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Green accounting: Reflections from a CSR and environmental disclosure perspective

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ABSTRACT

In this commentary, we reflect on Thornton's (2013) extension to his original *CA Magazine* article on environmental accounting (Thornton, 1993) as well as the original contribution. Given our background in social and environmental disclosure research, we question Thornton's narrow focus on environmental accounting as it relates to the debits and credits of financial reporting, and we attempt to illustrate the problems that voluntary environmental disclosure creates with respect to reduced incentives for companies to improve environmental performance. We conclude by identifying our concerns with the future of environmental accounting given the recent 'rediscovery' of the topic by mainstream accounting researchers.

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1. Introduction

We appreciate the opportunity to reflect on, specifically, Thornton's (1993, 2013) contributions to the debate on environmental accounting, and more generally, on what we see as the concerns that environmental (and social) accounting needs to deal with.[1] We have carefully read his new exposition and, given its reliance on the original *CA Magazine* article, we carefully reviewed it as well. Let us state from the beginning, that we agree wholeheartedly with three major points from these works. First, like Thornton (1993, p. 39), we believe that "we can't really decide how to do green accounting until we settle some fundamental, epistemological issues of what we are supposed to account for" (and we do not believe we have much chance of ever settling those issues). Second, we concur that the asset retirement obligation (ARO) accounting requirements now in place are an improvement over the situation that existed when Thornton first discussed environmental accounting. Finally, and perhaps most importantly for our argument, we agree with Thornton (1993, p. 37) that "information is never perfect." Where we differ, and this perhaps relates back to agreement number one, is on what we see as within the purview of the accounting domain.

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[1] This special issue includes other reflection papers that provide different reactions and perspectives (Deegan, 2013; Gray, 2013; Spence et al., 2013).

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As Thornton (1993, p. 34) noted in his original piece, he was going to do something he saw as unique to articles dealing with green accounting, he was "going to talk about accounting." As he explains in his update, what he meant was that he actually got into the debits and credits that would be needed to bring companies' environmental responsibilities into the accounting system, and for the most part, that is what he again focuses on in the new article. To him, accounting appears to be limited to what gets captured in the financial statements. But we are researchers in corporate environmental disclosure – almost always focusing on information that gets provided not through the financial statements, but instead through other means such as narratives in annual reports, disclosures on company websites, and more recently, provision of information through stand-alone corporate social responsibility (CSR) reports. We can understand, given that very little research into corporate environmental reporting predated Thornton's first exposition,[2] that his view of accounting back in the early 1990s was so limited. However, in that both environmental disclosure research, and the practice itself, have increased dramatically over the past two decades, we would like to have seen Thornton at least consider the role that disclosure, as opposed to formal recognition in the financial statements, might be playing in today's world. As such, we attempt in this comment to expand Thornton's (1993) 'base case' scenario to illustrate the important role that environmental information plays in, if nothing else, firm valuation, but also to bring out our concerns with where CSR disclosure research may be heading.

2. Thornton's 'Base Case'

In his original article on environmental accounting, Thornton (1993, pp. 38–39) used a simple example to illustrate his arguments regarding the intractability of accounting for environmental issues. He assumes a fledgling oil company that operates under a current set of environmental cleanup regulations that has just issued $2,000,000 in debt and received $1,000,000 of capital from the market.[3] But, following the financing, the government imposes new additional cleanup regulations. Assuming a competitive product market that will not allow price increases to offset the new costs,[4] Thornton lays out the assumed effects of the new requirements on the value of the firm. He notes first, that $*G* represents the present value of the increase in cleanup costs relative to the period immediately before the new legislation. Thornton then further assumes additional cash flow effects. Specifically, he decides that the changing cost structure leads his example firm to shut down marginal wells leading to reduced cash flows in the amount of $*x*, and he assumes management of the firm increases their estimation of potential lawsuits from indigenous residents at the time the remaining operating wells are shut down, leading to an additional expected cash outflow with a present value of $*y*. He designates the total impact of these two additional events as $*R*, the reduction in the value of the firm, and then further notes that the reduction in shareholders' equity is the sum of $*R* and $*G*.

Thornton (1993, p. 39) argues that this company could account for the estimated increase of future cleanup costs, $*G*, by debiting equity and establishing a liability, but only for $*G*, the increase in the cleanup costs, as any original expected cleanup costs would already be captured in equity value. He then further asserts that because *R* "cannot even be guessed at" without "information about the firm's cost structure, its leeway in passing on costs through pricing, and the competitive conditions in its economy," it is infeasible, if not impossible, to bring the effects of these costs onto the books as a liability at the time of the new regulations. He underscores this point by noting, "I wonder if anyone will ever be able to produce a credible, auditable estimate of *R*?" (Thornton, 1993, p. 39). This is what illustrates to us that Thornton clearly appears to be limiting accounting to only what can be captured through financial statement presentation. We are willing to concede that recognizing the impacts of the new regulations on the books at the time they are passed may be impossible, but that does not mean they do not matter.

