

KNOWLEDGE INTERESTS IN CORPORATE ENVIRONMENTAL MANAGEMENT



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We know from earlier studies that corporate environmental management is a young discipline, not yet integrated in general management and organization studies, but that researchers take an increasing part in the ongoing scientific conversation. However, the underlying knowledge interests characterizing the field of corporate environmental management is yet empirically unsubstantiated. One way to find out what elements make up the field is to analyse the contents of the most influential writings in the field. The present article identifies the 10 most cited works in *Business Strategy and the Environment* in 1992–2000 and explores the content of these texts. We conceptualise a typology for analysing corporate environmental management theory and formulate a characterization of the dominating knowledge interests. Our findings show that the theoretical fundament of corporate environmental management lacks a hermeneutic knowledge interest. Copyright © 2001

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BACKGROUND

Three decades ago, Jürgen Habermas forwarded critique against the common notion of scientific knowledge being free from values and interests. He proposed a differentiation between three types of interest on which the production of knowledge rests. The three interest types are *technical*, *hermeneutic* and *emancipatory* (Habermas, 1968). Technical interest is the foundation for empirical, analytical science and has the objective of mapping and controlling humanity and nature. The interest is driven by an urge for mapping social and natural processes, to find laws of nature and understand natural as well as cultural processes. Hermeneutic interest is characterized by an urge for understanding, often in everyday life, human interaction. It is the dominant knowledge interest of humanities, where language use, communication and cultural worlds are taken into consideration. Understanding *per se* is the goal. Emancipatory interest is critical and seeks to show underlying power structures and ideologies.



Through interpretation of social processes, control elements and limitations to human freedom are revealed, and this type of critical, reflective research is considered necessary by its advocates in the interest of democracy, freedom and a good society.

For almost two decades, scholars have extensively been working on issues concerning the relationship between organizations' activities and the natural environment. Within the realm of academic associations such as the Academy of Management and the European Group of Organization Studies, interest groups devoted to the study of organizations and the natural environment have been formed. Academic networks seeking cooperation with practice, such as the Greening of Industry Network and the Nordic Business Network for Environmental Management engage in knowledge development in the area. Apparently, a 'field' or 'discipline' has emerged comprising scholars interested in environment related research in management.

The knowledge produced in these constellations could be argued to be dispersed and multi-faceted, taking into account that the subject 'management' in itself has been characterized as fragmented with a non-unified theoretical base (Whitley, 1984). In a study of the organization of the sciences, management studies are argued to contain a low 'mutual dependence' between researchers in the field, and that there is a high 'task uncertainty' (Whitley, 1984). This is to say that there is no consensus on what kind of research is considered relevant, and thereby the field becomes heterogeneous. Monolithic (i.e. natural) sciences, are more specialized, with a low task uncertainty and a greater mutual dependence which implies that results to a greater extent build on earlier results. The field environmental management could be argued to be even more heterogeneous, since it, by necessity, is a multi-disciplinary field including management, which in itself is fragmented.

Environment-related management research has been published in general management and organization journals (Kivisaari and Lovio, 1996), although the number of environment-related articles were unsatisfactory in order to 'question the denatured agenda of

traditional management and technology studies' (Kivisaari and Lovio, 1996, p. 24). Gladwin (1993) criticized the research concerning organization and the natural environment for lacking conceptual definitions, empirical findings, hypothesis, comparisons, and alignment to broader streams of organizational research. In a recent special research forum on the 'Management of Organizations in the Natural Environment' in the *Academy of Management Journal*, Starik and Marcus (2000) however argue that they have seen an increasing comprehensiveness and sophistication in the field since the mid-nineties (Starik and Marcus, 2000). Yet, there have been no explicit attempts to classify and categorize the research within the field, its theoretical base and the knowledge interests underpinning the field.

