

GYÖRGY PATAKI

IN SEARCH FOR AN ECOLOGICALLY
SUSTAINABLE CORPORATION

Department of Business Economics
and
Department of Environmental Economics and Technology

Supervisor:
PROF. DR. SÁNDOR KERÉKES

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Budapest University of Economic Sciences and Public Administration

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**IN SEARCH FOR AN ECOLOGICALLY
SUSTAINABLE CORPORATION**

PH.D. DISSERTATION

by

GYÖRGY PATAKI

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“There is no wealth but life.”

John Ruskin

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György Pataki

CHAPTER 1

INTRODUCTION

1.1. PLACE OF PRESENT RESEARCH WITH REGARD TO ORGANISATIONAL LITERATURE

The present dissertation aims to describe, interpret and analyse processes of corporate greening. Greening is understood here as any organisational processes, events, and interpretations that have some ecological relevance (including those organisational actions that are intended to have an ecological impact, as well as those that have additional, perhaps unintended, positive ecological effects).

It should also be emphasised that this work is completely different from those efforts in the literature that attempt to delineate and prescribe the best practices for corporate environmental management what one might call the “environmental excellence literature.” Although the empirical research reported here is mainly focused on Hungarian companies considered to be leaders in environmental management, I have no intention to produce a “managerialist” account of corporate greening. In contrast, following the spirit of critical social research, my intention is more to understand and reflect upon the possibilities and limits of an instrumental, or means-ends, rationality, which is manifest in modern management sciences as well as practice, with regard to ecological problems and imperatives. Modern organisations and instrumentally oriented organisational sciences offer us a universal solution for social order (Reed [1996]). As modernity and modern life is overwhelmingly lived by and with large bureaucratic organisations, researchers should be very sensitive to the impacts of this organising logic (Alvesson–Willmott [1992]). Interpreting management and organising as a particular social practice allows one to overcome an exclusively instrumental perspective, which expresses an “ideology of efficiency,” and to critically address organisational processes and processes of organisational science in their broader socio-politico-economic (institutional) contexts. The subsequent analysis of the present dissertation is thus informed and guided by this more general value-commitment.

The present study is furthermore informed by contemporary philosophical debates about the nature of social reality and social science. More precisely, it is influenced by the debates

surrounding Anthony Giddens's structuration theory and its receptions in organisation studies (see among others Giddens [1984]; Whittington [1988] and [1992]; Bryant–Jary [1991]; Friedland–Alford [1991]; Barley–Tolbert [1997]; Child [1997]). At the same time, the present research is affected by the critical realist approach to science and methodology in economics and organisational studies (see, among others, Tsoukas [1989]; Hodgson [1993]; Lawson [1997]; and Reed [1997]). Consequently, research should attempt to focus upon the dynamic interactions between variables at the individual level (values, attitudes, actions) and variables at the institutional level (organisational, sectoral, societal – or economy-wide), as well as upon the processes and mechanisms through which agents and structures mutually constitute each other. In this sense, it is reasonable to depict the “institutionalised logic of action” (Räsänen–Meriläinen–Lovio [1995]) as a unit of analysis. Institutions not only provide cognitive justifications for individual actions, but at the same time, political and social/moral underpinning. Institutions (structures) constrain as well as enable individual (strategic) actions, and, in turn, institutions are continuously reconstituted and reproduced by and through individual behaviour. Thus, corporations in particular and organisations in general may be conceptualised as socio-cultural practice (Reed [1992]).

From a philosophy of science perspective, it seems reasonable to overcome the dichotomy between phenomenological/interpretive and structuralist/functionalist that has plagued social science. Giddens [1984], too, emphasises that structures gain their meaning and are created by and through social constructions of individuals, while those structures cannot be explained by, or reduced to, some aggregates of individual actions. Social reality is constructed, hierarchical and emergent in character. Out of individual actions, which themselves are always of an interpretive, meaning-making and social nature, qualitatively new levels of social reality emerge. In this sense, different hierarchical levels demonstrate new phenomena and are constituted by particular mechanisms and, in turn, exert their influence (constraining and enabling) upon the action sets of individuals, as well as upon processes of meaning-making. Structures embody social constructions of meaning and logic. Individual actions are situated within a plural field of institutions/structures. Therefore, there is room for individual strategic actions, though their particular operation cannot be interpreted without a reference to structures.

Corporate greening is therefore interpreted throughout this study as an institutional change. The aim is to understand which institutional logics are “activated” or realised by and through the social constructions of corporate greening: which institutional structures are

dominant; and in which ways are those structures or logics enacted by particular actors in particular contexts. Since the subject matter of the research is located in complex interactions, processes and causal mechanisms, the dominance of qualitative research methodologies is inevitable (Eisenhardt [1989]; Tsoukas [1989]). Complementarily, the explorative nature of quantitative methodologies is also utilised.

Like every researcher, I myself work within the limits of personal commitments, particular theoretical and practical sensitivities, and with background knowledge and subjective experience. Though at the same time, all of these provide me with a certain freedom, too. I believe that explicitly stating them contributes to intellectual honesty. In the following, four personal preoccupations that to a great extent influence my approach to corporate greening – beyond my position with regard to the philosophy of social science – will be briefly summarised.

First, I am persuaded that the human race currently degrades the biosphere, the habitat of all earthly creatures, to an alarming extent and endangers its life support mechanisms. Following, for example, Karl Polanyi [1946] and John Ruskin [1985/1862], among others, I tend to place the roots of our ecological problems in the dominant operating logic and mechanisms of industrialism and market society.

Second, because a dominant institutional element of modern market societies and economies are large, bureaucratic organisations, including most business enterprises (Simon [1991]), one must thoroughly investigate their role in the present ecological crisis. I also tend to agree with George Brenkert, a contemporary business ethicist, that

“... many of the environmental problems we confront are linked with prominent, mainstream... corporations. In short, problems of the environment do not simply attach to a few renegade corporations, but to mainline... business.” (Brenkert [1995], p. 676)

Therefore, I believe that organisational researchers have a special task and responsibility to move beyond the managerialist and instrumentalist tenets of a large part of organisational studies, particularly the so-called “excellence literature.” Concurrently, we must move beyond the current state of organisation and management studies aptly characterised by Paul Shrivastava as having a “denatured, narrow and parochial concept of organisational environment” (Shrivastava [1991], p. 705).

Third, by interpreting organisations as socio-cultural practice (Reed [1992]), it seems to

be possible to overcome both the instrumental and the dichotomous way of thinking about organisations vis a vis society. It might help to critically understand and constructively move beyond the debate between anthropocentric versus ecocentric (or biocentric) management paradigms (see among others Purser [1994]; Stead–Stead [1994]; Gladwin–Kennelly–Krause [1995]; Purser–Park–Montuori [1995]; Egri–Pinfield [1996], Meriläinen [1998]). Analyses might then be able to fulfill Brenkert’s dictum:

“... we need to reach within corporations and the economic system to change this [business’ special] ethics and its corresponding structure.” (Brenkert [1995], p. 677)

Fourth, I tend to see ecological problems as being tightly connected to social and political issues. The ecological crisis cannot be separated from the crisis of justice, both intra- and inter-generationally (Sachs [1995]). Wolfgang Sachs is therefore correct in pointing out that “global ecology” has emerged as a new arena of international political conflicts. Consequently, large organisations – a number of them economic in character – play their part in ecology-related global political games and organisational researchers have a corresponding role to play in broadening the perspective of their analyses.

