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SOCIAL AND ENVIRONMENTAL ACCOUNTING, ORGANISATIONAL CHANGE AND MANAGEMENT ACCOUNTING: A PROCESSUAL VIEW

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SOCIAL AND ENVIRONMENTAL ACCOUNTING, ORGANISATIONAL CHANGE AND MANAGEMENT ACCOUNTING: A PROCESSUAL VIEW[2]

ABSTRACT

Consistent with calls for in-depth studies of social and environmental accounting and reporting (SEAR) intervention (Bebbington, 2007; Fraser, 2012; Contrafatto, 2012), our paper focuses on the inter-relationship between organisational change and SEAR practices, as well as the involvement of management accounting in such organisational dynamics. Drawing insight from both Laughlin (1991) and Burns and Scapens' (2000) theoretical frameworks, we explore the processes of change through which SEAR practices become elevated to strategising status, in the context of broader organisational and extra-organisational developments, but we also illuminate how institutionalised assumptions of profit-seeking limit the extent to which broader sustainability concerns become infused into day-to-day business practice. Our paper highlights the importance of management accounting in facilitating and shaping the cumulative path of SEAR practices (and sustainability more generally); however, we also heed caution against uncritical reliance upon conventional management accounting tools. The following paper extends our understanding of SEAR practices as cumulative process over time, an awareness of the potential limits to such developments in profit-seeking organisations, and stresses a need to be circumspect when involving management accounting.

KEYWORDS: Social and environmental accounting and reporting (SEAR); Organisational change; Processes of change; Management accounting; Profit-seeking; Institutions.

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1 - Introduction

"[…] the current economic crisis is putting enormous pressure on the functioning of management accounting systems in most organizations in the world […] Strategies are […] being constantly recast, illustrating in the process the importance of being strategic rather than merely having a strategy. Ad hoc analyses of a multitude of different aspects of the economic functioning of the organization are becoming a form of standard practice. Management accounting is moving to operating in continuous time. In these and many other ways economic information flows are assuming an ever greater salience in the management of organizational affairs" (Hopwood, 2009a, pp.799-800).

It is well documented that management accounting *information* could play a fundamental role in the progress of the corporate initiatives towards sustainable development (Thomson, 2007). Management accounting, as a primary source of information within organisations, is paramount to the diffusion of social and environmental accounting and reporting (SEAR) practices and sustainability know-how. Its tools and techniques underpin the means by which tomorrow's organisations define, measure and *both* internally and externally report their social and environmental impact; and the role of a management accountant is thus critically important in this respect. As the above quotation suggests, management accounting is becoming increasingly complex, fluid and integrated within broader organisational and extra-organisational processes; there is, it seems, a growing demand in business and society for information. An important aspect of these developments is the interplay between management accounting and sustainability-related issues (including sustainability accounting and reporting); yet very little is known about such interplay (Thomson, 2007).

Today's organisations are increasingly open to pressures to be more socially and environmentally responsible when they conduct their business. Accounting and reporting on social and environmental aspects has become common practice for most leading organisations (KPMG, 2011). 'Being and acting' towards sustainable development, at least as it has been defined by many organisations, has been elevated to a higher tier of managerial concerns. That is, nowadays sustainability issues appear to be part of an organisation's strategic concerns.

Although the term 'sustainability' has been debated in the organisational literature for some time, there is still ambiguity concerning its meaning (Gray, 2011) and *whether* (and *how*) this notion

can be applied in the context of business and corporations (Milne et al, 2009; Gray and Milne, 2002; Bebbington, 2007). The varied and not always consistent terminologies used, in one way or another normally refer to the definition provided by the United Nations Commission for Sustainable Development in 1987, according to which a development is 'sustainable' if it is able to "meet the needs of the present generations without compromising the ability of future generations to meet their own needs" (UNWCED, 1987). Thus, sustainability represents fundamentally a 'global' (Gray and Milne, 2002) and 'spatial' concept (Bebbington, 2007) that refers to the "properties of a physical system in some physical space" and its capacity to sustain (Bebbington, 2007, p.234). The concept of sustainability embraces notions of eco-efficiency in the use of resources; and eco-socio justice in their distribution between current generations (i.e. intra-generational) and between present and future generations (i.e. inter-generational).

Some authors contend (see for example Gray and Milne, 2002) whether this notion can be applied in the context of business and corporations and, if so, what the implications for their undertakings would be. Nevertheless, business and corporations are strongly implicated in this ongoing debate and they have, and indeed they had, an important role to play in the process of developing (or not) sustainably through the adoption of more responsible behaviours, initiatives and practices [3], including management, accounting and reporting.

Sustainability (accounting and) reporting[4] is going through a rapid and detailed change process. From a situation of, say, just 20 years ago when a handful of organisations produced basic social

[3] In much of the corporate environmentalism literature the debate about sustainable development has been framed around the 'environment-development' dichotomy (Milne et al, 2009). At one extreme, there is a more 'economic-business-grounded' position which professes the centrality of economic growth; the prominence of technological and scientific progress; and the pivotal role of business and corporations in identifying solutions to social and environmental problems (see Milne et al, 2009 for further discussion). Alternatively, there is an 'eco-bio-grounded' perspective whose central values are the supremacy of 'nature'; the existence of ecological limits to economic growth; and the fundamental unsustainability of corporations. Within these two extremes, several scholars (see for example Colby, 1991 and Olsen et al, 1992) have sought to identify a "middle ground" or "in-between" perspective as an attempt to synthesise the "fundamental conflict between anthropocentric and bio-centric values" (Milne et al, 2009, p. 1215-1216). It is in this unresolved and ongoing 'conflict' that much of the current debate about sustainable development, and the role that business and corporations play, can be positioned.

[4] In this paper we use the term 'sustainability accounting and reporting' in a loose sense to indicate the range of topics and issues that are normally included in the SEAR literature. For a more detailed discussion and critical understanding of whether corporate sustainability reporting

and/or environmental accounts, we now see a bandwagon of organisations clamouring to be the first, best and most innovative owners of fully 'integrated reports' which attempt to combine social and environmental impact with the traditional accounts of financial performance. All of this requires *information*, usually drawn from a company's management accounting systems, and overseen by the management accountant. In turn, we also see an avalanche of new management accounting tools that, it is claimed by their advocates, provide a more effective way to bring sustainability concerns 'into' an organisation; although, as we develop in this paper, most of these tools tend to be premised on an assumption of 'profit-optimising outcomes' (Scapens, 1994).

Our paper aims to better understand the ongoing interrelationship(s) between SEAR and management accounting, in the context of broader organisational and extra-organisational developments. We present a longitudinal case study of why, and particularly *how*, an Italian multinational organisation's (MARIO, hereafter) SEAR practices evolved over time, and the organizational effects of such developments. We present this evolution as complex (change) processes over time, highlighting the cumulative interplay between accounting tools and both organisational and extra-organisational change.

We observe a growing importance for management accounting, as SEAR practices (and sustainability issues more generally) assume a more significant position in an organisation's strategic planning. However, we also highlight limits to such developments, as profit-seeking ways maintain their institutionalised status as 'the way we do things around here'. In our case study we observe the establishment of multiple SEAR-related tools and techniques and, importantly, that such practices were (at least assumed to be) consistent with dominant corporate objectives for earning economic profits.

Our case study highlights complexity in the development and effects of SEAR practices over time, and stresses how such complexity needs to be understood in its broad organisational and external context. We offer insights into whether (and how and when) SEAR practices might be

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is achievable or even possible, and what it should look like, refer for example to Gray & Milne (2002), and Bebbington (2007).

developed in a manner that mobilises change in organisational behaviour within a broader sustainable development agenda (Larrinaga and Bebbington, 2001; Bebbington, 2007). More specifically, we are drawn to consider how, in some organisations, the engineering of SEAR practices over time can constitute part of a broader change process, whereby sustainability principles and values become integral to organisational strategies and high-level corporate values (Adams & McNicholas, 2007), as opposed to some stand-alone project.

In this sense, to an extent we see some progress within MARIO, but we also see how dominant business assumptions focused on earning profits limit the degree to which sustainability can (if ever) eventually become an overriding strategic goal. We raise questions about how an organisation's attempt to 'embed' sustainability into routine activities needs to be viewed in the context of changeable external circumstances and other inter-linked organisational activities, but especially in the context of *dominant* and taken-for-granted business ways of operating. That is, although our case study presents a useful story of implementing SEAR-related innovations, we find that it is ultimately assumptions underlying the pursuit of economic profits which are dominant to the extent that SEAR changes appear to need to be designed *within* rather than *outside* of such constraints.

The approach that we adopt is 'processual' in the sense that we explore the development (and effects) of SEAR practices as *cumulative process(es) over time* (Burns, 2000; Burns and Scapens, 2000). Also, our methodological approach is holistic, in that rather than explore an organisation's SEAR practices and corporate sustainability strategies in isolation, we investigate their evolution in the context of broader and ongoing organisational, social and environmental context(s). Theoretically, we interpret our findings through a lens that draws from Laughlin (1991) and Burns and Scapens' (2000) frameworks of organisational and accounting change. As we develop later, these frameworks are sufficiently complementary, and they help to inform our narrative of the interplay and dynamics between SEAR practices, organisational change and extra-organisational developments. Laughlin's (1991) framework of organisational change has been adopted by numerous scholars of social accounting (e.g., Gray et al, 1995; Larrinaga et al, 2001; Fraser, 2012) to investigate whether and, if so, to what extent social/environmental

accounting tools become implicated in organisational change. Rather less-used in SEAR research to date, Burns and Scapens' (2000) framework particularly assists us in teasing out why and how the change dynamics unfold over time as they do (Fraser, 2012). Together, both theoretical frameworks present 'a way of seeing' the observed change processes in MARIO, which in turn allows us to construct a case study narrative.

The remainder of our paper is organised as follows. In the next section we look at extant works that have previously investigated SEAR-organisational change dynamics and, in so doing, we are then able to highlight some gaps in the literature towards which this paper seeks to contribute. Following that, we articulate the theory which assists us to interpret our empirical evidence, and we briefly describe our research methods. We then present our case study and, finally, we discuss some of the key issues that are highlighted from the case study, including theoretical reflection and consideration of the future role and functioning of management accounting in SEAR practice and the pursuit of sustainability in organisations more generally.