In an efficient market, investors are not going to wait until the effects of *G*, *x*, and *y* manifest through "market-mediated transaction[s]" (Thornton, 1993, p. 34). Instead they are going to immediately assess their beliefs about how the new regulation is going to impact the future cash flows of the firm, and the market will immediately impound those expectations into the equity value of the company. To do that, they need information, and that leads us to what we, as a sub-set of the "green accountants" (Thornton, 1993, p. 38), have spent so much of our research careers examining – the environmental (and social) information that companies voluntarily provide outside of the financial statements.

It is possible, given his apparent belief that accounting relates only to what is reflected in the financial statements, that Thornton would argue that what we examine is not 'accounting.' We, of course, disagree. Gray (2010, p. 49) cites Morgan (1988, p. 480) in noting:

> . . .[accounts] are always engaged in interpreting a complex reality, partially, and in a way that is heavily weighted in favour of what the accountant is able to measure and chooses to measure, through the particular scheme of accounting to be adopted.

[2] Certainly, the issue of environmental reporting existed at this time, but most of the examinations of corporate disclosure from the 1970s and 1980s tended to focus more broadly on 'social responsibility' information that extended to areas beyond just the environment.

[3] Although discussed by Thornton prior to the example, it doesn't matter in this case if the firm had chosen to provide audited estimates of what they believe the cleanup costs would be. The $1,000,000 of equity captures investors' perceptions of the discounted value of those future costs.

[4] Thornton (1993, p. 39) supposes competition from Mexican oil companies who face no environmental regulations. He later relaxes this restriction and argues that when prices can be changed it is even more impossible to assess the impacts of his change in regulation as his company could potentially use the new requirements to justify price increases above the marginal costs.

He further cites Abercrombie et al. (1984, p. 13) to make the case that "the language by which people justify their behavior when challenged by another social actor . . . is an 'account'" (Gray, 2010, p. 47). As such, we argue that information companies voluntarily choose to provide through, originally, disclosures in their annual reports, and more recently, through websites and stand-alone CSR reports, represent attempts to 'account' for their environmental (and social) behaviors, and as such, are very much within the realm of 'accounting'. Unfortunately, many of the problems we had with the voluntary environmental disclosure of twenty years ago remain unchanged today, and we would like to expand Thornton's (1993) original base case to illustrate our concerns.

3. An expansion of the Thornton (1993) example

Let's assume, instead of a single oil company, a market consisting of two competing firms. Let's call them Good and Evil, and let's assume that at the start of period *i* they are both valued in the market at $1,000,000. Now let's assume the government imposes new regulations designed to reduce the harmful effects of oil company activities on the environment. The market must now assess its beliefs about the cost of the new regulations on each firm, $E[\$G_{\text{Good}}]$, $E[\$G_{\text{Evil}}]$ (for the sake of simplicity, we note this 'cost' includes all other potential changes in future cash flows – that is, it includes what Thornton laid out as $\$x$ and $\$y$, as well as any potential product price changes that could be imposed to offset these costs). Because the regulations are meant to reduce harmful effects, we can assume that $\$G$ will be higher for the firm whose operations are more harmful, and as such, information on each company's environmental performance would appear potentially to have value relevance.[5]

One potential source of environmental performance information is the disclosures companies voluntarily choose to provide in their financial reports.[6] Proponents of voluntary disclosure theory (VDT) argue that companies choose to provide voluntary financial report environmental disclosures due to information asymmetry between managers and investors. Better performers, they argue, want to signal to the market their superior position through disclosure, while worse performers will choose to remain silent and as such, be judged an "average-type" firm (Clarkson et al., 2008, p. 304). This interpretation of the choice to disclose is perfectly logical in a world where no other sources of companies' environmental performance are publicly available. But that does not include the investing world in, for example, North America. In the U.S., most manufacturing firms and utilities are required to provide to the Environmental Protection Agency (EPA) annual estimates of toxics released into the environment and the EPA makes this information publicly available. Information on other air and water pollution performance issues is also available through the EPA (see, e.g., Hughes, 2000; Clarkson et al., 2004). Similar reporting is required by companies in Canada through the National Pollutant Release Inventory managed by Environment Canada. There are also proprietary firms such as MSCI,[7] Sutainalytics or Trucost that use this data, and information gathered from other sources, to make available to interested users (at a cost) their assessments of firms' environmental (and social) performance.