1.2. RESEARCH OBJECTIVES AND RESEARCH QUESTIONS

One objective of the present study is to review the corporate environmental management literature from an organisational theoretical point of view, by establishing a typology. The other aim is to provide a broader introduction as well as a deeper analysis of corporate greening processes in the 1990s in Hungary. A survey conducted on a sample of Hungarian manufacturing companies is summarised in order to provide a comprehensive picture of environmental management practices and orientations applied by and characterising Hungarian industrial firms. Three case studies of Hungarian corporations, considered to be in the fore of environmental improvements, attempts to dig deeper into corporate greening, in order to understand the internal processes of greening and their connections to and interactions with the broader socio-economic context of the 90s in Hungary – according to the precepts of the hermeneutic social research tradition.

Since empirical research on corporate greening informed by any organisational theoretical approaches is still in its infancy, especially compared to the other fields of

organisation studies, the following empirical research may be considered as being among the first steps of exploring this terrain of organisational inquiry. The aim of the case study research is, therefore, to provide a theoretical interpretation and theory-building of corporate greening in the Hungarian context. Doing so may enrich international research and theory building efforts in the field of organisational greening or environmental management.

This study alone cannot be designed to analyse in detail all the relevant institutional aspects of corporate greening in Hungary (from environmental legislation and regulation through consumers' environmental behaviour to green political movements, etc.) and, unfortunately, only some aspects were researched more extensively, during previous social inquiries. Therefore, the case studies themselves were designed to gain outside perspectives of the focal organisations under investigation in order to grasp the broader, institutional context and its dynamics in more detail.

The empirical research aimed at shedding light on the following broader questions:

1. How are ecological problems and issues interpreted by Hungarian corporations, their managers and employees? What kinds of discourse or narratives are applied when dealing with ecological issues affecting corporations?
2. What are the most salient features or elements of the internal (organisational) as well as the external (institutional) contexts, into which corporate greening is embedded in Hungary during the 90s?

1.3. RESEARCH METHODOLOGIES APPLIED

Since no comprehensive picture was provided by any previous research on corporate environmental management in Hungary, my initial research efforts were targeted to explore the broader trends and practices by applying questionnaire survey methods. By participating in three surveys in 1996, 1998 and 1999, respectively, access was available to three databases, which together provided a rich picture of corporate environmental management practices during the 90s (though I will only report here the results of one of them). However, by analysing the distinct databases, my principal aim was to gain insight into the diversity of firms' environmental strategic orientations and performance. Multivariate statistical methods, particularly factor and cluster analyses were applied, despite the fact that the majority of

statisticians consider them mathematically “more uncertain” than the often-used methods of correlation and regression analyses. The choice of quantitative methodologies was implied by my commitment to a critical realist and/or critical hermeneutic philosophy of social sciences mentioned above.

It is a commonplace that that time as an inherent variable, and interactive complexity, as an inevitable characteristic of social reality, should compel social researchers to take care when applying statistical methods. Moreover, exclusive reliance on quantitative methodologies is questionable and when applied, they should rather be treated as heuristic devices. Otherwise, given that by its very nature, empirical research closes off social reality, such investigations offer limited insight into causal powers and mechanisms. This problem is more acute in the cases of multivariate correlation and regression analyses than with factor and cluster analyses. Thus, this study consciously applied these latter statistical methods as heuristic devices to explore the diversity and plurality of the subject matter at hand and to guide the subsequent use of qualitative research methodologies.

On the other hand, my research questions discouraged the application of those multivariate statistical methods which do attempt to describe correlations among different variables so as to infer causal explanations, and encouraged the use of those analytical methods which explore characteristic differences and similarities among the variables and the different groups of variables without allowing for any causal explanation. With regard to my subject matter, multivariate statistical methods allowed me to explore the different dimensions of corporate environmental performance which separated companies into more or less well-defined groups of differing environmental strategic orientations. The results were treated only as heuristic and exploratory in nature, and helped with the subsequent design of qualitative research.

The fundamental objective of the qualitative research presented further on was to understand the perspectives held by representatives of industrial firms on corporate greening in Hungary during the 1990s. Seven case studies were conducted, out of which three stories of corporate greening will be introduced here, based on qualitative methodologies that enable the researcher to construct categories, theoretical concepts, and even models related to the subject matter. Following case study methodologies and qualitative data analysis methods, a number of major themes of corporate greening in Hungary during the 1990s were constructed. The very rudiments of a model of greening industrial bureaucracy will also be presented.

1.4. STRUCTURE OF THE DISSERTATION

The structure of the present dissertation is as follows. After this Introduction, Part I systematically presents, by developing a typology, the different interpretations of corporate greening found in organisational studies. This second part serves not only as a literature review but also as a crystallisation of my own theoretical approach. The fifth and sixth chapters differ from the first three chapters, in the sense that they both present a special example or type of organisational greening. Chapter 5 discusses the case of value-driven corporate greening by analysing the examples of so-called alternative business enterprises, such as The Body Shop Int. Plc., Ben & Jerry's Homemade Inc., Patagonia, etc. The examples of these firms demonstrate most clearly that the achievements and radicalism of corporate greening does not only depend on the actors' good intentions, motivations and values, but are heavily affected by the prevailing institutional logic of market society. In contrast, Chapter 6 introduces an example of greening which can be considered as a social experiment that attempts to build a sustainable agricultural enterprise applying a different logic than is currently prevailing in today's developed market society; specifically, Community Supported Agriculture (CSA).

Part II summarises the results of the empirical research. Chapter 7 presents a quantitative empirical analysis, while the remaining chapters report on a qualitative research. Chapter 8, 9 and 10 include three stories of corporate greening in Hungary during the 90s. Chapter 11 summarises theoretical conclusions drawn from the qualitative research. Finally, Chapter 12 provides a summary of the main findings of my research and the implications for further possible theoretical developments. This is followed by the Bibliography and, at the end of the dissertation, relevant publications of the present author are listed.

Part I

Theoretical Approaches to Corporate Greening: A Literature Review

This part attempts to summarise different interpretations of corporate greening prevalent in the relevant literature. Any theoretical experiment of this type should confront the problem of somehow limiting its reach in order to make the chosen task manageable, given the huge amount of writings on corporate greening. The typology of the literature on corporate greening presented below restricts itself to those theoretical perspectives and models that can be placed within the discipline of organisation studies. Two previous studies helped to keep the present analysis on track: Gladwin [1993] presented the classic lines of organisational theorising concerning the meaning of corporate greening, and Räsänen–Meriläinen–Lovio [1995] provided a first classification of “pioneering descriptions of corporate greening,” according to views on the nature of organisational change assumed. Table 1 presents the typology developed for purposes of the present dissertation.

Table 1 A Typology of Literature on Corporate Greening

Corporate Greening as		
1. Environmental Strategy Choice	2. Organisational Change	3. Institutional Change
1.1. excellence literature	2.1. process approaches: 2.1.1. change in strategic management 2.1.2. organisational learning	3.1. social constructionist approaches
1.2. stage and categorical models	2.2. content approaches: 2.2.1. technological change 2.2.2. cultural change	3.2. co-evolutionary approaches
1.3. market and/or non-market strategy		3.3. political-economic approaches

Within organisation studies on corporate greening, three main interpretations of greening are differentiated. The first strand of thinking that interprets corporate greening as the choice of the proper strategy has a straightforward functionalist tenet and, thus, is closely related to

the well-known contingency theory of organisations. Corporate greening is described and explained from this perspective as, at the simplest level, the application of the best environmental management tool-kit or, at a more complex level, the building of an integrated strategy reflecting a coherent environmental image of the organisation in question. Another major tenet of this first stream of interpretation of corporate greening is a 'rationalistic' and managerialist perspective: the general environment of the focal organisation is differentiated only to the extent of having different environmental demands and the focal organisation is represented only by a managerial body making strategic decisions (that is, rational choice of the proper environmental strategy).