METHOD. REFERENCES IN *BSE* 1992–2000

In an earlier call for reflection on the subject area of strategic environmental management (Dobers *et al.*, 2000), we attempted to describe the research carried out in the field. Our purpose was to describe the characteristics of the environment related research in management, and we did so by studying articles and references in a journal devoted to the area of strategic environmental management: *Business Strategy and the Environment (BSE)*. The journal is peer reviewed and specifically focuses research on strategic environmental management, which its aims and scope statement shows:

Business Strategy and the Environment is the leading academic journal in its field with double blind refereed contributions of a high quality. It seeks to provide original contributions which add to the understanding of business responses to improving environmental performance. Full length academic papers, as well as shorter, practical 'briefings' are invited. These should be of interest to a broad interdisciplinary audience.



We thereby consider the journal to serve as an example of environment related research in management. *BSE* is a communication medium for academics conducting environment related research in management, and thereby serves as an illustration to the research carried out in environmental management. By studying it we get a picture of the 'inside' of strategic environmental management. Even though the journal is by no means a neutral vehicle for transmitting research results, it is one of the influential academic journals in environment related research in management. We took all articles in *BSE* between 1992 and 2000 and formed a database of all references used in these 205 articles. The 10 most cited environment related articles are cited 13 times or more and listed in Table 1.

These ten writings can be considered to be central texts of the discipline of corporate environmental management. In their role as dominating texts they could be argued to form a central knowledge core that other authors call upon to make a point. Thereby, they serve as representatives for the core knowledge base of corporate environmental management. By classifying these texts, and characterizing them as regards knowledge interests in Habermas (1968) sense, we take one

step further toward understanding the theoretical pillars of corporate environmental management.

ANALYSIS OF CORPORATE ENVIRONMENTAL MANAGEMENT THEORY

In their seminal work linking together sociological paradigms with organisational analysis, Burrell and Morgan (1979) blueprint two dimensions based on assumptions regarding the nature of social science and the nature of society. Starting with their general assumption that 'all theories of organisation are based upon a philosophy of science and a theory of society' they formulate one dimension that shows an objective and a subjective perspective of the social sciences, and another dimension that shows a regulative and radical change perspective of society. Together, they form four paradigms for the analysis of social theory.

To characterize the top 10 works in *BSE* 1992–2000 we would like to relate them to similar dimensions. We welcome the dimension regarding the nature of society, since it

Table 1. References cited more than 10 times, *Business Strategy and the Environment*, 1992–2000

No.	Number of times cited	References
1.	28	World Commission on Environment and Development (WCED). 1987. <i>Our Common Future</i> . Oxford University Press: Oxford.
2.	24	Schmidheiny S. 1992. <i>Changing Course</i> . MIT Press: Cambridge, MA.
3.	20	Welford R. 1995. <i>Environmental Strategy and Sustainable Development: The Corporate Challenge for the Twenty-First Century</i> . Routledge: London.
4.	17	Welford R, Gouldson A. 1993. <i>Environmental Management and Business Strategy</i> . Pitman Publishing: London.
5.	17	Porter ME, van der Linde C. 1995. Green and competitive. Ending the stalemate. <i>Harvard Business Review</i> 73(5): 120–134.
6.	16	Hunt CB, Auster ER. 1990. Proactive environmental management: avoiding the toxic trap. <i>Sloan Management Review</i> 18(7).
7.	16	Hart S. 1995. A natural-resource-based view of the firm. <i>Academy of Management Review</i> 20(4): 986–1014.
8.	14	Cairncross F. 1991. <i>Costing the Earth: The Challenges for Governments, the Opportunities for Business</i> . Harvard Business School Press: Boston MA.
9.	13	Roome N. 1992. Developing environmental management systems. <i>Business Strategy and the Environment</i> 1(1): 11–24.
10.	13	Walley N, Whitehead B. 1994. It's not easy being green. <i>Harvard Business Review</i> 72(3): 46–52.