2 - SEAR and Organisational Change

Over the last two decades a handful of scholars have investigated the dynamics and effects of SEAR in specific organisational domains (see Bebbington, 2007 for a review of this work). The first empirical investigations appeared from the mid-1990s, primarily examining how organisations were responding to environmental issues around that time period (see Gray et al, 1995; Buhr, 1998; Larrinaga et al, 2001; and Larrinaga and Bebbington, 2001). These early studies particularly focused on the role of environmental accounting and reporting for shaping the "processes by which organizations go green" (Larrinaga and Bebbington, 2001, p. 279).

Since the turn of the last century, the focus of such work has expanded, and now includes investigation of additional forms of accounting interventions, such as: (1) social accounting book-keeping systems (Dey, 2007); (2) sustainability reporting (Adams and McNicholas, 2007); (3) environmental management systems (Albelda et al, 2007); and (4) specific social accounting technology such as 'sustainability assessment models' (SAM) (Fraser, 2012) and 'full cost accounting' (FCA) (see Antheaume, 2007 for a review of such studies).

Notwithstanding an increase in this body of research over the last decade, in-depth empirical investigation and critical evaluation of SEAR practices and their effects remains relatively scarce (Dey, 2007; Fraser, 2012). There is a dearth of understanding as to what today's organisations are *really* doing (and why and how) in respect of their SEAR practices. For instance, it would seem there is still much to be learned in terms of management intentions and motivation, hidden agendas, (dis-)incentivisation, unintended consequences, challenges, (re-)actions, and more. Yet, as we argue, it is important that we continue to try to understand more about such processes if we wish to better conceptualise, design and facilitate new tools that will help nurture more social and environmentally-sensitive organisational behaviour.

The SEAR-organizational change literature to-date predominantly focuses on two main issues, namely: (1) the role of SEAR in promoting organisational change, including focus on the change outcome(s) *per se*, and (2) the "assemblage of factors" (Duncan and Thomson, 1998) which either facilitate or stifle SEAR interventions. With respect to (1), many of the previous works (e.g. Gray et al, 1995; Larrinaga et al, 2001; Adams and McNicholas, 2007; Albelda et al, 2007) have tended to concentrate on SEAR intervention *outcomes* rather than on the dynamics of change over time. Moreover, there has been even less prior discussion and investigation of the role of management accounting in the SEAR (-related) processes (of change) (Thomson, 2007). In particular, and as argued by Bebbington, "the way in which such changes systematically play out […] [still] remains speculative […] under-specified and under-theorised" (2007, pp.228-9).

In relation to (2) above, recent studies have tended to investigate the dynamics and assemblages of factors which foster and/or hinder change (see e.g. Dey, 2007; Fraser, 2012). This said, there remains a dearth of research into *why* and *how* SEAR change first emerges, then unravels as it does in real organisations. In particular, as suggested by Bebbington (2007), there is need to extend the investigation of the way in which the various 'factors' (e.g. legislation, the appointment of senior managers) manifest themselves, interweave with each other and intervene into organisational life if one wants to understand why and how change occurs (or does not) in specific settings.

3 - Theoretical Approach

Our theoretical approach draws upon insights from two complementary frameworks, namely Laughlin's (1991) framework of organisational change, and Burns and Scapens' (2000) conceptualisation of accounting change as cumulative processes over time. Both frameworks can be used to investigate the dynamics of intra-organisational change, in a context where organisations are continuously subject to powerful 'environmental disturbances' (Laughlin, 1991); these disturbances provide both resource and constraints for change to occur.

Laughlin's framework is probably more familiar to SEAR scholars, whereas Burns and Scapens (2000) is probably less so, yet oft-used in the management accounting (change) literature. While the specific nature of each framework differs, for example, in their respective philosophical origins, primary foci and levels of analysis, their underlying purpose is consistent if not entirely complementary. First, both frameworks view organisational (including accounting) change as socially-constructed, and constituting socially-embedded processes over time. Second, a fundamental purpose of both approaches is to 'sensitise' researchers to the cumulative, complex and interwoven aspects of organisational change. Given such consistencies, we argue that it is justifiable, indeed sensible, to utilise and combine insight(s) from both frameworks to assist in understanding the processes of reproduction and development of SEAR practices in organisations. We argue that combined use of these two frameworks will, in time, contribute more than the sum of its parts. And, as a consequence, their combined lens will offer considerable potential for conceptualising the evolving 'life', and effects, of an organisation's SEAR practices. However, we should point out at an early stage that it is not our intention in this paper to look at creating an integrated or hybrid lens from these two extant frameworks. We shall return to the implications for combining the two theoretical frameworks in the conclusions of our paper; but, first, we briefly outline the key aspects to Laughlin's (1991) and Burns and Scapens' (2000) theoretical frameworks.

Environmental disturbances and organisational change: Laughlin (1991)

Laughlin (1991) describes organisations as comprising a series of interpretive schemes, design archetypes and sub-systems which for a large part remain in a state of equilibrium (or *dynamic stability*) over time, until they are 'disturbed' (Gray et al., 1995; Bebbington, 2007). According to Laughlin, this amalgam of interpretive schemes, archetypes and sub-systems will remain generally stable, unless some 'external' or 'internal' disturbance causes a shift in their balance, and a subsequent change begins to restore this balance and stability. It is explicitly recognised that accounting (information) can play a role in bringing about such change (and/or in re-establishing stability).

Interpretive schemes can be broken down further into three different levels, namely: (1) beliefs, values and norms, (2) an organisation's mission/purpose, and (3) organisational 'meta-rules'. Design archetypes comprise such things as organisational structure(s), decision-making processes and communication systems. Finally, sub-systems comprise tangible phenomena such as infrastructure, pollution and other readily-observable items.

Some scholars have adopted Laughlin's framework to explore the application of new business practice(s) or archetypes, and cast light on the 'assemblage of factors and outcomes' of such organisational change (Fraser, 2012). In particular, the extant literature has focused mainly on: (1) the extent to which new archetypes might (not) impact on peoples' thinking, and permeate an organisation's interpretive schemes, and (2) the role of 'environmental disturbances' for catalysing changes in an organisation's dynamic stability.

Where organisational change occurs, Laughlin broadly defines two categories of change, as follows: (1) *morphostatic* (1st-order) change, which involves some level of change in design archetypes, possibly in tangible sub-systems but not in terms of interpretive schemes, and (2) *morphogenetic* (2nd-order) change, whereby change in an organisation's design archetypes also results in changes to sub-systems and interpretive schemes. He further categorises morphostatic change in terms of: (1) *rebuttal*, where ultimately there is actually no change in the design archetype (e.g., where a change is rejected), and (2) *re-orientation* whereby some change may occur in respect of the organisational archetypes and possibly sub-systems. On the other hand,

morphogenetic change, is categorised in terms of: (1) *colonization*, where there is fundamental organisational change catalysed usually in design archetypes (and usually imposed) but also with diffusion to and impacts on interpretive schemes and sub-systems, and (2) *evolution*, which is change that emerges within interpretive schemes.

An Old Institutional Economics Framework of Change (Burns and Scapens, 2000)

An old institutional economics (OIE) theoretical framework views some business practices as institutionalised routines that facilitate the reproduction and legitimacy of organisational behaviour and which, in turn, brings cohesion to day-to-day organisational life (Scapens, 1994). Such theorising has been used previously to conceptualise an organisation's management accounting practices[5]; but, we argue, it can also be used as a way to view SEAR practices. An institutional approach focuses on intra-organisational *processes* (of change) over time, and is therefore a potentially useful way to extend our understanding of the re-production and/or change in SEAR practices.

An OIE framework conceptualises organisations as comprising a multitude of (interacting) rules and routines which bring cohesion and underlying stability to organisational practice (Scapens, 1994). *Rules* are "the formally recognized way in which 'things should be done'" (Burns and Scapens, 2000, p.6), and their repetition can shape what we define as being *routines* or "the way in which 'things are actually done'" (ibid.). Over time, the interaction between organisational rules and routines can take on more normative traits and become institutionalised. An *institution* is "a way of thought or action of some prevalence and permanence, which is embedded in the habits of a group or the customs of a people" (Hamilton, 1932, p.84). In this paper we are particularly concerned with intra-organisational institutions; that is, the taken-for-granted and unquestioned 'things we do around here', embedded within and specific to individual organisations.

[5] E.g., Burns (2000), Burns and Baldvinsdottir (2005), Burns and Quinn (2011), Burns and Scapens (2000), Busco et al. (2006), Johansson and Baldvinsdottir (2003), Lukka (2007), Quinn (2011), Ribeiro and Scapens (2006), Scapens (1994), Scapens (2006), Siti-Nabiha and Scapens (2005), Soin et al. (2002).

Burns and Scapens (2000) argued that management accounting systems, tools and techniques can be viewed as rules (i.e., formalised procedures) which will usually become routinised through their ongoing (re-)enactment. Here, in a similar way, we argue that SEAR practices can be conceptualised as organisational rules which, in time, can become routinised and potentially institutionalised.

Thus, in exploring why and how SEAR practices evolved over time in MARIO, we will focus to a large extent on changes in organisational rules and routines. An OIE approach conveys much of organisational practice (including SEAR) as remaining fairly constant over time, underpinned by the relevant (and inter-connected) rules and routines. This picture of relative stability resonates with Laughlin's notion of 'equilibrium' (or 'dynamic stability'). However, there is a fundamental difference; whereas Laughlin's framework presents more of a stop-go sequence of environmental disturbances and organisational stability (Gray et al, 1995), an OIE framework places the regularity of rules and routines-based organisational practice as part of ongoing processes over time. Thus, in an OIE framework, rules and routines are conceived as being part of ongoing processes of replication, adaptation, modification and/or change over time. Change *can* happen, in terms of (new) rules or routines but, importantly, 'no-change' does not mean 'static'. Institutional change, on the other hand, is generally more difficult and less likely to occur than changes in rules or routines. The latter can, for example, be viewed as an introduction of new organisational practices (e.g., SEAR practices) which, through repetition, can become routinised. However, by definition, institutions are deeply-rooted, often tacit assumptions, and usually not questioned, but generally 'just accepted'. As such, it can be difficult to even recognise and acknowledge intra-organisational institutions, let alone to try to change them.