The second main interpretation emphasises corporate greening as a process of organisational change. Four streams of analysis may be separated here, according to the process and content of change. The first two strains of thinking put more emphasis on the process, rather than the content of change, but differ from each other in the conceptualisation of the change process: one of them applying a strategic management, the other an organisational learning frame of reference. The other two interpretations focus on the content of change (that is, "What is changing?") in corporate greening, which is considered as either a change of technology or organisational culture. These change perspectives introduce dynamic aspects of greening, though they restrict them to internal organisational processes without including interactions with factors and processes of the general environment of the focal organisation in the analysis. The organisational theoretic paradigm followed by these studies is mainly of a functionalist and managerialist nature, though some studies follow a behavioural model of organisations.

The third major interpretation of corporate greening is labeled as institutional, although this time, this term is applied to a grouping of theoretical perspectives that are sometimes considered divergent. However, here they are grouped together, since they radically depart from the other two major interpretations in the non-functionalist and non-managerialist stance of their analyses. In more positive terms, all three perspectives included here – social constructionist, co-evolutionary and political-economic – share a fundamentally critical epistemology and a focus upon institutionalised practices and, in particular, power relations. Consequently, they integrate into the analysis of corporate greening the dynamic and constitutive interactions and processes of the focal organisations, as well as the general environment.

The next three chapters and their sections introduce in detail the different interpretations

of corporate greening and subsequent models, descriptions and prescriptions. Since the purpose of the following analysis is to delineate and differentiate ideal-typical interpretations of corporate greening in organisation studies literature, different studies will be referred to as examples of the separate strands of thinking and, by implication, a detailed analysis of the studies cited will be omitted. One should therefore be aware that every study or author quoted here usually expresses a more heterogeneous analysis or model than will be presented below. Consequently, the focus is not upon individual models or descriptions of corporate greening, but upon characterisation of the ideal-typical interpretations. On the one hand, this abstract exercise may provide the baseline of an assessment of empirical studies of corporate greening, including the ones presented later, and on the other hand, it should help clarify the theoretical position of the present author with regard to the chosen subject matter.

CHAPTER 2

CORPORATE GREENING AS A CHOICE OF ENVIRONMENTAL STRATEGY

Since the 1980s, when corporate environmental management literature started to flourish, a perspective based on the general corporate strategy literature has become dominant. More precisely, the majority of business organisation studies on environmental management attempt to elaborate on the strategic nature of the so-called “environmental challenge,” or to develop corporate environmental strategy typologies (see a summary by Bhargava–Welford [1996]). An explicit or implicit starting point for these studies may be reconstructed as follows: the more demanding stakeholders’ environmental expectations with regard to corporate environmental performance, the more apparent and urgent the search for a “strategic fit” between the focal organisation and the general environment. The theoretical framework employed is static since, despite the frequent vague references to organisational changes, there is no description or analysis of processes and mechanisms underlying the strategy change evoked. These studies offer a wide spectrum of analytical tools and methods, and prescribe “best practices” or strategic actions in order to provide decision support for allegedly rational corporate managers with regard to environmental issues.

The interpretation of corporate greening as a choice of environmental strategy may be separated into three strands of thinking. The first one may be termed “environmental excellence literature.” A list of tools and methods are provided for implementing “environmental best practices” that lead to improving environmental performance as well as bottom line. Receipts for business success are prescribed this time to “fix” environmental problems. From an organisational theoretic point of view, environmental excellence literature proves to be the less sophisticated and less critical. The second approach analyses corporate greening as a categorical choice of “the proper” environmental strategy, or as a developmental process along the stages of environmental strategy improvement. The third strand of analysis of corporate environmental strategy interprets corporate strategy as an integration of market and non-market strategies in a synergistic fashion. In the following, all three strands will be analysed.

2.1. ENVIRONMENTAL EXCELLENCE LITERATURE

Authors representing this approach put their emphasis on the question of the development and application of an environmental management strategic tool-kit. Accordingly, they offer a wide range of management techniques and technological solutions that guarantee corporate environmental management with business success. The empirical evidence cited is usually based on different individual success stories of mostly well-known large, international companies (see, among others, Schmidheiny [1992]; Smart [1992]; Piasecki [1995]). Articles and books arguing along these lines all share a prescriptive style in order to induce corporate managers to believe the “win-win” reality of the environment–competitiveness relationship and act accordingly. As Dechant and Altman speak of environmentally leading companies:

“The experiences of these firms carry a clear and urgent message – companies that continue to approach environmental problems with band-aid solutions and quick fixes will ultimately find themselves at a competitive disadvantage.” (Dechant–Altman [1994], p. 7, Executive Overview)

On the one hand, authors arguing like this confidently speak of a sort of universal profitability of environmental management without any caution concerning contextual constraints. On the other hand, they typically offer their empirical evidence of environmentally as well as financially successful companies, as if all the achievements depend upon the commitment and knowledge of top management. If top managers are committed as well as knowledgeable the (win-win) success is inevitable. There is nothing special with regard to solving ecological problems: it needs the usual, single-minded rational choice of a good strategy and effective top-down implementation of that strategy. The choice of a good strategy can be reduced to the careful search, collection and application of the best tool-kit fitted to the environmental demands of the general environment of the focal organisation. Companies able to carry out this task will gain competitive advantage; those incapable of doing so will lose and be selected out from competition.

Dechant–Altman [1994], based on the examples of Johnson & Johnson, Procter & Gamble, IBM, The Body Shop, Lever Brothers, Pitney Bowes, Olin, Loctite, United Illuminating and Colgate Palmolive, among others, lists the following five elements of

environmental “best practices:”

1. A mission statement and corporate values that promote environmental advocacy;
2. A framework for managing environmental initiatives;
3. Green process/product design;
4. Environmentally-focused stakeholder partnerships; and
5. Internal and external education initiatives” (op. cit., pp. 9–14).

Though Dechant and Altman recognise the difficult road to environmental leadership through managing change and particularly managing human resources, the transition from the traditional mindset of seeing profitability and environmental protection as polar opposites to the new, “win-win” way of thinking is conceptualised as senior management’s commitment to and undertaking “greening as a rational, strategic choice” (p. 15). Their suggested “approach to overcoming short-term cost concerns and organisational resistance is to show the economic benefits of proposed environmental modifications” in the longer term (p. 16). Ultimately, they see environmental leadership as a “shift in corporate environmental thinking” (p. 7).

Newman–Breedon [1992] claims that environmentally leading firms not only integrate environmental considerations into their enterprise strategy, but share common environmental best practices (like AT&T, Chevron, McDonald’s, 3M, etc.). The road to the win-win success is made of three crucial elements:

1. *Setting the vision* by identifying critical capabilities;
2. Designing the blueprint for *organisational excellence*; and
3. Creating the processes for *achieving continuous improvement* (op. cit., p. 219 – emphasis in original).

Newman and Breedon understand environmental leaders as companies realising that the reduction of environmental risks creates business opportunities (through eliminating pollution as production inefficiencies, anticipating future risks, acting pro-actively and innovatively, and building a good corporate reputation among stakeholders). They conclude that successful companies (in win-win terms) stick to their core business with regard to their environmental efforts as well (op. cit., p. 219).