describes well the notion of how far-reaching changes are necessary to handle the sustainability challenge. The opposing perspectives can be illustrated with the two statements: 'Society can reach sustainability within the present conditions of market economy!' or 'Society must undergo major and drastic changes to reach sustainability!' However, we do not render the dimension regarding the nature of social science as relevant in this case. That dimension describes writings with a sound anchorage in social science and academia. In our case, several of the top 10 works are written by non-academic authors. Thus, a comparison based on the nature of social sciences would be misleading. To include non-academic texts we suggest a dimension that is based on how knowledge is used in relation to action; whether the knowledge authors have acquired with their text is used to suggest action or is presented as a basis for others to take action. The former would include normative suggestions whereas the latter would refrain from normative suggestions and present descriptions, allowing the reader to formulate norms for action. The opposing statements here could be illustrated with: 'We know enough and need to take immediate action!' or 'We need to acquire more knowledge before we can take action!'

Taken together, we arrive at two dimensions regarding the nature of society and the nature of knowledge use that help us to characterize the top ten works in *BSE*. Those di-

mensions give us a diagram with four quadrants, which makes it possible to speak of four distinct fields. The first field (bottom right) is that of regulation of society and a normative use of knowledge. Texts that fall into this category are those that consider knowledge to be used in a normative and standard-setting way, and that 'society is maintained as an entity (and with) its underlying unity and cohesiveness' (Burrell and Morgan, 1979, p. 17). Texts that remain normative in their character, but are more change-oriented, belong to the second field (top right). This field is a space for texts that are in favour of a radical change of society identifying a deep-seated structural conflict and very much 'concerned with man's emancipation from the structures which limit and stunt his potential for development [...] and with alternatives rather than with acceptance of the *status quo*' (Burrell and Morgan, 1979, p. 17). Such texts are prescriptive and readers should take active steps for a change of society. The third field (top left) would hold texts that use their knowledge for conceptual descriptions of certain situations and empirical mappings of existing conditions, but still want radical change to take place in society. Finally, texts in the fourth field (bottom left) are also descriptive in their knowledge use but are interested in holding together society, rather than making it fall apart as is the case with text in favour of radical change. We arrive at four quadrants that can be characterized as in Figure 1.

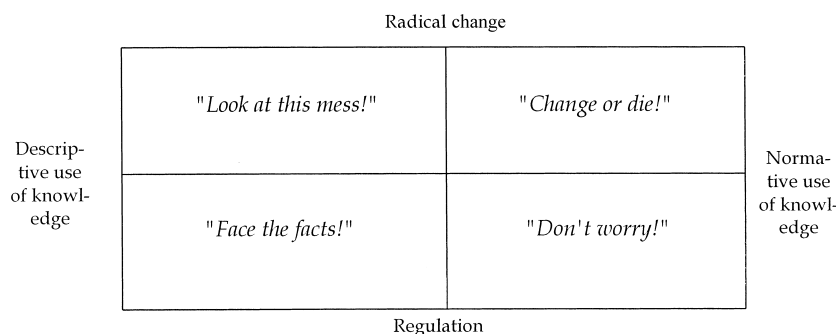


Figure 1. Four fields for the analysis of corporate environmental management theory.



EXPLORING THE MOST CITED WORKS IN CORPORATE ENVIRONMENTAL MANAGEMENT

Richard Welford's (1995) book *Environmental Strategy and Sustainable Development* is radical in its aims, and prescribes that the knowledge the book stands for is to be used to change the direction of future development. Already the first sentences hint at this: 'This radical new book represents an attempt to forward the debate over environmental strategy in business. It is argued that traditional approaches to environmental management cannot deliver sustainability and this book therefore outlines where we must go next in order to avoid the path of self-destruction' (Welford, 1995, p. 1). Although not as explicit in terms of prescription and change orientation, the World Commission on Environment and Development's *Our Common Future* calls for change (World Commission on Environment and Development, 1987). This book is more descriptive in its character. It contains a fairly lengthy empirical part on food security, population growth, eco-systems, energy use, etc. Meanwhile, the authors lift a warning finger: 'The failures that we need to correct arise both from poverty and from the short-sighted way in which we have often pursued prosperity [...] We have also found grounds for hope: that people can cooperate to build a future that is more prosperous, more just, and more secure; that a new era of economic growth can be attained [...] But for this to happen we must understand better the symptoms of stress that confront us, we must identify the causes, and we must design new approaches to managing environmental resources and to sustaining human development' (pp. 27–28). Thus, the report presents empirical material, but uses it to build an argumentation of normative change, i.e. a list of 'musts' which are prescriptions of change.