4 - Research Methods

Our small but hopefully not insignificant contribution to this important area is a case study, spanning 8 years, of the (re-)development and organisational effects of SEAR practices in an Italian multinational organisation, (MARIO), which operates in the energy sector. The narrative that we give begins in earnest around the mid-2000s, although our 'on site' investigation was

conducted over a twenty-month period in 2011-12[6]. Data was collected through a combination of methods and using different sources, including interviews.

We began our empirical work with an analysis of MARIO's web site and other publicly-available information, the main purpose of which was to get a sense of the most recent initiatives that had been undertaken by the organisation in respect of its SEAR practices and sustainability more generally. Following this, at the beginning of 2011, a first formal contact was made with two senior managers. Interviews held with these particular managers were especially helpful, as they established good access across the company.

The remainder of our interviews were carried out from 2011 to 2012. In total, we held interviews with ten different senior managers, most from MARIO but also a few who worked for a research centre, founded by MARIO, which became associated with SEAR-development (see later). In order to guarantee the anonymity of the interviewed personnel we use Roman numerals (I, II, III, etc). All of our interviews were conducted in Italian, and one of the co-authors attended all of these interviews. Each interview was recorded and fully transcribed; and the time taken for interviews varied between forty-five minutes and two hours. The interviews focused in particular on the processes through which SEAR evolved in MARIO, especially the organisational consequences of SEAR intervention and the impact on SEAR practices of multiple organisational changes through a period of just over eight years since mid-2000s to 2012.

Finally, other methods adopted to collect our data, included: (1) observations while conducting interviews; (2) correspondence via email and telephone; (3) further analysis of MARIO's web site; (4) close examination of various corporate social/sustainability reports; and (5) other publicly-available corporate information. In analysing our empirical data, in particular our transcripts, we followed rigorous and systematic procedures, including coding (O'Dwyer, 2004).

[6] The organisation was investigated over a decade ago by one of the current authors to explore, in particular, the motives and dynamics through which SEAR was initiated (see Contrafatto, 2009 for further empirical details of this initial investigation). More recently a follow up project was conducted to explicitly investigate the organisational effects of SEAR over time, the results of which are reported in the present paper.

5 – SEAR, Organisational Change and the External Environment: a narrative of their (cumulative) interplay over time

As stated at the outset of this paper, our empirical investigation covers (including retrospective study) a prolonged period from the mid-2000s until 2012. It was over this period that SEAR practices evolved and were implicated in a further process of penetrating corporate life. As a reference point for the reader, we include a timeline of the key events in the development of SEAR practices which occurred during the period of our study (see Figure 1).

Include Figure 1.

In particular, as illuminated by our empirical analysis, SEAR and related principles and techniques underwent significant change to become part of, and involved in, the formulation, planning and control of corporate strategies. The characteristics underpinning such change processes are developed in the remainder of this section. What follows is a narrative of the dynamics and effects of change(s) which occurred in both: (1) SEAR, as a result of changes in the organisational domain, and (2) the organisation (MARIO), as a consequence of SEAR intervention. The story is a complex one, which we now try to articulate in a comprehensible way and following which (later) we will elaborate on some of the emerging key issues, particularly in relation to the dynamics between SEAR, organisational change and management accounting.

Environmental disturbances

The seeds of SEAR practices in MARIO began during the mid-1990s and became quite structured and more established by the early-2000s (further empirical details of these processes may be found elsewhere, see Contrafatto, 2009).

However, it was after the mid-2000s that SEAR was elevated to a position of greater importance, and moved upwards in terms of the strategic agenda; and, it is from this period that our focus began in earnest for the present paper. As one interviewee commented, the mid-2000s signalled the point from which MARIO discarded its 'Health, Safety and Environment" (HS&E) focus and

moved to a “Sustainability era” (Interviewee I, 08/2011). As observed by another interviewee, someone who personally experienced these changes, with this new ‘era’ “a series of initiatives were undertaken for systematising and implementing sustainability principles and values in our organisation” (Interviewee II, 08/2011). Before investigating the processual dynamics through which sustainability issues increasingly became part of the process of corporate strategic planning, we now turn our attention to events and factors which stimulated changes in the organisational equilibrium of MARIO.

Corporate awareness of the growing importance of sustainable development advanced with the combined impact of three exogenous factors or ‘environmental jolts’ (Laughlin, 1991), namely: (1) increased regulation through an industry-wide ‘transparency and accountability initiative’, (2) a general increase at societal level of the importance of such issues as climate change and human rights’ protection, and (3) other expected legislation which MARIO’s senior management aimed to anticipate in advance rather than be subjected to coercive ‘shocks’.

The principal outflow of these exogenous influences was the explicit and pro-active elevation of sustainability issues (including SEAR practices) to corporate strategic level. These three externally-rooted developments ruptured the organisational equilibrium, and created openings for organisational change to occur (Laughlin, 1991; Burns and Baldvinsdottir, 2005). And, it was at this stage of the change process that internal-grounded (or endogenous) organisational change begins to emerge. First, MARIO’s senior management conceded that sustainability was a strategic matter that must become an integral part of strategic decision making. This significant development was initially borne out in mid-2000s, when MARIO produced a new corporate document entitled “Corporate responsibility, values and conduct”, the intention of which was to investigate in general the potential implications of sustainability for MARIO. Commissioned and promoted by the senior management, this report held considerable symbolic value and political clout, and was instrumental for formalising sustainability rules and routines into organisational activity and discourse.

Second, still in the same period, the appointment of a new Chief Executive Officer (CEO) from outside MARIO brought a whole new level of impetus to a change process that by now was beginning to gather some momentum. This new senior executive had the power to mobilise change, and was determined amongst other things to take the organisation much further (and quickly) in its quest to develop sustainability-rooted practices. S/he, more than anyone else, was the main instigator of multiple new rules to establish sustainability as being *strategic*, and to forge ahead with the 'sustainability era'.

So, while the three exogenous drivers (described above) created openings for organisational change to occur, it was the new CEO in particular who visualised and championed such change. External developments by themselves are not usually sufficient to trigger (nor enact) intra-organisational change; *agency* is key, normally underpinned by the power 'to get things done' (Burns, 2000; Burns and Baldvinsdottir, 2005), as one interviewee implied:

> There was a significant change of pace in 200[X], when our new CEO was appointed. Due to [her/his] works' experience abroad, as well as time s/he had spent in other major companies, the CEO appreciated positive effects of integrating sustainability into our organisational processes. The CEO had a holistic view of sustainability, and a wider understanding of the positive impacts that sustainability integration can bring to corporate life (Interviewee I, 08/2011).

Laughlin's (1991) framework would portray the CEO's arrival as representing a form of 'determinant' environmental disturbance which challenges the status quo in MARIO, but an OIE-influenced interpretation would supplement this to highlight the 'opening' created by such external developments, followed by visionary and power-infused agency of the CEO over a period of time (Burns, 2000). The CEO embraced a stimulus that was created by the external circumstances and, as we develop below, s/he continues to play a key and proactive role in mobilising further complementary and reinforcing changes in the future:

> The new CEO, even more than before, argued that from then on, 'sustainability' was to be a fundamental aspect of our way of conducting business (Interviewee VIII, 10/2012).

The first significant action taken by the CEO was the creation of strong links to a Centre of Research (COR), which would come to serve as a strong support mechanism for her/him to extend the reach of sustainability strategies across MARIO and, in the words of one interviewee "began to construct a sustainability community" (Interviewee II, 08/2011). The remit for COR was the promotion of innovative environmental and sustainability policies:

> The new CEO pushed our company to continuously involve COR. COR, a centre of competencies and expertise, was kept involved because it could help [MARIO] to implement sustainability (Interviewee, II, 08/2011).

In Laughlin's (1991) terms, the involvement of the Centre was another powerful 'environmental disturbance' which provided further impetus for ongoing organisational change. As stated by a different interviewee:

> Through the involvement of COR, we were able to draw on their wide experience. The process of establishing a structure for sustainability would have been much more complex if COR had not been involved (Interviewee I, 08/2011).

In the same year, the CEO was also instrumental in creating a Sustainability Project, the first tangible organisational effect (Laughlin, 1991) of the unfolding change programme. A management team was created to oversee what was, from the outset, declared as an 'interim unit' before a more permanent sustainability unit could be formalised. The Sustainability Project was also established as a forerunner to more permanent (sustainability) policies, and whose main remit was to gather relevant information from around the organisation. However, it did have its own constitution, and was made responsible for a particularly important task (see below):

> I was involved in this [sustainability] 'project' since the beginning […] the first thing we did was a screening of our internal operations to understand what was our state of the art; then we did a sort of external benchmarking to identify existing 'good practice'. Finally, we used both sets of information to start our activities and to figure out what we could do (Interviewee VIII, 10/2012).

The main strength of the 'project' probably lay in its organisational-wide representation. Thus, there were several inter-linked working groups whose composition included representatives from both existing structures (e.g., the HS&E department), and also people who were more geared to where MARIO was heading in the future (i.e., COR). This 'bridging' from, or building-on existing structures, as opposed to displacing the 'old', encapsulates much of what Burns and Scapens (2000) referred to as 'evolutionary' change and, as will be seen, this is a recurring theme in the life-story of MARIO's 'sustainability-era':

> The nice thing about the Project was that it was organised in joint-working groups, which included personnel of both MARIO and COR. The real positive aspect of this joint project was that it was not an alien structure that undermined the role or authority of incumbent people. On the contrary, it was more about process of integration and mediation (Interviewee II, 08/2011).