North [1992] intends to present a complete recipe of “how to make your business lean, green and clean.” The strategic tool-kit he offers entails the following: environmental action plan; environmental impact analysis (EIA); environmental audit; organisation of environmental functions; communication and participation; training for environmental management; dealing with wastes and pollution; energy saving; prevention of industrial

disasters (op. cit., pp. 95–143).

Others, such as Elkington [1994] and Welford–Jones [1996], predict no less than the coming of sustainable corporations and intend to direct all efforts accordingly. While Elkington places his confidence in total quality environmental management, environmental life cycle analysis of products and voluntary environmental communication, Welford and Jones elevate the concept of “auditing for sustainability” to the distinctive practice of a sustainable corporation (an audit that also includes both environmental and social justice related impacts).

Unfortunately, empirical evidence cited by the environmental excellence literature is less than adequate or persuasive, due to the lack of analytical and methodological rigor. Many companies often cited as examples of corporate environmental leadership would not stand a closer and more critical scrutiny. Moreover, environmental NGOs often charge the same companies applauded in the environmental excellence literature with “green washing.” It should be taken seriously whether researchers who uncritically provide such firms with a label of environmental leadership, based on limited experience or investigation, might not commit the same fault as that with which the companies are charged (cf. Welford [1997a])

In sum, environmental excellence literature suggests the following:

- The choice of corporate environmental strategy is a rational choice (a well-structured problem);
- There is a universal tool-kit for good and effective environmental strategy (its application results in a win–win success independent of time, place, organisational and environmental context);
- The environment–competitiveness relationship can always be turned into a win–win situation (the environmental challenge should be taken as an opportunity, not a threat);
- Corporate greening is a top-down process (the development and achievement of best practices depend solely on top managers); and,
- Corporate greening is a well-known managerial and technical problem, the standard management paradigm should be applied (there is no need for paradigm change).

2.2. STAGE AND CATEGORICAL MODELS OF CORPORATE ENVIRONMENTAL STRATEGY

Researchers of these approaches to corporate greening question the reasonableness of a universally applicable environmental management tool-kit and argue that managers cannot save the effort of a thorough analysis of the general environment and organisational resources and capabilities and, thus, developing a unique strategic approach and tool-kit. Improving corporate environmental performance has many possible pathways from which to choose. As Hass [1996] points out, the models of corporate environmental strategy may be separated into two groups “based on their underlying structure: (i) stages along a type of continuum/progression or (ii) categorical” (p. 60). The stage models of corporate environmental strategy prescribe steps towards improving environmental management or performance. In contrast, categorical models of corporate environmental strategy differentiate a few environmental strategy postures and claim that depending upon the nature of environmental challenge as well as the economic sector to which the firm in question belongs, there is always a first-best environmental strategy choice. For example, for companies of some sectors, green product differentiation seems to be of little relevance, thus a so-called offensive environmental strategy might not be pursued.

2.2.1. Stage Models of Corporate Environmental Strategy

One of the most often cited and earliest stage models of corporate environmental strategy is presented by Hunt–Auster [1990]. Based on their work experience as consultants, the authors separate five levels of environmental management, primarily with regard to reducing environmental risks of toxic wastes:

1. Beginner;
2. Fire Fighter;
3. Concerned Citizen;
4. Pragmatist; and,
5. Pro-activist.

In the stage of beginner, firms have no environmental management practice and operate without taking possible environmental risks into consideration. The fire fighter stage of environmental management implies the recognition of environmental risks, but their treatment

is typically ad hoc or regulatory driven, and primarily forced by emerging conflict situations. The stage of concerned citizen is described by Hunt and Auster [1990] as firms that are rhetorically committed to reducing environmental risks and attempt to adapt to changing expectations, but are still far from having an integrated environmental management or institutionalising a dialogue with relevant stakeholder groups. The last two stages of improving environmental management are characterised by well-developed risk management. In a pragmatist stage, firms focus on developing and institutionalising a comprehensive approach to reducing environmental risk while still pursuing inwardly-oriented environmental management. Companies that reach the most developed stage of pro-activist have developed a genuine preventive management of environmental risks which also institutionalise stakeholder involvement.

From the most underdeveloped stage of corporate environmental management to the most developed, the reduction, treatment and management of environmental risks are integrated in organisational routines; environmental commitment increases and becomes established; and, environmental risk management is gradually institutionalised throughout the organisational structure and culture. At the same time, Hunt–Auster [1990] also feel the need to provide a checklist for a successful environmental strategy. More progressively, they attempt to give guidance to unfreeze and transform misdirected and unsatisfactory organisational practice and routines that hinder the effectiveness of environmental risk management. This addition to their stage model constitutes a step towards a more dynamic, process model, however underdeveloped and unconvincing it is in the form presented.

Roome [1992] and [1994] present a so-called “strategic option model,” intended to differentiate between general environmental strategies. Corporate environmental strategies are characterised according to the following main factors:

- Environmental risk;
- Market opportunities;
- Regulatory pressure;
- Organisational limits; and,
- Capabilities for managing organisational change.

Based on these five factors, five corporate environmental strategies might be separated (Roome [1992], p. 18):

1. Non-Compliance;
2. Compliance;
3. Compliance plus;
4. Commercial and environmental excellence; and,
5. Leading edge.

A non-compliance environmental strategy may be typical of firms whose operations involve low environmental risks as well as low market potential for environmentally sound products or services. Some companies might deliberately suppress any environmental expectations, counting on the alleged fact that the environmental challenge is only a passing fad and investing resources in lobbying against environmental regulation. Moreover, there might also be some firms that lack resources and capabilities to catch up with increasing environmental demands and, therefore, may easily become laggards in competition. According to Schot and Fischer [1993], from the 1970s to the mid-80s the majority of industrial firms demonstrated a non-compliance or compliance environmental strategy, and thus lacked the willingness to internalise environmental issues. Petulla [1987] called this approach a “crisis-oriented management:”¹ operating without a strategic approach towards environmental regulation, without an environmental function within the organisational structure, and an ad hoc management of conflicts with regulatory authorities as well as local communities.

A compliance environmental strategy places its primary focus upon regulatory requirements – they might be called environmental “minimalist” or, as Petulla [1987] puts it, a “cost-oriented management.” Companies of this compliance orientation consider environmental regulation another cost of doing business and their job is to economise on these additional costs. However, according to Roome, these firms might easily find themselves in a laggard position, loosing their market shares if environmental expectations as well as stakeholder pressure raise and they are not able to accommodate such changes (because of large sunk costs in end-of-pipe technologies or rigid organisational routines, narrow cognitive frames, etc.).

A compliance-plus environmental strategy intends to be a step ahead of regulatory requirements, in order to assure opportunities for a timely and least-cost adaptation. According to Petulla [1987], an “enlightened environmental management” expresses this approach. Improving environmental performance is considered to be a necessary requirement

¹ Note a weakness of the typology developed here, due to the lack of an explicit treatment of the literature on the relationship between corporate environmentalism and crisis management.

of long-term market survival. Companies of a compliance-plus strategic orientation develop a written environmental strategy and an environmental policy statement, a commitment to continuous environmental improvement, establish an environmental unit or department within their organisational structure, monitor emissions, screen investment alternatives from an environmental point of view and frequently practice environmental compliance audits. Though firms of a compliance-plus strategy have moved from an exclusively defensive orientation toward a more pro-active one, their main strategic focus remains (current and future) environmental regulation. Similarly, their pro-active strategic orientation still has a relatively shorter time horizon and they rarely expand it to a long term one that would raise questions regarding the choice of basic technology and product line, as well as the basic assumptions of organisational culture.