Cairncross (1991) is somewhat calmer in her reasoning. Frances Cairncross, environment editor of *The Economist*, takes a reflective perspective. She focuses on the business-environment interaction and how these two spheres interact. The call for change is not as immediate, and the text instead presents ideas that

can improve environmental quality and greener policies at a lower cost. Cairncross (1991) is in *Costing the Earth* normative, but her investigation is just as connected to the economic/business dimension, although her suggestions go beyond the company level. She suggests that governments need to make natural conservation pay off and let polluters pay. She states that 'The more governments intervene in markets, the more important it is that they do so in benign ways' (Cairncross, 1991, p. 238) and 'Companies in continental Europe have for some time seen greenery as a way to move upmarket.' (p. 157)

In his article 'Developing environmental management systems', Nigel Roome (1992) establishes that 'the challenge presented by the environment to society and business arises because of the managerial complexity of the issues it raises' (Roome, 1992, p. 12). To Roome, environmental management is a human construct; the term environment is evaluated differently between different settings and cultures. The environment is according to Roome interpreted through other human constructs, such as politics or science, and no perspective provides a complete view. Environmental resources are components of large overlapping social and natural systems. All these increase the complexity of environmental issues and make them hard to manage. Roome describes this complexity and presents it as a fact to accept. The complexity is necessary to understand, and environmental strategies will fail if this complexity is neglected. Thereby, Roome (1992) is more descriptive than normative, and non-radical and non-regulative concerning the change dimension. Welford and Gouldson (1993) give recognition to the progress and potential of environmental management in their book *Environmental Management and Business Strategy*: 'Huge steps forward have been made in the field of environmental management and much bigger steps are yet to be made' (Welford and Gouldson, 1993, p. ix). They do not call out for a radical shift of human activity, but many of the inherent contradictions of industrial activity and the natural environment can be solved through environmental management systems. Technical solutions such as



environmental reviews, environmental auditing and life-cycle assessments are capable of solving the acute environmental problems. Marketing and cost minimization, according to Welford and Gouldson (1993), make it possible to increase the competitive power of companies, which is a way to stop the development that the future otherwise seems to take.

The 1995 article 'Green and competitive. Ending the stalemate' by Michael E Porter and Claes van der Linde in *Harvard Business Review* addresses the issue of competitiveness and environmental regulation. They state that pro-active environmental management is necessary in order for companies to stay profitable and competitive. Their exhortation is a normative one: '... managers must start to recognize environmental improvement as an economic and competitive opportunity, not as an annoying cost or an inevitable threat... The early movers – the companies that can see the opportunity first and embrace innovation-based solutions – will reap major competitive benefits...' (Porter and van der Linde, 1995, p. 124). Porter and van der Linde's view of change is non-radical, and close to what Burrell and Morgan (1979) called a sociology of regulation.

Stuart L. Hart is conceptual in his article 'A natural-resource based view of the firm' from 1995. The article is published in the journal *Academy of Management Review*, in which it has as its objective to publish theoretical and conceptual works. Hart proposes a new way of analysing firms for students of management: an expansion of the definitions of a firm's 'environment'. Hart is thereby not normative, as regards action-orientation, and has no radical-change orientation. Instead, he calls for a new perspective and states that '... the natural-resource-based view of the firm opens a whole new area of inquiry and suggests many productive avenues for research over the next decade' (Hart, 1995, p. 1004).