Next, a new corporate report was issued by the Sustainability Project, entitled 'Commitments and Initiatives for Sustainable Development'. One interviewee described the report as a "manifesto" for MARIO's sustainability programme and, again, a large part of this rules-based document extended (rather than displaced) HS&E's existing manifesto:

> It was basically a sort of a White Paper, a manifesto, a *positioning* paper about all that would come in later years with regards to sustainability issues. It was a document of intent (Interviewee I, 08/2011).

The constitution of the ‘sustainability project’, strengthened by the publication of this report, accelerated the process of transformation in the MARIO’s sub-systems and design archetypes (Laughlin, 1991). One year after the Project’s inauguration, a Sustainability Department was created by the Project’s management, whose broad remit was to account for, manage, control and report on all matters sustainability-related. Consistent with changes made thus far, the composition of this department was not too radically different from past structures, although ‘some’ new staff were appointed from outside. The previous department which was responsible for managing corporate social responsibility issues was absorbed into the new Sustainability Department and the HS&E department (which had existed for several years) was re-structured but not disbanded.

Simultaneously with the creation of its new Sustainability Department, the Project also created the ‘MARIO Foundation’, which was intended to promote, undertake and manage the philanthropic activities of the organisation, on behalf of outside communities and other external stakeholder groups.

The analysis undertaken in this paper illuminates that the formation of the ‘Sustainability Project’ and the publication of ‘Commitment and Initiatives for Sustainable Development’, which were the outcome of environmental disturbances of the previous years (e.g. appointment of new CEO), also represented a medium for further changes in the other components of organisational life, such as design archetypes.

The Sustainability Department issued the company’s first “Guidelines on Sustainability and Protection of Human Rights”, and published its first “Sustainability Report”. The guidelines comprised a set of policies (i.e., rules), endorsed by the CEO and COR, hence underpinned by sufficient power to enforce them. Once again, there was a degree of evolution as opposed to revolution in such change, since these ‘new’ policies were largely an extension of the previous HS&E guidelines:

> The Sustainability Guidelines provided not only guidelines on how to manage, plan and report sustainability issues but also accounted for how to achieve the integration of sustainability principles and values in corporate processes. In other words, they were not just a picture of what we were doing but also an account of what we wanted to achieve with the reporting (Interviewee II, 08/2011).

The new policies reinforced the change process, as the formally recognised rules for how and what to 'do' specifically in collating and producing the forthcoming 'Sustainability Report'. For example, the rules established expectations in respect of the appropriate format of the sustainability report, and the re-enactment of which would eventually foster routinised practice (Burns and Scapens, 2000). Also, the guidelines established what kind of information was needed for inclusion in the new Sustainability Report, as well as stipulating who and what needed to be monitored and regulated (and by whom) in the new sustainability reporting process.

MARIO's first Sustainability Report was an integration of all previously published social and environmental documents (e.g., the HS&E and other 'social reports'). So, to an extent, there was an amalgamation of existing rules and routines but, although past traits were passed on, the combined new report also conveyed some new and idiosyncratic features:

> We do not think of the Sustainability Reporting as an incorporation of existing reports. It is a document that can be considered uni-inclusive, a document that embraced all the issues of sustainability over time. In this sense it was not simply a transformation of the old HS&E report, but rather the result of a *new conceptual model* which included aspects of HS&E but not just that (Interviewee IV, 07/2012).

From the evidence gathered through the empirical investigation, it appears that the implementation of 'sustainability reporting', and the changes in existing accounting systems and techniques, created some puzzlement and friction between people involved in the process of reporting (see Fraser, 2012). This was illustrated by a comment of one of the interviewees:

> The biggest watershed was defining the boundaries between the reporting that one department now had to do and what the other one had to do. It was an arduous task to move from HS&E to sustainability reporting, I remember the difficulties we encountered (Interviewee VI, 09/2012).

Drawing from Laughlin's (1991) ideas, we can view MARIO as being in some sort of 'schizoid state', or 'out of equilibrium', as a result of external (and internal) jolts. Fraser (2012) characterised such disequilibrium as "pockets of tension" (p. 514), which some people perceived as inevitable consequences of a "real" change process:

> In every change there are situations of tension because 'old and new' collide, there are always different views. There would not have been *real* change without the necessary moments of tension (Interviewee III, 07/2012).

Fraser (2012, p.521) highlighted that such 'fractured design archetypes' have potential to derail any intended change process. However, such derailment did not occur in MARIO, and a new settled (though continually evolving) situation emerged. It seems that three factors were important for relatively smooth and timely transformation, namely: (1) the temporary nature of disequilibrium, (2) the evolutionary (rather than revolutionary) passing from 'old' to 'new' rules and routines, and (3) good communication to relevant personnel, with sufficient and helpful details of the required new procedures (rules).

Teething issues, and even temporary conflict, is usually to be expected with even evolutionary change, as new rules are learned and new routines need to emerge; and, maybe also some re-alignment is required along the way between new and old rules and/or routines (Burns and Scapens, 2000). But, such ongoing re-adjustment and 'reprogramming' is normally quite minor in comparison to situations of adapting to revolutionary change, e.g., where there is change in the fundamental assumptions of a business (i.e., *institutional* change). As happened in MARIO, when change is facilitated through the introduction of new rules (and emerging new routines), the

change process tends to be smoother when there is clear communication about the required new ways.

Following the publication of MARIO's inaugural Sustainability Report, a proactive and increasingly empowered Sustainability Department was becoming more and more aware of further external developments that impinged on their company and that warranted some reaction. Towards the late-2000s, sustainability was gathering considerable momentum across (global) society in general; new sustainability-focused bodies were being created, as were global indices to measure (and declare!) just how sustainable an organisation was (not) being in its activities. Empowered by the CEO, the Sustainability Department recognised the importance of at least being seen to be involved with such external interests; the case for *not* being involved with such things was deemed risky. So, after the publication of the first report, MARIO became a member of the World Business Council for Sustainable Development (WBCSD) and joined two external 'prestigious' sustainability indices: (1) the Dow Jones Sustainability Index (DJSI), and (2) the FTSE4GOOD index.

MARIO was actually rejected for its first application to join the DJSI index, but such was the determination to become associated with such "prestigious indexes" (the term used by one senior manager), the Sustainability Department promptly addressed their original application's shortcomings, and MARIO was invited to join on a second attempt. The dynamics at play here illuminate how exogenous/external factors continuously (at least have potential to) impact an organisation's approach towards sustainability. In this particular instance, whether or not there were corporate reputation and/or image-related motives behind such 'prestigious' memberships, the process of rejection mobilised further (re-)action that reinforced MARIO's endeavours to bolster its 'sustainability era':

> Participation in the DJSI was a turning point - a *compass of change*. The fact that we were not initially admitted to the index was important, because we then used this inside the organisation as a lever to push change. Thus, this event reinforced the commitment to make the necessary changes (Interviewee III, 07/2012).

We might view this interaction between an organisation and its external environment (including stakeholders' perceptions) as part of a strategic attempt to strengthen the sustainability plan. We were informed that the (relatively small number of) new staff recruited from outside were influential in the decision to join these external indices, but it was important that fresh ideas were complementary to the emerging rules and routines underpinning MARIO's sustainability era.

The impact of SEAR practices on broader organisational processes

By the end of 2000s, the sustainability era in MARIO was reaching a level of maturity – i.e., a proactive Sustainability Department was in place, Sustainability Guidelines were established, and Sustainability Reports were now being produced. But, the development of (and changes to) SEAR practices was also having broader organisational impact(s), i.e., wider influences in terms of changes in intangible design archetypes, tangible sub-systems, and interpretive schemes (Laughlin, 1991). We will now consider some of these broader organisational change aspects, beginning with the influence of evolving SEAR practices (and the emergent 'sustainability era') on intangible design archetypes.

First, evolving SEAR practices had influenced the creation of new employee groups, or as one interviewee put it, a "famiglia professionale" (i.e., professional family):

> This is a set of employees who not only do the same job, but who also have skills and competencies which are structured, uniform and consolidated. They comprise a group of employees who, though not necessarily part of the same organisational unit, constitute profiles with similar competencies and common developmental programs (Interviewee II, 08/2011).

Second, the development of SEAR practices was also a factor in shaping greater integration of MARIO's management systems which, in turn, reinforced the elevation of sustainability to more senior (and strategic) levels rather than being isolated from other organisational practices. And, as we highlight in the following comment, this increase in information integration was not so much

as radical a change as it might at first appear, but rather the evolution of existing rules and routines:

> The real added value of sustainability reporting is that it provides a more complete and holistic view of organisational activities under the umbrella of sustainable development. Sustainability reporting is a lens that allows us to see organisational phenomena from a unique perspective. You need to keep in mind that *much of this information already existed* in the organisation, but was produced and managed by different parts of the organisation. Thus the implementation of sustainability reporting has promoted *integration of our existing information systems*, in order to provide a unique view of [MARIO's] activities (Interviewee I, 08/2011).

Developing SEAR practices were also influential in the design and issuing of a new "Ethical Code of Conduct". The cumulative interconnection with past behaviour was apparent again, because this new Ethical Code was to a large extent an *extension* to (rather than the displacement or a radical re-configuration of) the previous "Code of Conduct". Moreover, the new Ethical Code of Conduct was aligned to, and closely reflected, the rules established within the 'Corporate Responsibility, Values and Conduct' document in the mid-2000s (see above) that was issued when MARIO's sustainability era was beginning to take root.