Only companies of commercial and environmental excellence or leading edge environmental strategies consider environmental issues a new dimension of business competitiveness and act accordingly. The firms demonstrating these latter two types of strategic postures perceive environmental expectations as much more demanding than regulatory requirements. Besides environmental authorities, many other stakeholder groups (customers, suppliers, financial institutions, local communities, NGOs, etc.) are perceived to infer strong environmental demands upon the business sector. A commercial and environmental excellence strategy entails a well-developed market, as well as non-market communication strategy that attempt to establish and deepen a green image or identity for the organisation in question. Typically, these industrial firms try to make good business out of the environmental challenge. They might focus either on environmental differentiation as a competitive strategy or upon developing an environmental business unit that provides environmental products and services to customers.

An environmentally leading-edge firm aims at radically reducing its environmental impact by transforming old technologies and product lines into innovative environmentally sound ones. Their focus is therefore upon environmental technology and product innovation. These firms typically express a high moral concern for the social good and the natural environment in their mission statements, and may initiate efforts to renew their organisational culture toward one with social and environmental responsibility. Strategically, they clearly aim to develop resources and capabilities to deal with environmental issues in order to gain sustainable competitive advantage.

Roome [1992] emphasises that developing and renewing a corporate environmental

strategy should be an inherent part of the strategic management process and, consequently, requires planned and structured adjustments (p. 16). He goes on to argue for a so-called threat-response analysis as well as an environmental vulnerability analysis, upon which the rational choice of an environmental strategy should be based. A threat-response analysis focuses upon environmental impacts as related to organisational processes, products, resources and the elements of organisational culture. A firm’s environmental vulnerability is related to the assessment of environmental risks according to two dimensions: a scientific analysis of environmental impacts and stakeholders’ perception of those impacts. This is shown by Figure 2 below:

Figure 1 Assessing Corporate Vulnerability

<i>scientific significance of environmental impacts</i>	high risk	REACTIVE (threat driven)	REACTIVE (legislation driven)
	low risk	DISCRETIONARY (management driven)	REACTIVE (communications driven)
		low risk	high risk

public perception of environmental impacts

(Source: Roome [1992], p. 17)

Both Roome [1992] and [1994] refer to the link between developmental stages of environmental strategy and the organisational changes that in fact constitute the implementation of the environmental strategy. Since a compliance strategy involves only technological changes and no changes in organisational structure and culture – as Roome [1994] argues – it implies a first-order change. In contrast, a compliance-plus strategy requires changes not only in technology but in organisational structure and management – it thus belongs to the category of second-order change. An environmental excellence strategic orientation, however, demands an organisational culture change as well. Changes in

individual as well as organisational behaviour, values, and attitudes are needed toward environmental consciousness – it is a third-order change process. Roome does not really specify in detail how those planned change processes take place, nor what particular factors and mechanisms hinder or support them, only giving a few hints as to what might be gained, such as the importance of change management capabilities within the organisation or the presence of environmentally aware and committed managers and employees, etc. (Roome [1994], p. 74). Therefore, Roome's analysis remains, in this sense, a static one, lacking the specification of processes, mechanisms, and interactions of organisational change that are involved in corporate greening.

A new approach to the theory of the firm as well as to corporate strategy has recently appeared and has been gaining prominence, called the resource-based theory of the firm. It has been applied to the interpretation of corporate environmental strategy as well (see Hart [1995] and [1997], Russo–Fouts [1997]). The resource-based theory of the firm goes beyond the general limit of the standard, structure–conduct–performance type economics approach to the theory of the firm, by opening the black-box of companies and taking their organisational resources or capabilities into account. There is a straightforward relationship between the resource-based theory of the firm and the core competence approach to competitive strategy (developed by Hamel and Prahalad [1990]). According to the resource-based theory of the firm, the strategic capabilities that produce sustainable competitive advantage should be based upon organisational resources which are valuable or rent producing; non-substitutable; tacit or causally ambiguous; socially complex; and firm specific or rare (Hart [1995], pp. 988–989). However, strategic capabilities might become strategic rigidities over time and with dynamically changing context. In order to avoid this uncompetitive option, firms should continuously renew their own organisational resources and capabilities, and adapt them to the changing general circumstances.

Hart [1995] distinguishes three strategic capabilities relating to corporate environmentalism: (i) pollution prevention; (ii) product stewardship; and, (iii) sustainable development (p. 992). A strategic capability of pollution prevention is based upon the greening of production and operations; this contributes to an increase in resources efficiency (that is, reducing materials and energy loss in the form of waste and pollution), thus lowering production costs which results finally in improved competitive advantage. Hart relates the approach of pollution prevention to the logic of total quality management (TQM), which

involves the capability for continuous improvement and the upgrading of human resources and skills.

A strategic capability of product stewardship resides, by contrast, in product design and development. From an environmental management point of view, it means the application of such tools and approaches as so-called cradle-to-grave life-cycle analysis (LCA) and design for environment (DfE), which also entails established environmental cooperation with stakeholders along the value chain (e. g. with suppliers as well as customers). In this case, the source of competitive advantage lies in product differentiation and good company reputation.

A strategic capability of sustainable development might be found in a sustainable organisational vision and a strategic intent that focuses not only upon envisioning sustainable technologies and products but also upon the development of new markets for such technologies and products. Competitive advantage, in this sense, lies in the development of future markets.

Hart [1997] claims the above model to be a stage model which prescribes corporate strategies directed to the vision of sustainable development as the most developed stage, providing long-term solutions for industry-related ecological problems. Hart goes somewhat beyond the standard arguments or scope of awareness dominant in the environmental strategy literature, in the sense that his stage model of corporate environmental strategy is embedded in political economic aspects as well. His starting point is the following:

“Beyond greening lies an enormous challenge – and an enormous opportunity. The challenge is to develop a sustainable global economy: an economy that the planet is capable of supporting indefinitely.” (Hart [1997], p. 67)

The political dimension of the problem is clearly stated:

“The roots of the problem ... are political and social issues that exceed the mandate and the capabilities of any corporation.” (op. cit.)

A well-known argument follows about the possible role of corporations and corporate managers:

“At the same time, corporations are the only organisations with the resources, the technology, the global reach, and, ultimately, the motivation to achieve sustainability.” (op. cit.)

Both articles by Hart warn the business world that sustainability, to the best of our current

knowledge, requires corporate strategies directed to reducing material consumption in the rich North, while allowing for an increase in the poor South. Clearly, political economy and political ecology factors are raised here. Yet, a difference between Hart's model and the interpretation of corporate greening as political economic change is that the stage model above is silent about what kind of wider or deeper institutional changes are needed in order to enable sustainable corporate strategies, and about constraining as well as enabling factors of the current institutional arrangements. Hart's stage model then seems to suggest that what is necessary for addressing the political aspects effectively is a cognitive or value change with regard to the actors of the current institutional setting (a global cognitive revolution), and a change toward environmentally sound technologies. Therefore, his model remains static and ultimately, offers no more than the rational and right choice of an environmental strategy.