The remaining five texts are not very concerned with change on a radical basis. Instead, these texts argue for keeping the society as is, facing the facts of the situation. Walley and Whitehead (1994) for instance, in their article 'It's not easy being green', realize the

existence of the so called win-win situations, but do also state that many other situations exist with more costs than profit: 'We must question the current euphoric environmental rhetoric by asking if win-win solutions should be the foundation of a company's environmental strategy. At the risk of arguing against motherhood (and mother earth) we must answer no. Ambitious environmental goals have real economic costs. As a society, we may rightly choose those goals despite their costs, but we must do so knowingly. And we must not kid ourselves. Talk is cheap; environmental efforts are not' (Walley and Whitehead, 1994, p. 46f). Another text, little more normative but still within the descriptive field, is that of Hunt and Auster (1990) and their article 'Proactive environmental management. Avoiding the toxic trap'. An early text with little references to other texts, it describes the situation of companies that have not developed necessary management steps and programs for environmental pollution control. But they stretch the description of five stages with a slight normative statement by offering practical guidelines for program development. As formulated in the abstract: 'The difficulty of managing environmental issues tempts many corporations to undermanage and neglect necessary pollution control and environmental protection programs. This oversight puts those firms – not to mention the environment – at serious risk. The authors describe five stages of environmental management program development. They highlight each stage's characteristics, including its potential shortcomings, and offer practical guidelines for program development' (Hunt and Auster, 1990, p. 7). A third text describes how 24 companies are changing their approach to the environment, suggesting what to do, and also identifying obstacles that managers within these organizations have mentioned (Smart, 1992). The book *Beyond Compliance. A New Industry view of the Environment* describes several well-known firms and their products and processes that have been environmentally hazardous, and how these firms have been active in their change work toward environmental imperatives. The aim of the book is to encourage this trend toward



greater environmental environmentalism (Smart, 1992, p. 1). These three texts are similar in their ambition to describe situations and incremental steps towards environmental improvement, however remaining within the prevailing social model. Another text that shares this interest in regulation, but is more normative than descriptive, is the book by Stephan Schmidheiny (1992). The book *Changing Course* describes companies successful in implementing pollution prevention schemes and in developing 'eco-efficient' technology that also could be a business opportunity with regard to developing countries. Maybe more important is the four page long list of business leaders that have signed a declaration in 'changing course toward our common future' (Schmidheiny, 1992, p. xiii). It is a small group of business leaders, yet defining their normative stand on actually wanting to take action and change business structures. But change remains not radical: 'We call for a long-term view, for far-reaching changes, and for action. But we do not base our hopes for success on radical changes in human nature or on the creation of a utopia. We take humans the way

we find them, the way we all are made, with all our strengths and weaknesses. We base the conclusions in our report on the facts and our own experiences of the real world. We believe that given the will and understanding, our proposals can eventually become part of practical reality' (Schmidheiny, 1992, p. xxii).

Taking these 10 texts and placing them in the proposed quadrant reveals a number of interesting clusters (see Figure 2). Even though these clusters are by no means mutually exclusive, the grouping makes a pattern discernible.

The first cluster, which Welford (1995) and World Commission on Environment and Development (1987) belong in, we have named 'tormented change agents.' These two texts display worries about future development to a much greater extent than the other texts. The texts are more normative than descriptive, and the knowledge interests behind these are in Habermas (1968) terminology clearly emancipatory. Cairncross (1991) is not as radical in her urge for change. She is more business oriented and proposes solutions to how business, governments and consumers can