In a world where corporate environmental performance information is publicly available, it is less clear why firms choose to make voluntary financial report environmental disclosures. One possibility, based on VDT arguments, is that the publicly available information is incomplete (certainly a realistic possibility) and does not allow investors to adequately assess who the better performers actually are. In this case, as before, better performers disclose to signal their superior position. However, a competing argument, legitimacy theory, suggests that companies may use voluntary disclosure to reduce their exposure to social and political costs (Patten, 1991, 1992) by projecting an image of environmental awareness. Proponents of legitimacy theory (including us) argue that this incentive applies in particular to companies with worse environmental performance, and several studies over the past ten years provide evidence supporting such a relation (e.g., Aerts and Cormier, 2009; Cho et al., 2012a,b; Patten, 2002).

Returning to our adaptation of the Thornton base case, we assume, consistent with today's world (and the world of 1993), that partial environmental performance information is available in the market, and that the preponderance of that data suggests Good is a better environmental performer than Evil. However, again consistent with today's world, while both Good and Evil provide voluntary financial report environmental disclosures, Evil provides a more extensive array of information, particularly focusing on its programs and objectives in the environmental domain (see, e.g., Hopwood, 2009). Now we would hope that investors, given access to actual performance data, would discount or even ignore the disclosures provided by Evil. But both experimental (e.g., Milne and Patten, 2002) and empirical (Freedman and Patten, 2004) investigations present evidence that that does not appear to be what happens. Instead, the impacts of negative environmental performance appear to be mitigated, at least to some extent, by the voluntary financial report environmental disclosure. If it were only the misguided investors who would suffer from this misinterpretation of the information being provided, we would not be

[5] It is important to note here that we are not assuming that investors would only assess the market effects of environmental performance at this time. Similar to Thornton (1993), we assume (and empirical evidence suggests – see, e.g., Hughes, 2000; Clarkson et al., 2004) that the market effects of differences in environmental performance are already captured in equity value. What the investors need to assess at this point in our example is the *change* in the amount, timing, or certainty of future cash flows owing to the effects of the new regulation.

[6] While we are aware that some financial report environmental disclosures are mandatory, there is evidence of a large variation in the compliance with such regulations across firms but also, and more importantly, a significant lack of enforcement and consequences for non-compliance (Blacconiere and Patten, 1994; Cho and Patten, 2008; Gamble et al., 1995). Therefore, we classify these disclosures to be of voluntary nature as well.

[7] MSCI recently purchased the more well-known KLD Research and Analytics, Inc.'s social performance ratings database.

overly concerned—after all, investing is a risky activity. However, as Freedman and Patten (2004, p. 28) argue, if companies can reduce the market effects of poor performance through the use of legitimating disclosure, it will also lead to a reduced incentive for those with poor environmental records to improve their performance, ultimately resulting in less benefit (if not more harm) to society.[8]

Now the reason we, like Thornton (2013), believe that the ARO accounting of today is better than what existed back in 1993 is because firms are now required to include in their accounts their beliefs about what (the present value of) ARO costs are going to be. This means investors (and others) have a better starting point for assessing their expectations for these costs, but perhaps more importantly, the rules lead to information that is comparable across firms thus also allowing the market to assess differences in exposure. To us, it does not matter that the ARO reporting is required to be reflected in the financial statements, what matters is that the provision of the information is now mandatory, rather than voluntary. It is the voluntary nature of most environmental disclosure that creates problems, not only for investors, but for society. As summarized by Gray and Bebbington (2000, p. 16), where CSR disclosure is voluntary, it will only reflect those aspects of performance that companies are willing to release, and accordingly, it can "only be a legitimation device and not an accountability mechanism."

4. Where are we headed?

Thornton identifies in this year's update that his original *CA Magazine* piece, while apparently striking a chord with practitioners, appears to have gone unnoted by his academic peers. What he might also have mentioned is that, with a few exceptions,[9] in the 1990s and the 2000s the mainstream North American accounting research community largely ignored environmental and CSR issues altogether. But, perhaps fueled by the growth in both Internet disclosure and the use of corporate stand-alone CSR reports, it appears that the mainstream has 'rediscovered' CSR disclosure.[10] To illustrate, *The Accounting Review*, after recently publishing papers related to the assurance and auditing of sustainability reports (Simnett et al., 2009) and the impact of CSR reporting on firms' cost of capital (Dhaliwal et al., 2011), included a "Special Forum on Corporate Social Responsibility in Accounting" including an introduction and three articles in its May 2012 issue. Further, Harvard Business School, in conjunction with the *Journal of Accounting and Economics* hosted a conference on corporate accountability reporting in January of this year. As long-time researchers in the CSR domain, we welcome this renewed interest by the mainstream community. We believe there is much yet to be learned about, in particular, the effects of environmental (and more broadly, CSR) disclosure, and having the topic re-emerge in mainstream journals can only help to trigger interest in exploring the issues. However, we are also troubled that the new breed of mainstream CSR researchers appears to know so little about what we have been exploring for more than a quarter of a century.