As mentioned above, the emerging SEAR practices also had an impact on broader and tangible (sub-systems) organisational change. First, some new 'sub-units' were created by the Sustainability Department, for example they created a new department for managing ecosystem services, and they also appointed individuals, called "Focal Sustainability Points", as experts who were scattered across the wider organisation, and who were primed and ready to give 'local' advice on sustainability-related matters. Next, there was an increase in sustainability-led projects, run mostly through the Sustainability Department. There were projects, for example, on: (1) the reduction of pollution, (see below, the 'gas-flaring project'); (2) increased safety of operational activities and a reduction in employee-related incidents; and (3) increasing employee satisfaction. With regard to (2), initiatives had been undertaken to increase safety of the activities in 'difficult-

contexts' (e.g., in deep water) through the adoption of more advanced technology such as the 'blow out preventer' (i.e., an automatic system intended to control the flow from oil and gas wells). In addition, investments had been made to increase the number of hours dedicated to employee training (particularly in respect of safety) which in two years increased from approximately 2.5 to over 3.1 million. MARIO also saw a decrease in the frequency and severity of employee-related incidents, which reduced by 50% and 60% respectively from 2007 to 2010. With regard to (3), this involved a survey amongst MARIO's employees and, once again, there was evidence of how such an initiative was facilitated through the cumulative and expanding base of rules and routines embedded in the 'sustainability era' approach:

> This initiative was possible because of the changes that had previously occurred. The answers that were gathered in the survey were used as input for further actions to improve the internal performance. It was an initiative through which we were able to listen to the expectations of our employees. At the same time, it was important because it provided information for the preparation of our reporting in the following year (Interviewee III, 07/2012).

There were also new and, in some instances, re-invigorated initiatives run in collaboration with external parties such as the local government and Universities. For example, as mentioned above, there was a 'gas-flaring reduction project' which aimed to "eliminate combustion into the atmosphere of the gases associated with oil and gas production and to increase its re-use (i.e. flaring down)" (source: MARIO'S Sustainability Report). This particular project had been an intention of MARIO over many years; however it was the growing momentum embedded in sustainability-rooted organisational rules and routines which not only reinforced these intentions but also provided a greater internal legitimacy and 'corporate sense' for such things to now happen[7]. In particular, MARIO was one of the first companies in its sector to associate the reduction of gas-flaring (and the increase of 'flaring down') with the implementation of electrification projects aimed at producing electricity for local communities. In recent years,

[7] In terms of performance, MARIO has seen a considerable reduction in the gas flaring produced which has decreased more than 30% over the period 2007-2010. In some specific areas, the percentage of 'flaring down" (i.e. gas re-used) was more than 75% in 2010 compared to less than 50% in 2000.

MARIO has invested significantly in these projects, across highly-complex situations like the oil rich countries in Africa.

Finally, the maturing SEAR practices began to have more influence on the interpretive schemes within MARIO (Laughlin, 1991). More specifically, as time progressed, sustainability became increasingly formalised in high-level corporate strategising. New (and an expanding number of) key measures that highlighted sustainability (non-)performance were reaching the radar of strategic decision-makers in the organisation:

> After the creation of our Sustainability Department and the implementation of Sustainability Reporting, the old HS&E targets gradually became objectives for the entire corporation. For example, an old HS&E target for the 'reduction of flaring' is now incorporated into a section of MARIO's *strategic planning*. So, through the processes of aiming for sustainable development, a series of objectives that previously had not been considered for strategic planning, are now included in MARIO's strategic corporate planning (Interviewee II, 08/2011).

Essentially, sustainability-grounded rules were not only being elevated to, but also formally integrated into, high-level corporate strategies. And, with that came empowerment for certain actors to enforce new rules and routines across the organisation. Notwithstanding, such developments will need time until they really consolidate and, as we discuss in more detail later, this is not to say that such sustainability-grounded rules or routines become predominant and/or displace other more dominant business ways. As we discuss later, such developments in SEAR practices, including the elevation of SEAR-grounded measures to the level of strategic planning, represented progress in terms of the original corporate intentions. However, such measures ultimately failed to impact the dominance of 'profit-seeking' institutions in the organisation

Our observations seem consistent with some of the conclusions in Adams and McNicholas's (2007) arguments about the importance of SEAR for mobilising organisational change, when intertwined with corporate strategising. In addition, our findings would also seem to resonate with

Adams & McNicholas's (2007) claims that SEAR can foster "reinforcing sustainability principles throughout the organisation [and] integration of sustainability issues into the strategic planning process" (pp. 398-399). The incorporation of sustainability-focused measures and targets into the strategic 'dashboard' would seem to be a pre-requisite for strong-form routinisation of sustainability practices:

> The *real* change - or at least one of the most important in MARIO - is the fact that everything which could be considered as part of sustainability strategy is perfectly and fully integrated, and embedded. There is no separate planning for sustainability; they are an *integral* part of [MARIO]'s operational and strategic planning (Interviewee I, 08/2011).

Towards a Normative System and Integrated Reporting

By the end of the 2000s, the development of sustainability reporting practices, and interconnected broader organisational change, was such that a new "Normative System" was formalised in the shape of a "Corporate Pyramid". At the top of the Pyramid was the ethical code, followed next by policies (including SEAR-related policies). Next, there were corporate governance systems and regulatory compliance(s) and, finally, at the base of the pyramid were 'management system guidelines' (MSGs). These MSGs created a 'bridge' between overriding corporate policies and operational initiatives; in other words, they were the rules at the ground level which translated higher level (more abstract) policies into what actually should *be done.*

More change was experienced around 2010, brought about by inconsistencies between existing SEAR practices at that point in time and: (1) the new 'normative system' on the one hand, and (2) developments in the external (social/environmental) setting on the other. Once again, such further (ongoing) change reflects both the cumulative nature of changes in SEAR practices, and the interconnectedness of such practices with (1) broader aspects of organisational activity, and (2) the continually evolving external context. It was around this time, particularly after the formalisation of the Pyramid, and the continuing elevation of sustainability to corporate-strategising, that senior managers began to question the effectiveness of their existing sustainability reporting mechanisms to meet corporate objectives. We can say that continuously

evolving organisational, social and environmental circumstances were demanding ongoing re-calibration of the sustainability-related rules and routines in MARIO. One interviewee commented:

> At this period of time, our sustainability reporting was not sufficient to represent all the complexities and changes that had occurred in [MARIO] (Interviewee I, 08/2011).

Another added:

> We felt that we had exploited all the potential of our sustainability report. We recognised the limits of this tool, and we felt that we needed to find something new. In addition, we observed significant diversification in the information requirements of different stakeholders - investors, environmentalist groups, NGOs, etc. On the one hand, there were stakeholders concerned with the reporting of emissions - business by business, and country by country. On the other hand, there were stakeholders who were still interested in reporting emissions but also the corporate strategies that we had in place for reducing emissions. Thus, we felt a need to implement a sustainability reporting system that allowed integration of different tools (Interviewee II, 08/2011).

In the early 2010s, MARIO adopted what they described as a “reporting mix” system, and they subsequently published their first *Integrated Sustainability Report*, thus replacing the ‘Sustainability Report’ of several years. With these developments, a new phase in the ‘SEAR life’ commenced. We have already discussed in detail how the momentum of intra-organisational change (and proactive, powerful agency) can influence the magnitude and path of further change. But, in terms of integrated reporting, ‘external developments’ (or, using Laughlin’s terms, ‘environmental disturbances’) certainly had an effect on MARIO. First, there was growing stakeholder expectation that leading multinational organisations adopt an integrated reporting approach:

> There was a strong international trend that demanded the integration of sustainability-related information into the financial statements. This is considered *a means to increase the reliability of the information* (Interviewee II, 08/2011).

Further reinforcement of MARIO's adoption of integrated reporting came through participation in a pilot programme launched by the IIRC (The International Integrated Reporting Council)[8] whose purpose is to evaluate the effects of adopting the integrated reporting model in (real) organizations.

MARIO's integrated report comprised: (1) a list of key sustainability-related targets that were integrated alongside other financial and non-financial targets, (2) the company's performance against such targets, and (3) information on MARIO's sustainability strategies:

> To respond to the information demands of our different stakeholders, we have done three things, namely: (1) prepared an integrated financial statement, which also includes a section about sustainability; (2) created an interactive tool that allows detailed analysis of our sustainability performance; and (3) added a strategic document, written in a language accessible to a wider audience (Interviewee II, 08/2011).

With the implementation of an integrated reporting system, new rules and routines emerged to regulate the processes of gathering, collecting, accounting and reporting sustainability-related information. These new routines altered, and in some cases replaced, prevailing routines that had underpinned the previous sustainability reporting systems:

> Through our integrated system, information is transferred from our database to the Sustainability Department, which then uses such information to undertake our reporting. The entire process of integrated reporting is formalised; such formal procedures have to provide reliable data and have to ensure the reliability of the process of collecting,

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[8] The International Integrated Reporting Council (the IIRC) is an "international cross section of leaders from the corporate, investment, accounting, securities, regulatory, academic and standard-setting sectors" (http://www.theiirc.org/) whose purpose is to develop and propose a framework for integrated corporate reporting.

> managing and reporting data that is to be included in the reporting system (Interviewee VII, 09/2012).

Although the launch of integrated reporting might appear to be a radical change for MARIO, indeed some interviewees commented how difficult the change had been from a *technical* point of view, the change was actually still evolutionary in the sense that it involved realignment and synchronisation of mostly *existing* reporting rules and routines, but again involved no revolutionary shift in dominant and underlying profit-seeking-oriented business assumptions. Furthermore, the working group which coordinated MARIO's move to integrated reporting comprised of representatives from across the organisation.

The implementation of integrated reporting had broader organisational impact, again what Laughlin (1991) referred to as the development of new 'sub-systems'. More specifically, a new 'cross-functional working group' was created, including the appointment of new employees and new resource demands which coordinates and facilitates the transition to, and further development of MARIO's integrated reporting systems:

> We have recently created a cross-functional working group, which is overseen by a representative of the Chief Financial Officer. The working group comprises: a representative from our Sustainability Department, a person who is involved in putting together the Annual Report, a representative from each of the respective (3) departments of Strategy, Planning and Investor-relations, and representatives from the corporate governance unit and the risk management unit. The working group's responsibility is to evaluate our application of the IIRC integrated reporting framework (Interviewee, III. 07/2012).

Finally, the implementation of the new 'integrated reporting approach' contributed to bolster the nature and role of SEAR as a strategic management control device. This was illustrated by a comment from one respondent:

> Nowadays we are less interested than in the past in external reporting. Now our attention is focused on ensuring that our process of improvement is not an end in itself, but rather it is an overall benefit for our company. If we improve internally, as a consequence we can improve the relationship with the outside world and therefore also our external reporting. In the past, the process of reporting was unrelated to the management and control system, now instead, it is functional to our strategic management and control system of sustainability-related issues (Interviewee VI, 09/2012).