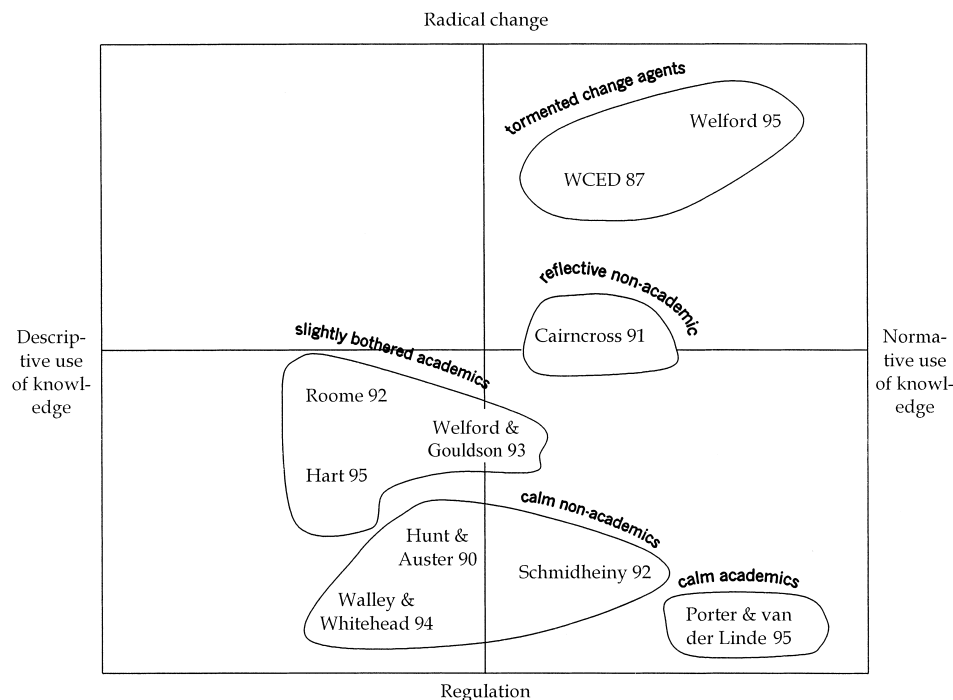


Figure 2. Five clusters of the ten most cited workd in *BSE* 1992–2000.



take action in order to act in a way that is more in harmony with the natural environment. Basic assumptions on profit and growth are touched upon but considered to be unescapable features of the market economy. The texts fall into a cluster that we have named 'reflective non-academics.' Roome (1992), Welford and Gouldson (1993) are texts that are not as radical. They represent academic writings by authors that are worried about the future development, but systematically present logical conceptualisations and action plans. Welford and Gouldson (1993) are more normative in their tool-orientation. This cluster is an illustration of what Habermas (1968) found to be texts representing a technical knowledge interest. The same goes for the cluster 'calm non-academics'. These texts are somewhat varied regarding the descriptive-normative dimension, but they represent a view that is closer to the regulatory than the radical one. To question the nature of society is thus not an issue, but a calm reflection on the natural environment-business relationship provides an opportunity to make environmental management more professional. The final cluster, including Porter (1980) and Hart (1995) is also one driven by a technical knowledge interest. The approach is more distant, descriptive and regulation oriented; hence the cluster is named 'observing academics'.

CONCLUSION

The three knowledge interests represent three different stances of the production and use of knowledge. As we see them, they are by no means incommensurable paradigms, but different stances that authors may subscribe to in different situations. This is to say that a fragmented discipline such as corporate environmental management does not necessarily become more fragmented even though the knowledge interests are diverse. Rather, a knowledge production characterized by multiple knowledge interests may make the knowledge more versatile and useable. Habermas (1968) himself found the technical

knowledge interest to gain ground, leaving less space for the hermeneutic and emancipatory interests.

The clusters we have identified are characterized by the technical and emancipatory knowledge interests. What is striking is the complete absence of the hermeneutic knowledge interest. This knowledge interest is also referred to as a practical knowledge interest; it is grounded in the interest for practice, and *Verstehen* is the main focus and goal. The hermeneutic knowledge interest is one of daily interaction, of an urge to understand human interaction in everyday life. To Molander (1996), the hermeneutic interest is one of participation, completely different from the technical interest which is driven by prediction and control, and the emancipatory which is driven by questioning and critique of a social order that is taken for granted (Molander, 1996).

A theory that rests on a technical knowledge interest is concerned with the creation of change tools and better practice. A theory that rests on an emancipatory knowledge interest is concerned with liberation from the social order at hand. Eventually, a discipline that lacks a hermeneutic knowledge interest in its main theoretical underpinning is bound to become unbalanced and single-tracked.

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