve these objectives.

The combination of research methods in investigating different aspects of SER has proven fruitful. Haigh et al. (2005), in interviews with investment managers, sought to identify how they defined and took into account governance, environmental issues, labour standards and social considerations when constructing investment products. The information drawn from these interviews was then compared to the extent to which a sample of 2004 product disclosure statements complied with Section 1013D of the *Corporations Act* (Cth) 2001, which imposes requirements on product issuers to disclose social considerations. The analysis suggested that the requirements imposed on issuers of social investment products by Section 1013DA of the *Corporations Act* (Cth) 2001 had not resulted in immediate improvement in the quality of disclosures.

3.5 Content analysis

Content analysis of annual reports is a technique for gathering data. It involves codifying qualitative and quantitative information into pre-defined categories in order to derive patterns in the presentation and reporting of information. For content analysis to be effective, certain technical requirements should be met (Guthrie and Mathews, 1985; Guthrie et al., 2004). Several of these are now discussed below.

First, the categories of classification must be clearly and operationally defined, that is, the units of analysis. Second, data capture must be systematic – it must be clear that an item either belongs or does not belong to a particular category. Third, content analysis must demonstrate some characteristics for reliability and validity.

Unit of Analysis

Content analysis requires the selection of a unit of analysis. According to Holsti (1969, p. 116), a recording unit is “the specific segment of content that is characterised by placing it into a given category”. In the accounting literature debate has arisen (Gray et al., 1995) regarding the use of words, sentences or portions of pages as the basis for the coding.

Gray et al. (1995) suggested that sentences are preferred in written communication if the task is to infer meaning. Most SER content analysis uses sentences as the basis for coding decisions. Using sentences for both coding and measurement is likely to provide complete, reliable and meaningful data for further analysis (Milne and Adler, 1999). Another unit of analysis is the paragraph. The paragraph method is more appropriate than word count for drawing inferences from narrative statements, as meaning is commonly established with paragraphs rather than through the reporting of a word or sentence. Usually the amount of disclosure is measured by counting frequency at both category and element levels. An organization’s overall index is calculated according to the total amount of information disclosed. Also, disclosure indices often are calculated for each category.

Unerman (2000) usefully presented arguments for measuring the volume of SER disclosures in terms of proportions of a page, taking into account non-narrative SER disclosures (e.g., charts, tables, photographs). Although Wilmshurst and Frost (2000) excluded pictures in their analysis, they indicated that this was a limitation because of the possibility that pictures might be used by management to impress upon stakeholders their approach towards the management of environmental issues. However, there are complications in attempting to quantify the impact of pictures. Wilmshurst and Frost (2000) argued that “a picture may be worth a thousand words”, but to measure pictures based upon an unweighted word count is highly subjective. Further, some pictures cannot deliver the intended message without the surrounding text. These arguments complicate the debate as to the weight that should be used to determine the amount of disclosure that is represented by a picture.

Data Capture

The IC literature has convincingly coded voluntary reporting to analyse elements and location of IC in source documents (Abeysekera and Guthrie, 2004a, 2004b, 2005; Olsson, 2004). The IC information collected from the reading and analysis of annual reports is coded onto coding sheets. Each item is coded according to the section under which the item appears. To facilitate coding, the annual report was divided into five sections: the vision/strategy section; the directors’ section; the business/operational section; the financial section; and the remaining sections. The nature of disclosure is categorized as either qualitative or quantitative, and the incidence of occurrence (i.e., number of paragraphs) is generally noted. The paragraph count reveals the proportion of space allocated for a given element, since each ‘story’ is competing for its right of space in the annual report. Although the SEA literature has engaged in similar

exercises, extended reporting by combining SER with ICR, may provide useful information.

Reliability and Validity of Content Analysis

Those conducting content analysis need to demonstrate the reliability of their instruments and/or the reliability of the data collected using those instruments, to permit replicable and valid inferences to be drawn from findings (Milne and Adler, 1999).

According to Milne and Adler (1999), reliability in content analysis involves two separate issues. First, it is necessary to attest that the coded data set produced from the analysis is reliable. This is usually achieved by the use of multiple coders and by reporting that the discrepancies between coders are minimal. Another factor to consider is the reliability associated with the coding instrument. Establishing the reliability of particular coding tools (i.e., ensuring well-specified decision categories with well-specified decision rules) reduces the need for multiple coders.

Krippendorff (1980) identified three types of reliability for content analysis: stability, reproducibility and accuracy. Guthrie et al. (2004) detailed three methods to increase reliability in recording and analysing data: first, selecting disclosure categories from well-grounded relevant literature, and clearly defining them; second, establishing a reliable coding instrument with well-specified decision categories and decision rules. For example, Abeysekera (2006) notes differences in operational definitions of elements in the coding framework examined using content analysis, and the level of detail on which elements are examined, may explain the substantial differences

between studies. Third, training coders and showing that coding decisions made on a pilot sample have reached an acceptable level.

Limitations of Content Analysis

There are several limitations in the use of content analysis (Gray et al., 1995; Milne and Adler, 1999; Unerman, 2000). The first is the recognition that it captures quantity of disclosure (in terms of frequency and volume of reporting) rather than quality characteristics. The second is that it is subjective, in that it is capturing various narratives as a representation of SER.

In relation to the first limitation, researchers have cited several studies as evidence that content analysis has failed to explain the quality of reporting in SEA. For instance, Deegan and Gordon (1996) and Deegan and Rankin (1996) examined the volume of news of the disclosure as an indicator of its quality. Guthrie and Parker (1990) examined theme, evidence (monetary, non-monetary, declarative, none), frequency of reporting, and location of a disclosure to infer its quality. Gray et al. (1995) examined themes, evidence, frequency of reporting, and news. Hackston and Milne (1996) examined the amount of disclosure, themes, news and evidence. These researchers highlighted the difficulty of relating findings to the quality of reporting.

The second limitation is that the subject matter being investigated, the narratives of SER, must be captured by the coding instruments (Deegan and Rankin, 1996; Wilmschurst and Frost, 2000). Milne and Adler (1999) emphasised that in order for

valid inferences to be drawn from content analysis, reliability of both the data and the instrument must be achieved.

4. Summary and possible future directions

Traditionally, the focus of content analysis has been narrow, chiefly associated with annual reports of listed companies. This paper proposes broadening the focus to include a variety of SEA materials, and combining content analysis with other methods of data collection.

The main argument for combining content analysis with a variety of other research methods is to provide a richer empirical understanding of SEA and its management, measurement and reporting. Several contemporary papers have adopted this approach to contrast and compare management, measurement, and reporting aspects in SEA and IC research.

The combination of either sources of SEA material (e.g., annual reports, stand-alone environmental reports, internet material, strategy plans, business plans, newspaper articles, etc.) and/or methods of data collection (e.g., case/field/interview studies, surveys, experiments, etc.) should also provide more robust empirical evidence for understanding of SEA practice.

Therefore, this paper proposes the following benefits to be derived from broadening the use of content analysis in SEA research: the provision of richer empirical observations of actual practice; the ability to focus inside the organization; a richer understanding of the relationship between the inside-outside perspectives; and more

complex normative models for understanding extended performance reporting as outlined in section 3.1.

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