6 - Discussion

The main aim of our paper was to investigate the inter-relationship between organisational change and SEAR practices, as well as the roles and functioning of management accounting in this sphere. This is an important theme, as we have already explained, "to move beyond bald statements about the likelihood that (social and) environmental accounting interventions will either succeed or not succeed" (Larrinaga and Bebbington, 2001, p. 287). In this section we will reflect on some of the more interesting aspects of our case and its interpretation, including the usefulness of our adopted theory and potential implications for the future involvement of management accounting in developing sustainability principles and practices within organisations.

Theoretical Lens

Our theoretical approach comprised a combination of Laughlin's (1991) 'environmental disturbances' framework and an OIE-informed conceptualisation of intra-organisational change (Burns and Scapens, 2000). Laughlin's framework was particularly helpful for categorising the nature of SEAR change, as well as highlighting the interconnectedness between such change and both broader organisational change and changing extra-organisational developments. Through the lens of this framework we were able to structure the change process partly in terms of interplay between external developments, changes in SEAR practices, and broader but co-developing changes at the organisational level. For instance, we considered how external 'jolts' created an opening for the publication of a 'Corporate Responsibility, Values and Conduct' document and the appointment of a new, proactive and pro-sustainability CEO, as well as the

involvement of a Centre of Research which helped to promote a 'sustainability era'. Next, a Sustainability Department and a report entitled 'Commitments and Initiatives for Sustainable Development' emerged, and these were a large part of why further changes were to later emerge in respect of the archetypes, sub-systems and interpretive schemes of MARIO.

However, it is particularly the OIE theoretical lens (Burns and Scapens, 2000) which injects a processual and evolutionary dimension to our interpretation of SEAR practices and their effects in MARIO. We adopted 'old' institutional economics theory as a lens to make sense of developing SEAR practices over time in MARIO. In so doing, we were not arguing that such theory is superior to alternative theoretical approaches; however, we do argue that an OIE theoretical approach seems at least to offer a useful starting point for carrying out SEAR-related interpretive case studies. And, we certainly recommend more similar case studies of real organisations in the future. In particular we would argue that such theoretically-informed case studies would be important for extending our knowledge and conceptualisation of unfolding SEAR practices, beyond overly-normative approaches that seek mostly to facilitate 'successful' change.

It was through an OIE-informed perspective that we captured why and how our case organisation introduced multiple new SEAR-related rules, and how associated routines developed in time which, in the main, further reinforced the original rules. These new SEAR rules and routines are in a continual process of interaction over time; they underpin and 'pass on' know-how through time (Nelson and Winter, 1982; Scapens, 1994); and they carry a connectedness in the underlying change process. Rules or routines do not 'just appear' and/or disappear as stand-alone events; they are interconnected, self-reinforcing (but can clash also), and have been likened to biological 'genes' as phenomena which 'carries' organisational DNA and 'memory' through time: "[…] rules and routines are the processes through which organisational traits are transmitted through time" (Scapens, 1994, p.310).

Our OIE-informed lens was particularly helpful for conceptualising how much of the changes implemented (i.e., new rules) were to an extent grounded in prior/existing practices, thereby normally facilitating a smoother transition than might otherwise have occurred. With an OIE lens,

we also maintained focus on the interplay between SEAR and the external (i.e., social, environmental) context *over time*, unlike Laughlin's framework which normally portrays the external context as stand-alone 'shocks' which come and go. In our approach we viewed the external context as a continuous dimension to the unfolding change processes for MARIO. For example, we saw how external factors such as growth in industry regulation were important in the early stages of the change process, for igniting awareness around the importance of sustainability and sustainability-reporting. But, it is also important for us to consider why and how such external influences impact reaction, and the consequences of such (re-)action. Much later, rooted in concerns over how their organisation was being perceived in the outside world, from a sustainability perspective, MARIO joined two key external sustainability indices and became a member of WBCSD. In other words, the influence of external factors on intra-organisational matters can evolve (and change) over time, not just 'at an instant', and new influences can also emerge. In this respect, the present work has attempted to investigate further the oft-used notion of "assemblages" of change (Bebbington, 2007; Duncan and Thomson, 1998) which to us at least lacks a notion of *cumulative* dynamics over time.

Our OIE-influenced framework also drew attention toward the importance of embedded agency for influencing why and how change takes place within organisations (Englund et al., 2011). Even in highly institutionalised situations, which many organisations are, change *can* still occur, and it is frequently through the initiation and drive of powerful individuals that we witness such change (Adams and McNicholas, 2007). In the MARIO case it was the CEO who particularly influenced the change process, that saw sustainability become at least a more routinised feature of organisational activity, and which eventually led to the implementation of integrated reporting in the early-2010s. Agency is therefore important; powerful individuals or groups are usually needed to get things done, at least in terms of elevating sustainability issues to the strategic level in an organisation and in promoting and communicating the implementation of new sustainability rules and routines. But, such agency does not occur in isolation to the *existing* organisational rules, routines and institutions; so, the latter need full consideration before designing any sustainability-led change. Nor does such change occur in isolation to the external environment; external

impinging factors continue to evolve, and so further openings for change are possible 'along the way'.

In summary, we argued that to better understand the complex and cumulative aspects and effects of an organisation's SEAR practices over time, it is sensible to adopt a theoretical perspective that is rooted in seeking to 'see' and explain unfolding (change) processes over time. An OIE-influenced perspective on organisational change offers focus on intra-organisational dynamics over time, with attention also given to broader and moveable (social, environmental) context. From a premise of organisational practice constituting largely rules and routines based behaviour, the adopted institutional approach helps bring to the fore the mechanisms through which organisations follow particular SEAR and sustainability paths. Viewing SEAR practices as ongoing practices over time conveys both change and no-change, and complexity across multiple organisational domains. Even when all appears to be stable (thus, 'no change'), a processual approach takes as given that change can be (though is not necessarily) under way in broader contexts, which may or may not subsequently filter through to changes in an organisation's settled way of doing or thinking. In this respect, especially, we argue that an OIE approach both complements and extends the 'environmental disturbances' framework on change, which has a tendency to overstate inertia (Bebbington, 2007; Gray et al., 1995). Indeed, we would certainly encourage future research that, in the context of investigating SEAR and other sustainability-related themes, further explores potential synergies, integration even, of the two theoretical frameworks adopted in this paper.

Implications for Management Accounting

In our case study, SEAR became increasingly integral to more holistic forms of corporate reporting that to a large extent seemed capable of simultaneously serving the requirements of both internal and external stakeholders. But, such requirements it would seem are inter-connected, they are not separate exercises. There was evidence in our case study that as well as accepting that an organisation should at least *be seen* by external stakeholders to be behaving in a sustainable way, it also usually makes good economic sense to 'be (or to appear) sustainable' (see below for more discussion of this point). Thus, it appears that tomorrow's organisation needs

internal reporting systems that will facilitate sustainability-focused planning, control, strategising, and more. One interviewee stated:

> Sustainability reporting represents the activities of gathering, collecting and integrating sustainability *information* into a unique database, with the purpose of providing a set of key performance indicators. It is a tool which fundamentally has an *internal* objective; in MARIO, the primary purpose of sustainability reporting is to improve the internal activities of management and control (Interviewee II, 08/2011).

The above quotation raises potential implications for an organisation's management accounting practices, since it is the management accounting systems which usually produce the bulk of information that facilitates the internal decision-making processes of an organisation. In MARIO, it would seem that management accounting had become more intertwined with, rather than separate to, its external reporting process. In large part due to increasing global concern and expectations towards sustainable behaviour, tomorrow's organisations can ill afford to ignore their sustainability impact. For many (and a growing number of) organisations, though not always for the same reasons, sustainability is now a consideration that transcends both internal and external reporting processes which, in turn, possibly mirror each other more than ever before.

This 'mirroring' between internal and external reporting is observable, for example, through the measures being used by organisations to gauge and convey their (non-)performance. This is not to say, however, that a de-coupling between external and internal reporting would no longer happen, indeed we fully expect that managers will continue to skilfully manage especially what they report externally, including the infusion of rhetoric and disguise (Hopwood, 2009b). But there does seem to be much still to learn about the relationship between an organisation's external reporting on the one hand and its internal reporting mechanisms (including management accounting practices) on the other. Further, we might ask if there has been a change in recent times in how managers view this interrelationship between external and internal reporting.

Organisations incorporate (some of the) sustainability issues in both internal and external reporting tools because, we argue, it is not only becoming increasingly expected of them, but also because it makes little economic sense not to do so. We are, it seems, in times of considerable change in both form and purpose for organisational reporting, i.e., internal *and* external reporting, but also the interrelationship between them. For instance, in recent times there has been plenty of evidence to show the elevation of *non*-financial performance measurement in both internal and external reporting, as well as such measurement characteristics becoming more formally constituted in *strategic* planning and control. As the traditional guardian of an organisation's information base, management accounting has the opportunity to steer such developments in corporate reporting in the future, thus offering significant opportunities for management accountants, although they are highly likely to face professional competition in such matters.

Management accounting is very much implicated in the process of organisations *becoming* (or at least appearing to become) more sustainable. Hopwood (2009b) highlights some of the multiple ways in which management accounting and similar calculative practices will remain inevitably intertwined with the process through which organisations tackle the sustainability challenge:

> Trade-offs would still have to be evaluated, interests would still diverge, thereby suggesting a role for incentives to engender change, intentions would still need to be checked against achievements and there still would be areas where careful analyses of alternative approaches would need to guide action (p.433).