Organizers of the Harvard conference cited the need for the event by noting "as public corporations devote more resources to corporate accountability reporting that differs from traditional corporate financial reporting, there is a demand for a better understanding (or explanation) of the phenomenon" (see call for papers at: www.hbs.edu/faculty/conferences/2013-corporate-accountability-reporting/Pages/default.aspx). Somewhat similarly, *The Accounting Review* Editor, John Harry Evans III, in addition to claiming that "the two forum archival studies document that shareholders have reason to care about CSR disclosures," further adds in his introduction to the special forum that its third contribution, Moser and Martin (2012), suggests that experimental research could "offer new insight into understanding . . . why firms make the CSR disclosures that they do" (Evans, 2012, p. 721). We would argue that a large body of research—experimental and otherwise, already exists and offers explanations and understandings of CSR disclosure practices including what drives firms to disclose this type of information. At least Moser and Martin (2012) are aware of its existence. They state (albeit in a footnote):

> Of course, there are many other earlier CSR studies published in *The Accounting Review* and in many other accounting journals. *We do not cite such papers* because this commentary is not intended to provide a review of prior CSR work, but rather to comment on how accounting researchers might consider a broader perspective when studying CSR issues (Moser and Martin, 2012, p. 797, our emphasis).

One of our major concerns with the mainstream renewal into CSR reporting is that, rather than being considered from broader perspectives, the disclosure appears to be viewed with little or no skepticism regarding its purpose. For example, Ballou et al. (2006, pp. 65–66), in a *Journal of Accountancy* article on sustainability report audit issues, claim CSR reporting is used by companies in order to "create transparent reports that provide accurate and reliable data, as well as a fair picture of overall performance." Similarly, Dhaliwal et al. (2011, pp. 62–63) argue that "standalone CSR reports likely provide

[8] More recently, Cho et al. (2012a,b) make a similar claim about the harmful effects of voluntary environmental disclosure. They show that worse performers make more extensive disclosures and that both perceptions of companies' environmental reputations and company inclusion in the Dow Jones Sustainability Index appear to be driven by the disclosure, not the actual performance. They, too, suggests this reduces the incentives for firms to improve actual environmental performance.

[9] Among those exceptions is Thornton's *Contemporary Accounting Research* article with Yue Li and Gordon Richardson on environmental liability disclosure (see Li et al., 1997).

[10] We use the term 'rediscovered' because several articles related to CSR or environmental disclosure issues were published in the late 1970s and early 1980s in the *Journal of Accounting Research* (e.g., Ingram, 1978; Ingram and Frazier, 1980) and *The Accounting Review* (e.g., Anderson and Frankle, 1980; Buzby and Falk, 1979).

incrementally useful information for investors to evaluate firms' long-term sustainability." Legitimacy-based research suggests neither Ballou et al. (2006) nor Dhaliwal et al. (2011) are likely correct, but this contrary view receives not so much as a mention in either piece, or for that matter, in *any* of the articles published in *The Accounting Review*'s special forum, or *any* of the papers presented at the Harvard conference. Unlike us, and unlike Thornton (1993), the mainstream CSR researchers either don't understand, or don't care, that information – particularly voluntarily provided corporate environmental information – is never perfect.

Protecting the environment is hugely important, and, normatively, we believe that 'green accounting' ought to be about actually accounting for an organization's environmental impacts. However, we agree with Thornton (1993, 2013) that capturing the effects of companies' environmental actions in their financial statements is not likely to happen. But we also suspect that firms will continue to provide disclosure related to those actions, and to us, this is just as much an issue of accounting as the debits and credits that Thornton chooses to focus on. Understanding corporate disclosure, and its impacts, is as important today as it was twenty years ago, and to that end, the resurgence in CSR disclosure research by the mainstream North American academic accounting community is potentially valuable. But, if those mainstream researchers fail to acknowledge that the disclosure may not be about transparent accountability, we fear that these new contributions will only support the status quo, and that's not good news for the environment.

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