2.2.2. Categorical Models of Corporate Environmental Strategy

In contrast to stage models, categorical models of corporate environmental strategy have no built-in developmental perspective. The rational choice of an environmental strategy is delineated by some specified dimensions, by which an assessment or rating of companies is possible. Steger [1993] defines two dimensions: market opportunities through environmental performance and environmental risks. The problem of strategy choice thus can be reduced to the positioning of a firm in a 2 x 2 matrix:

Figure 2 Environmental Strategies Based on Market Opportunities and Environmental Risks

<i>market opportunities through environmental protection</i>	large	OFFENSIVE	INNOVATIVE
	small	INDIFFERENT	DEFENSIVE
		low	high
		<i>corporate environmental risks</i>	

(Source: Steger [1992], p. 151)

Steger’s model treats the choice of an environmental strategy as a well-structured problem, in the sense that organisational managers were able to cope with the problems of information gathering and analysis with regard to environmental market opportunities (by market research, competitive analysis, etc.) and environmental risks emerging from business operations. From Figure 1, one may infer the logic of the model: if, for example, market research demonstrates that customers are not willing to pay higher prices for improved environmental performance, but the environmental impacts of business operations should be mitigated in order to comply with regulations, a defensive strategy would be the rational choice. In other words, when there is no effective demand for environmental improvements there is no room for competing on environmental performance and the only rational strategic approach would be to comply with existing environmental regulations as cost efficiently as possible, and to avoid conflicts with other stakeholders in order not to hurt the bottom line through bad organisational reputation. In contrast, an offensive strategy constitutes the rational choice when, though corporate environmental risks might be judged low, the market is willing to reward improved environmental performance. Environmental management thus makes good business sense, in this case.

Steger’s categorical model differs from stage models of environmental strategy in that it does not prescribe to pursue an offensive or innovative environmental strategy that might seem to be the most progressive among the four strategic postures. However, he also mentions that the rationality of an indifferent strategy does not involve the total irrelevance of environmental considerations (op. cit., p. 151) – it may well be a temporarily rational choice

and over time might even become self-defeating, though this option is not explored further by Steger. Therefore, there is no dynamism included and consequently, the applicability of his model is limited. A snapshot picture of environmental strategy choice is offered here in a static general environment – it is a strikingly mechanistic picture of organisations.

In the Hungarian corporate environmental strategy literature, the first model, a categorical one, was presented by Kerekes and Kindler [1995]. This model – similar to Steger's and Roome's mentioned above – treats environmental risks as a particularly important dimension of strategy choice. The authors argue that environmental expectations or demands with regard to corporate environmental performance will differ according to company profile and the natural as well as social context of the focal organisation. In order to assess company environmental management, organisational capabilities for environmental risk management should be analysed and evaluated. Environmental risks involve two different dimensions. Corporate environmental risks, on one hand, emanate from standard business operations (corporate profile), including the nature of materials used, technologies applied and human resources and skills developed. This dimension is called by Kerekes–Kindler [1995] the endogenous risks. On the other hand, the probability of an environmental accident or catastrophe and the seriousness of its consequences are also determined by factors external to the focal organisation. These are called exogenous risks, and include geographical location, ecosystem properties, demographic characteristics of the social neighbourhood, infrastructural conditions, environmental attitudes of local residents, etc.

The model of Kerekes–Kindler [1995] prescribes differing roles for an environmental function within an organisation, according to the magnitude of endogenous and exogenous risks. For example, a company characterised by low exogenous as well as endogenous risks should establish a supporting environmental function at the middle management level of industrial plant operations, while at the other extreme, a corporation of high environmental risks makes a rational choice if environmental issues are treated at the top level as a major strategic concern. Furthermore, the authors argue for taking into account environmental market opportunities. Thus, four corporate environmental strategies might be categorised according to the aggregated environmental risks (including endogenous as well as exogenous risks) and market opportunities related to improved environmental performance:

1. Indifferent;
2. Defensive;

3. Offensive; and,
4. Innovative.

Operating with low environmental risks and having no environmental market opportunities may justify an indifferent environmental strategy. If environmental performance improvement cannot be marketised but environmental impacts of business operations are considerable, the rational choice involves a defensive environmental strategy. In contrast, when environmental risks are low but environmental market opportunities are promising, an offensive environmental strategy should be pursued (environmental and commercial excellence in Roome's model above). If both environmental risks and market opportunities are high, an innovative environmental strategy constitutes a rational choice (leading-edge strategy in Roome's strategic options model) (Kerekes–Kindler [1995], pp. 35–45).

Csutora has recently further developed the model of Kerekes–Kindler and presented an empirically-based theory of corporate environmental strategy (Csutora [1998] and [1999]). Csutora's model, while not breaking with the basic assumptions of the original, has the advantage of being able to compare the environmental strategic orientation of companies of different profiles and size.

In sum, the stage and categorical models of environmental strategy share the following salient characteristics:

- environmental strategy choice is a rational one;
- environmental strategy choice is context dependent and depends upon organisational resources and capabilities, and the general environment (the environmental strategic tool-kit is, thus, not universal but should be adapted to internal as well as external factors);
- though only stage models express a clear evolutionary logic in the sense of prescribing a sequence of developmental stages of corporate environmental strategy, categorical models also share an implicit assumption of a progress toward innovative or sustainable environmental strategies over time;
- there is room for so-called win-win situations, even for the most radical changes in the long-term (for example creating future markets);
- the choice of an environmental strategy implies organisational changes and it is assumed that changes are planned and of a top-down nature and top management should practise transformative leadership; and,

- to reach a leading edge position with regard to environmental performance and management, gradual and incremental organisational adaptation are not enough, radical and discontinuous changes are also required.

2.3. MARKET AND NON-MARKET ENVIRONMENTAL STRATEGIES

A third interpretation of corporate greening as a choice of environmental strategy might be distinguished because of a particular understanding of strategy as such. Schot [1992] puts it as follows:

“... the environmental aspects of management should no longer be regarded as being restrictive to business practice, but as a natural part of their social responsibility to society ...” (p. 35)

This particular understanding of strategy has been developed by Baron [1995] and is called integrated strategy. An integrated strategy should provide a synergistic fit between the focal organisation and the market as well as non-market aspects of the general environment. The focal organisation should be positioned not only with regard to market competitors but non-market stakeholders as well. An environmental market strategy focuses on gaining competitive advantage – either by cost leadership through improving resources productivity or by an environmental product differentiation. A non-market environmental strategy focuses upon legitimacy and trust.² It aims to gain legitimacy by establishing trustful stakeholder relationships and building or maintaining the credibility of the focal organisation within its organisational field.

Schot [1992] develops related theoretical insights based on his qualitative research regarding environmental management practices of eight multinational chemical firms. The chemical industry was one of the first economic sectors that associated with environmental pollution and which, consequently, has suffered from a negative environmental reputation. The chemical sector has also produced major industrial accidents and catastrophes that have undermined public trust with regard to the industry as a whole. The names of Union Carbide

² In the Hungarian management studies, a similar line of reasoning can be found within the business ethics literature (see particularly Zsolnai [1992] and [1993]).

and Bophal, Exxon Valdez and Love Canal are some of the signposts signifying the worst industrial accidents or hazards related to the chemical industry. It is – as interviews with some of the top executives of chemical firms presented by Schot [1992] underline – a major strategic issue of how to regain and maintain public trust and legitimacy for the sector in general. Top executives reported that a bad environmental reputation implies considerable monetary losses (e. g. falling share prices, worsening credit and insurance conditions, etc.).