We considered in our case study how information is fundamental to the cumulative path(s) through which SEAR practices become what they are. Whether an organisation's push to become more sustainable is grounded in core 'good cop' values at one extreme or reputation/image-management on the other (or maybe some combination of both), the process is heavily dependent upon the production and use of information. Increasingly, it appears, such information is required to be holistic, integrated, and predictive as well as historical. This inter-twining of the development of an organisation's sustainability and its management accounting practices, however, should be treated with some caution. That is, because when stripped down to

its basic premise, management accounting is fundamentally a professional practice which seeks to assist managers to make decisions that will maximise their economic returns and, in the context of prior discussions, management accounting thus plays an important role in facilitating and reinforcing the dominant intra-organisational institution pertaining to profit-seeking. The basis of management accounting's conventional wisdom is neoclassical economic theory, including underpinning assumptions of rational behaviour and market equilibrium (Scapens, 1994). Such premise of management accounting, we argue, does not sit comfortably alongside sustainable development – see below for further discussion of these important issues.

Recently, there have been some attempts to broaden the impact of management accounting in *non*-profit-maximising situations, for example an increased use of management accounting techniques in the public sector. However, most of the evidence to-date highlights that financial or economic achievements as opposed to social and/or environmental goals still take priority. For instance, the prevailing approach to costing in most types of organisation, private or public sector, do not interject sufficient consideration of the very real indirect consequences of corporate action on society and the environment (Hopwood, 2009b; also Gray et al, 1993). Also, predominant methods for capital (project) appraisal in business were still those which favour short-term economic gains, as opposed to elevating long-run and more environmentally sustainable approaches (ibid.).

Others in the management accounting field have tried to develop the *non-financial* (or 'intangible') aspect of its tools and techniques, so attempting to de-emphasise any predominant focus on financial or economic returns. One such example would be the increasingly popular use of the 'balanced scorecard' (Kaplan and Norton, 1996), which represents a holistic performance management tool that measures the (non-)achievement in 'intangible' business activities, such as customer loyalty, quality of service, and investment in workforce satisfaction. There is evidence that more organisations are integrating social/environmental measures into their balanced scorecards (Dey and Burns, 2010), or similar management tools, to help steer them both operationally and strategically. However, caution is needed yet again; such 'alternative' forms of management accounting are still grounded in the achievement of long-run financial or economic

returns. There is an underpinning assumption for all balanced scorecards that improved mobilisation of intangible business assets will eventually lead to economic gains; and, again, such a premise may not necessarily represent the 'best' way forward in terms of sustainability and sustainable development (Norreklit, 2000). The future importance of management accounting in the quest towards improved sustainability and sustainable development is not in question; but there is a very real chance of fundamental changes taking place in the discipline's underpinning roots and methodological assumptions: "[…] to delve deeper into the assumptions involved and into the wider issues that might be at stake […] raising questions about the adequacy of prevailing understandings about costs and their association with very particular assumptions about the nature of organizations and their boundaries" (Hopwood, 2009b, p.434).

Absence of 'Revolutionary' Institutional change

The discussion above steers our attention towards the primary objectives and embedded assumptions of commercial organisations and, in particular, the institutionalised notion of economic profits. Our case study indicated how SEAR practices and sustainability more generally became an increasingly important part of an organisation's value creation, re-enacted and reproduced over time through continual interaction of sustainability rules and routines. However, this might constitute a frail commitment; put simply, some organisations may 'join the sustainability *club*' because the business case to do so outweighs the business case to *not* do so.

In the MARIO case study, we learned how despite the development of sustainability-focused rules and routines, the overriding 'economic institutions' (i.e., settled assumptions concerning the pursuit of profits) remained dominant, though quite possibly in subtly different ways (see below). One interviewee said: "At the end of the day, the main objective of this company is always to *make more and more profit* - and this can not be otherwise" (Interviewee IV, 07/2012). Moreover, we saw just how important management accounting was for the maintenance and bolstering of such assumptions through time, and enabling the objectification and quantification of such dominant interests. Hopwood (2009b) has addressed such tensions previously, as he describes how "[…] accounting practices and other calculative technologies seemingly have become intimately tied up with what has been the increasingly single minded attention placed […] on

profitability" (p.799). Importantly, in OIE and Laughlin's (1991) terms, we can say that there was no *institutional* or *morphogenetic change* in our case organisation, to the extent that dominant economic-rooted assumptions concerning profit-seeking remained stronger than anything else. While we witnessed development over time of SEAR rules and routines, particularly once sustainability issues became integral to corporate-strategising, it would be hard to claim that 'institutions' of sustainability (at least in terms of becoming *dominant* business ways) really emerged.

This observation, we contend, raises questions about the extent to which we might think and talk in terms of 'embedding' sustainability and/or instilling sustainability 'mind-sets' (Fraser, 2012). In MARIO, we witnessed how new SEAR rules and routines developed and generally grew in maturity. For this to actually happen, it appeared that important dynamics included senior management support, and a change programme that included sound communication, advisory support and some incentivisation.

So, sustainability can become an important and integral part of both operational and strategic life, technically at least. And, why should we really be surprised at that? But it did not displace dominant profit-seeking assumptions, which further highlights that when change is introduced (e.g., new SEAR practices), *existing institutions matter*. Reinforcing this, two interviewees highlighted that there was no tension between profit-seeking and sustainability, and that ultimately one mattered the most – that is, the institution of profit-seeking. The first interviewee commented:

> I believe that our role as a corporation is to produce energy, and *to make profit*. But, clearly *we make more and better profit if we act in a more sustainable way*. In my opinion, to speak about any trade-offs is old-hat (Interviewee I, 08/2011).

A second interviewee added:

> Sustainability can only be successful if it is considered as something that can give you a competitive advantage or in some other way fosters the creation of economic value (Interviewee IV, 07/2012).

So, sustainability in organisations would seem to be becoming embedded *within* (and blended with) dominant economic institutions; it is not simply bolted-on, nor is it likely to displace the dominance of profit-seeking assumptions:

> At the end of the day, what emerges very clearly is that sustainability *is* actually business [...] and, in the long term these two things *blend* together (Interviewee X, 10/2012).

In this organisation, sustainable practice has become a part of strategising for earning economic profits and long term (business) development. So, in some sense this form of 'profit' is maybe different to conventional (i.e., neoclassical) notions of profit; this may or may not be cause for concern, it may be a fragile concept, but we suggest there is enough in our case evidence to suggest further exploration into such matters. However, it is also difficult not to suspect that behind the veil of sustainability is a real sense of awareness that at least being seen to be sustainable enhances the likelihood of improving economic profits.

Based on our case findings, and for commercially-oriented organisations at least, it would appear that sustainability and sustainable development rules and routines can gain ground (e.g., new tools and techniques), and peoples' perceptions of what sustainability represents can change, but only likely if it aligns to dominant economic institutions rather than stressing against them. And, in this sense, sustainability that becomes integrated into corporate-strategising will likely bolster rather than change the dominance of economic institutions. On the other hand, a world of commercial organisations that give considerably greater weight to sustainability-rooted institutions over economic institutions would as yet seem a long way off, and probably represents an unrealistic long-term expectation. This comes across in the following interviewee's comment:

> It is clear to everybody, including top management, that (what we call) sustainability can be an important lever for MARIO's *competitive and strategic success*. So, for example, our managers who undertake exploration and production activities *with an eye on local community and environmental impacts* do not do this because there is someone who says that "it's sustainability strategy". They do this because it is corporate strategy; it is as if *there has been strong integration of sustainability into corporate strategies*, to the extent that managers do not perceive such situations as being something 'to do with' sustainability. It is the way MARIO *has to* act (Interviewee II, 08/2011).

So, if we are to believe this, at least in the foreseeable future, profits and economic value are what ultimately matters to commercial organisations, we should ask what implications this has for policy-making? What regulation and (dis-)incentives can be initiated by the likes of governments (Gray and Milne, 2002), influential professional bodies and of course organisations to encourage profit-making at less cost to society and the environment? What new management accounting tools and techniques can 'best' achieve such objectives?

Then, what about in the long-run? Are there more radical (but also realistic) alternatives? Should we spend as much attention to *how* we define 'profit' as the time we spend on its calculative methods and outputs? We *should* possibly be looking more broadly and more critically at the conventional notion of 'profit', and potentially nuanced forms, especially when we are considering the role and functioning of management accounting tools in sustainable development. We should be looking to new conceptualisations, new concepts and new foci for how we account for society and the environment, developing as new alternative flows of management information.

Discussions above would suggest that leaving things simply to drift along with an a-critical view of management accounting might be invidious, and not entirely pulling in the direction of a more harmonious relationship between organisations and the environment. There are also questions to be had as to whether or not "[…] the ethical considerations of the environmentalists (can) be transferred to the economic market place? Or will the values of the market place overwhelm those of the environmental sphere […] to the longer term detriment of original concerns"

(Hopwood, 2009b, p.435). These are the sorts of questions that we cannot answer here; however, they do need much more consideration in the future.

At least in the short-term, it would appear that working *with* assumed dominant economic institutions, rather than seeking more revolutionary changes in our society, would be the most sensible and realistic way forward. We would argue that dominant political and social structures, and powerful vested interests, render any 'revolutionary' changes in the assumed ways of 'doing business' unlikely in the foreseeable future. Such an approach toward change will inextricably demand the expertise of financial- and information-astute management accountants. But, as we have intimated here, such challenges for the future will (or *should*) constitute far more than 'simple' extension of conventional techniques in the pursuit of profit-maximising 'success'.

7 - Concluding Remarks

We have investigated the complex, interrelated and cumulative relationships between organisational change and SEAR practices, but also the role of management accounting in facilitating such organisational dynamics. Responding to calls for more in-depth studies of social/environmental accounting intervention in the corporate realm (Dey, 2007; Fraser, 2012), we have combined Laughlin's (1991) 'environmental disturbances' framework and an OIE-informed perspective on organisational change (Burns and Scapens, 2000) to make sense of the unfolding dynamics between the environment, organisational and, more specifically *SEAR*, practices. Exogenous factors were seen to continually interplay with the intra-organisational sphere, and have ongoing potential to shape the (re-)actions of powerful agents; and the interaction between emergent SEAR-related rules and routines was influential upon, and implicated in broader organisational change (and vice-versa). Important to, and weaving throughout this ongoing process of change was the production, use and evolution of *information* within the case company. Information, mobilising various calculative techniques but most prominently management accounting, was necessary to visualise and make sense of the changes that were taking place, not only in terms of SEAR practices but also in broader organisational terms.

However, although we witnessed technical ‘success’ in terms of implementing new SEAR practices, our case also highlighted that these sustainability-related developments needed to be carried out within an assumed profit-oriented model. Furthermore, if an important aim is to be encouraging more ‘sustainable profits’, we should be cautious about simply trying to extend conventional management accounting tools and techniques. As discussed above, future notions of ‘profit’ will not necessarily replicate ‘profits’ that persist in management accounting today; the journey forward in sustainable development will almost certainly demand changes in the practice of management accounting.

References

Adams, C., and McNicholas, P., 2007. Making a difference: sustainability reporting, accountability and organizational change. Accounting, Auditing and Accountability Journal, 20(3), 383-402.

Albelda-Perez, E., Correa-Ruiz, C. and Carrasco-Fenech, F., 2007. Environmental management systems and management accounting practices as engagement tools for Spanish companies, Accounting, Auditing and Accountability Journal, 20(3), 403-422.

Antheaume, N., 2007. Full cost accounting: Adam Smith meets Rachel Carson?, in Unerman, J., Bebbington, J. and O’Dwyer, B., Sustainability Accounting and Accountability, Routledge: London.

Bebbington, J., 2007. Changing organizational attitudes and culture through sustainability accounting in Unerman, J., Bebbington, J. and O’Dwyer, B., Sustainability Accounting and Accountability, Routledge: London.

Buhr N., 1998. Environmental Performance, legislation and annual report disclosure: the case of acid rain and Falconbrigde. Accounting, Auditing and Accountability Journal, 11(2), 163-90.

Burns, J., 2000. The dynamics of accounting change: Inter-play between new practices routines, institutions, power and politics. Accounting, Auditing and Accountability Journal, 13(5), 566–96.

Burns, J. and Baldvinsdottir, G., 2005. An institutional perspective of accountants’ new roles - the interplay of contradictions and praxis, European Accounting Review, 14(4), 725-57.

Burns, J., and Scapens, R. W., 2000. Conceptualizing Management Accounting Change: An Institutional framework. Management Accounting Research, 11, 3-25.

Burns, J., and Quinn, M., 2011. The routinisation of management controls in software. Journal of Management Control, 22, 5-24.

Busco, C., Riccaboni, A., and Scapens, R. W., 2006. Trust for accounting and accounting for trust, Management Accounting Research, 17(1), 11-41.

Colby, M.E., 1991, Environmental management in development: the evolution of paradigms, Ecological Economics, 3(3), 193-213.

Contrafatto, M., 2009. The process of institutionalization of social and environmental reporting: A narrative from an Italian case study, *unpublished working paper presented at the 21st CSEAR International Congress on Social and Environmental Accounting Research*, St. Andrews (UK), September.

Contrafatto, M., 2012. Social and environmental accounting and organizational change: what, where and why? A personal overview", in Arena P. and Cardillo E. (Eds.), Social and Environmental Accounting- Research advances and new perspectives, ARACNE, Rome.

Dey, C., 2007. Social Accounting at Traidcraft plc: A struggle for the meaning of fair trade. Accounting, Auditing and Accountability Journal, (20)3, 423-45.

Dey, C.R. and Burns, J., 2010. Integrated Reporting at Novo Nordisk, in Hopwood, A., Unerman, J. and Fries, J. (Eds), Accounting for Sustainability: Practical Insights, Earthscan, 215-32.

Duncan O. and Thomson I., 1998. Waste Accounting and Cleaner Technology: A Complex Evaluation, Asian Pacific Interdisciplinary Research in Accounting Conference Proceedings, Osaka, August.

Englund, H., Gerdin, J. and Burns, J., 2011. 25 years of Giddens in accounting research: achievements, limitations and the future, Accounting, Organizations and Society, 36(8), 494-513.

Fraser, M., 2012. 'Fleshing out' an Engagement with a Social Accounting Technology. Accounting, Auditing and Accountability Journal, 25(3), 508-34.

Gray, R., 2011. Sustainability + Accounting Education: the elephant in the classroom, paper presented at the BAFA Special Interest Group on Accounting Education Conference, Winchester, UK.

Gray, R. and Milne, M., 2002. Sustainability Reporting: who is kidding whom? Chartered Accountants Journal of New Zealand, July, 66-70.

Gray, R., Bebbington, J. and Walters, D., 1993, Accounting for the environment. Paul Chapman in Association with the Chartered Association of Certified Accountants, London.

Gray, R. H., Walters, D., Bebbington, J. and Thompson, I., 1995. The Greening of Enterprise: An Exploration of the (non) Role of Environmental Accounting and Environmental Accountants in Organisational Change. Critical Perspectives on Accounting, 6(3), 211-39.

Hamilton, W. H., 1932. Institution, in Seligman, E. R. A. and Johnson, A. (Eds.), Encyclopaedia of Social Science, 73(4), 560-95.

Hopwood, A. G., 2009a. The economic crisis and accounting: implications for the research community. Accounting, Organizations and Society, 34, 797–802.

Hopwood, A. G., 2009b. Accounting and the environment. Accounting, Organizations and Society, 34, 433–9.

International Integrated Reporting Council (accessed in October 2012). Available: http://www.theiirc.org/

Johansson, I.-L. and Balvinsdottir, G., 2003. Accounting for trust: some empirical evidence. Management Accounting Research, 14(3), 219-34.

Kaplan, R. and Norton, D., 1996. The Balanced Scorecard. Harvard Business School Press.

KPMG, 2011. International Survey of Corporate Responsibility Reporting. The Netherlands: KPMG International Global Sustainability Services.

Larrinaga-González, C., Carrasco-Fenech, F., Caro-Gonzalez, F. J., Correa-Ruiz, C., and Páez-Sandubete, M., 2001. The role of environmental accounting in organizational change: an exploration of Spanish companies. Accounting, Auditing & Accountability Journal, 14(2), 213-39.

Larrinaga-González, C. and Bebbington, J., 2001. Accounting change or Institutional appropriation? A case study of the implementation of environmental accounting. Critical Perspective on Accounting, 12(3), 269-92.

Laughlin, R., 1991. Environmental disturbances and organizational transitions and transformations: some alternative models. Organization studies, 12(2), 209-32.

Lukka, K., 2007. Management accounting change and stability: loosely coupled rules and routines in action. Management Accounting Research, 18, 76-101.

Milne, M., J., Tregidga, H. and Walton. S. (2009) Words not actions! The ideological role of sustainable development reporting, *Accounting, Auditing and Accountability Journal*, **22(8),** 1211-1257

Nelson, R. & Winter, S., 1982. An evolutionary theory of economic change, Harvard College, USA.

Nørreklit, H., 2000. The balance on the balanced scorecard – a critical analysis of some of its assumptions. Management Accounting Research, 11, 65-88.

O'Dwyer B., 2004. Qualitative Data Analysis: Illuminating a process for transforming a 'messy' but 'attractive' 'nuisance'. In C. Humphrey & B. Lee (Eds.), The real life guide to accounting research: A behind-the-scenes view of using qualitative research methods. Oxford: Elsevier.

Olsen, M.E., Lodwick, D.G. and Dunlap, R.E. (1992), Viewing the World Ecologically, Westview Press, Boulder, CO.

Quinn, M., 2011. Routines in management accounting research: further exploration. Journal of Accounting and Organizational Change, 7(4), 337-57.

Ribeiro, J. A. and Scapens, R. W., 2006. Institutional theories in management accounting change: contributions, issues and paths for development, Qualitative Research in Accounting and Management, 3(2), 94-111.

Scapens, R. W., 1994. Never mind the gap: towards an institutional perspective of management accounting practices, Management Accounting Research, 5(3/4), 301-21.

Scapens, R., 2006. Understanding management accounting practices: a personal journey. British Accounting Review, 38, 1–30.

Siti-Nabiha, A. K. and Scapens, R. W., 2005. Stability and change: an institutionalist study of management accounting change. Accounting, Auditing and Accountability Journal, 18(1), 44-73.

Soin, K., Seal, W., & Cullen, J., 2002. ABC and organisational change: an institutional perspective. Management Accounting Research, 13, 249–71.

Thomson I., 2007. Mapping the terrain of sustainability accounting, in Unerman, J., Bebbington, J. and O'Dwyer, B., Sustainability Accounting and Accountability, Routledge

United Nations World Commission on Environment and Development (WCED), 1987). Our Common Future, Oxford University Press, Oxford.

Year (Approx.)	Environmental jolts	SEAR-related development
Year 1	a) Increase in industry regulation b) General increase in societal concern over climate change and human rights' protection c) Corporate expectation of more legislation d) New Chief Executive Officer (CEO) appointed	▪ *Corporate Responsibility, Values and Conduct* document published
Year 1 to Year 2	a) Links established with Centre of Research (COR)	▪ *Sustainability Project* established ▪ *Commitments and Initiatives for Sustainable Development* report i*ssued*
Year 2 to Year 3		▪ *Sustainability Department* formed ▪ *Foundation* established ▪ Inaugural *Sustainability Report* published ▪ *Guidelines on Sustainability and Protection of Human Rights* published
Year 3 to Year 6	a) Membership of the World Business Council for Sustainable Development b) Joins the Dow Jones Sustainability Index (DJSI) c) Joins the FTSE4GOOD index	▪ *Ethical Code of Conduct* published ▪ *Focal Sustainability Points* established, and notable increase in sustainability-facing projects
Year 6 onwards	a) Stakeholders expectations for 'integrated reporting' b) Participation in the IIRC pilot programme about "Integration reporting"	▪ *Corporate Pyramid* (normative) system established ▪ Adoption of a *Reporting Mix System* ▪ Inaugural *Integrated Sustainability Report*

Figure 1. A timeline of environmental jolts and SEAR-related developments in MARIO

Note: The time frame of the case study spanned for eight years beginning from the mid-2000s. Year 1 is used to denote the start of the period, Year 2 denotes two years from the starting point and so on.