The main strategic tool for an effective non-market environmental strategy is communication, primarily with external stakeholders. If communication based on stakeholder dialogue is necessary for regaining public trust, it is a great challenge to the currently institutionalised identity of the chemical sector. The chemical sector – as Schot [1992] and others report (e. g. Simmons-Wynne [1993], Tombs [1994]) – has developed an identity based on objective science that can hardly involve or take seriously subjective perceptions expressed by different non-scientific stakeholder groups. Environmental issues have primarily been treated by the chemical industry as questions for science; that is, their existence and seriousness should first be justified scientifically, then a search for solutions may start, again guided by scientific methods and tools. Obviously, the approach of the chemical sector is that of the expertise or technocrat. Seen from this perspective, the opinion or perception of the lay public is unscientific, driven by biases and unjustified fears. According to Schot [1992], one of the critical issues is whether a dialogue might be initiated between the parties and whether external stakeholders would be involved – and to what extent – in environmental policy making. Based on his research, Schot [1992] reports that the largest chemical firms under investigation have not yet started a dialogue with stakeholders and their communication strategy, aimed at re-establishing credibility, does not go beyond providing technical information (p. 36). The more effective forms of stakeholder involvement that, at the same time, are also more credible, have not yet been established (op. cit., p. 37).

Concurrently, the chemical sector is often reported as a leader in improving environmental performance and pursuing win-win environmental strategies. Many large chemical firms announced the launch of new, environmentally less harmful products or else modified existing products toward improved environmental performance. The majority have also established environmental units and other organisational institutions related to environmental management, formalised environmental criteria for supplier evaluation and selection procedures, etc. However, Schot argues that even the largest chemical companies have not initiated radical changes in their research and development structure and culture, by

integrating environmental considerations (op. cit., p. 40).

Schot [1992] presents categories of environmental strategies based on his empirical research. His typology differentiates between environmental strategies that are

- Dependent;
- Defensive;
- Offensive;
- Innovative; and
- Niche.

Schot [1992] also points out that even the environmental leaders among the largest chemical firms under investigation are just implementing a move from a defensive to an offensive environmental strategy, while a few elements of their environmental strategies demonstrate an innovative approach to environmental management issues (pp. 42–43).

Maxwell–Rothenberg–Briscoe–Marcus [1997] report the results of a thorough analysis of the environmental strategies of such large companies as Volvo, Polaroid and Procter & Gamble. The main conclusion they reach is that these companies formulated their own environmental strategies in a way that is consistent with the main characteristics of their business activities and external environment, as well as with their existing market and non-market strategies (op. cit., p. 128). In this sense, Volvo has developed its environmental management under the influence of non-market stakeholders (regulatory authorities, local communities) and consumers. In line with the general Swedish practice, Volvo made efforts to develop cooperative relations with environmental regulatory agencies and treated greening as an inherent part of its previously developed commitment to corporate social responsibility. Following its organisational traditions, one of the first steps towards greening was a company-wide environmental training programme that also involved suppliers and dealers (a total of 70 thousands people were involved – op. cit., p. 122). Polaroid has long been criticised because of production waste; therefore, the firm's greening efforts focused on developing cleaner production techniques from the very beginning. Procter & Gamble has experienced an increasing environmental consciousness on the part of its consumer base and thus the first and foremost environmental problem to be addressed has become post-consumption waste.

Maxwell and co-authors argue that existing organisational capabilities have exerted a similarly strong influence upon the ways of greening, like the external factors briefly

mentioned above (op. cit., pp. 128–129). Actual greening efforts at Volvo gained support from or were integrated in the automobile manufacturing company's social responsibility tradition. Procter & Gamble delegated environmental tasks, in line with its decentralised organisational structure, to existing product and geographic divisions in order to advance decentralised problem solving and implementation activities with regard to environmental issues. The formulation and implementation of an environmental strategy at Procter & Gamble was also based on the salient features of its organisational culture, stemming from well-developed brand management and consumer focus groups traditionally applied in the process of product design.

At the same time, accommodating their environmental strategies to their organisational capabilities has resulted not only in a more successful process of implementation, but in newly emerging environmental conflicts (Maxwell et al. [1997], pp. 129–130). Volvo, for example, has further pursued its commitment to manufacturing large automobiles without any compromise and, however fuel efficient, they are still far from acceptable from the point of view of many environmental NGOs. That is, Volvo has not radically changed its product strategy with regard to environmental expectations – yet. Though Polaroid and Procter & Gamble have received environmental awards for their efforts, they had to face unexpected environmental conflicts due to the lack of a radically renewed product strategy. Both companies still produce throw-away products.

Maxwell et al. [1997] also emphasise large difficulties emerging in the processes of organisational change implied by corporate greening (op. cit., pp. 130–131). Typically, corporate environmental management was previously assigned a so-called puffer role. It seems to be a very troublesome process to change it in order to fulfill a more pro-active role in line with the changing environmental demands of stakeholders. However, this process of change (i. e. greening) may come up against serious organisational resistance since it involves changing competences and power structures within the focal organisation. It might be much easier to overcome these difficulties or obstacles if environmental efforts and tasks are linked with existing organisational capabilities and culture. However, this may have the price of slowing down organisational changes or taking the edge off the radical nature of greening. Moreover, gradually raising environmental performance objectives higher and higher might become more and more difficult to implement over time (without changing the dominant organisational frame of reference or cognitive paradigm), since those changes will require more and more resources, which implies more and more conflicts between organisational

units. Maxwell and his co-authors thus reach a final conclusion (op. cit., p. 132) that the large firms under investigation are inevitably faced with treating environmental issues as a challenge to their overall business operations. However, to reconsider a corporation's overall business activity has such a very high price (not only in monetary terms) that the firms involved clearly prefer a step-by-step approach toward greening their operations.

Reinhardt [1998] presents a detailed analysis of environmental product differentiation strategy. In order for such an environmental strategy to be successful, he determines three requirements (op. cit., p. 47):

1. "willingness to pay of consumers for environmental quality;
2. establish credible information about environmental attributes of the product; and
3. defensible against imitation."

Citing the cases of chemical corporations (Ciba and Monsanto) as cases of industrial marketing (op. cit, pp. 47–55), Reinhardt persuasively argues that if a product helps industrial customers reduce their environmental risks and, consequently, save on environment related expenses, the first requirement of a successful environmental product differentiation strategy is met. Of course, environmental regulation may play a decisive role in determining environmental compliance costs. As to the second requirement, the credibility of environmental information might be strengthened by an established brand name and radically new product innovations lack these advantages. Furthermore, the environmental legitimacy of a product must be established not only in the market but – since it has a lot to do with environmental quality as a public good – in the wider social-political context (including regulatory authorities as well as green pressure groups). In order to reap so-called first-mover advantages (the third requirement above), an environmental product differentiation must be defensible against imitation. However, if an environmental product innovator experiences excess costs compared to its rivals, the innovator might be forced to move beyond a product differentiation strategy and lobby for more stringent environmental regulation in order to compensate for its cost disadvantage.

Reinhardt [1998] also considers cases of consumer marketing, such as Patagonia and Heinz (pp. 55–67). He argues that consumers' willingness to pay is the strongest when at least part of the resulting environmental improvement might be appropriated as a private good (e. g. as individual health improvement or avoiding risks to individual health). However,

appropriability conditions may differ among consumer groups and, by implication, an environmental product differentiation strategy should be based on a proper segmentation of consumer market (that is, the horizontal strategy of environmental product differentiation should be complemented with vertical considerations). Citing the example of Patagonia's clothing products made of organically grown cotton, Reinhardt points out that environmentally sound products may demonstrate a so-called halo-effect with regard to the other products of the company in question – this clearly results in additional profits over the whole product portfolio (as has been in the case of Patagonia). It is even of more interest that a successful environmental product differentiation strategy seems to require a consistency over all aspects or elements of corporate communication:

“... the fit between environmental product differentiation and the overall positioning of the firm is critical.” (Reinhardt [1998], p. 66)

A key factor of Patagonia's very successful strategy is that corporate environmental performance has been considered a way of communicating the essence of organisational identity or basic organisational values to consumers and other stakeholders. This constitutes an excellent example of connecting public good with private welfare for consumers. It seems clear, from the perspective of the resource-based theory of the firm, that it is much more difficult to imitate an integrated environmental strategy (a synergy between market and non-market strategy) than a single environmental product differentiation strategic move. Thus, Reinhardt [1998] seems to be right in arguing that (in the case of Patagonia):

“Environmental product differentiation is an organic outgrowth of an entire company culture.”; and “... the environmental positioning is an integral part of the business strategy ...” (p. 67)

In sum, the key features of interpreting corporate greening as an integrated, market and non-market, strategy are as follows:

- The choice of an environmental strategy is a rational one (stemming from a resource analysis to understand strategic organisational capabilities and a competitive as well as a stakeholder analysis);
- The essence or key to the success of an environmental strategy is the integration or

synergy between market and non-market considerations;

- Corporate environmental performance cannot be reduced to a question of competitiveness in a narrow sense, but also has to do with the social legitimacy of a business enterprise;
- Due to the issue of legitimacy (or credibility and trust), the environmental challenge to business enterprises is primarily a challenge to their organisational culture and values as organisational capabilities;
- Organisational changes required by environmental expectations seem to be more radical than business enterprises are currently able and willing to implement;
- Organisational changes are assumed to be of a top-down nature and there is no description or analysis of their mechanisms and processes, though the probable organisational resistance is emphasised (the analysis remains static).

CHAPTER 3

CORPORATE GREENING AS ORGANISATIONAL CHANGE

Most of the literature on corporate greening leaves no doubt that corporate environmental management involves organisational change. Meeting the environmental expectations of different stakeholder groups calls for organisational change and development. It is argued that assuring a fit between the focal organisation and its general environment over time is the basic question of organisational survival, on the one hand, and gaining sustainable competitive advantage, on the other. However, authors following this ‘change perspective’ on corporate greening may differ considerably from each other in their view on what is changing within the focal organisation, the extent of organisational change and the processes of organisational change, themselves. Descriptive and prescriptive approaches are again intertwined. A number of authors devote most of their attention to the extent of change required to meet the environmental challenge and to the possibilities of top managers to direct change processes – typically urging radical or transformative changes. Others prefer to analyse what sort of change processes are going on within organisational greening – for example, asking, if changes are incremental, not radical at all, what reasons account for them? Problems clearly emerge for both descriptive and prescriptive analysis of how to differentiate between incremental versus radical change. Where is the dividing line between “frame-breaking” change and changes that do not have the transformative potential to change the previously dominant “frame of reference?”

There is an extensive literature on organisational change. The analysis of corporate greening as organisational change given here is informed by the concepts and models developed by Child–Smith [1987]; Pettigrew [1987]; Johnson [1990]; Gersick [1991]; Wilson [1992]; Greenwood–Hinings [1993] and [1996]; Gelei [1996]; Hardy [1996]; Calori [1998]; Antal-Mokos–Balaton–Drótos–Tari [1999]; Dobák [1999]; Ford [1999]; and, Taylor [1999].

It might be argued that descriptive or prescriptive approaches to organisational greening can be divided into two perspectives, differing from each other in whether their focus is upon the process of change (how does change take place?) or the content of change (what is

changing?). Within the ‘process perspective’ on organisational change, one group of authors concentrates on the process of strategic management – how to incorporate environmental considerations into the process of strategic management? Another group of researchers of the “process perspective” relies on the models of organisational learning and conceptualise corporate greening as processes of learning.

The “content perspectives” on organisational change might also be divided into two approaches. One approach interprets greening as technological change; the other describes or prescribes it as cultural change. Note, however, that it is only for the purpose of the present theoretical analysis of organisational studies on corporate greening that so-called content and process perspectives on organisational change are divided. One should be aware (see Gelei [1996]) that they are overlapping and connected in many respects.

Before entering into the details of the four different perspectives on corporate greening as organisational change, it might be a useful start to introduce two relevant models (Shrivastava [1992] and Gray et al. [1995]) that characterise the interrelationships between the approaches separated here for theoretical convenience.

Shrivastava [1992], based on his qualitative empirical research, developed a model of “corporate self-greenewal.” The strategic challenge of the social, political and economic dimensions of environmental pressures requires companies to transform themselves. Corporate environmental responsiveness implies initiating processes of “self-greenewal.” Corporate self-greenewal should include changes in all basic organisational characteristics; that is, radical or transformational organisational change. Transformative changes should appear in a company’s philosophy, objectives, strategies, product lines, packaging, production systems, organisational systems, deployment of resources, and stakeholder relationships – although changes will probably be gradual over time (op. cit., p. 12).

Shrivastava’s [1992] empirical research includes one leading U. S. firm in each sector of the automobile, chemical, fast foods, oil and petroleum industries (pp. 13–17). The self-greenewal of industrial firms examined follows a similar pattern of strategic actions, from which a general process model of corporate greening can be abstracted. The model of corporate self-greenewal processes includes the following stages or strategic actions:

1. Strategic threats from regulations and public pressures;
2. Re-visioning objectives;
3. Incremental ad hoc strategic programmes;

4. Testing competitive benefits; and,
5. Expansion of organisational systems; institutionalisation and cultural changes (Shrivastava [1992], p. 17).

An external threat makes a company start a greening process, first in the form of ad hoc, incremental organisational changes responding to the most acute and sensitive environmental problems, then gradually, environmental management is integrated and institutionalised within the organisational structure and routines. Over time, the heteronomous starting point turns into autonomous actions and intrinsic motivation from within the organisation, spreading a genuine environmental ethic or responsibility all over the organisation (op. cit., p. 18).

It is a distinctive feature of Shrivastava's model that, in contrast to the interpretations of corporate greening as the choice of an environmental strategy which are rationalist and planning in nature, changes in the formal organisational systems follow changes in actions and forms of behaviour (Räsänen–Meriläinen–Lovio [1995], p. 11). Conscious implementation of a rationally planned environmental strategy is not presented here, in a prescriptive style, but instead, emerging patterns of a corporate environmental strategy moving from uncertain and ad hoc towards more integrated and more conscious processes.

Another general process model of corporate greening was developed by Gray–Walters–Bebbington–Thompson [1995], based on the model of organisational change developed by Laughlin [1991]. The empirical research of Gray and co-authors focused on the role of financial accounting and accountants in corporate greening as organisational change.

In accordance with Shrivastava's model above [1992], it is assumed that corporate greening is initiated by the environmental demands of the general environment of the focal organisation: inertia, or the protection of the status quo, is a fundamental characteristic of any organisation. The model separates so-called "morphostatic" and "morphogenetic," or first- and second-order, organisational changes.

Table 2 Laughlin's typology of organisational change

No change	Inertia
First-order change (Morphostatic)	Rebuttal Reorientation
Second-order change (Morphogenetic)	Colonisation Evolution

Source: Gray–Walters–Bebbington–Thompson [1995], p. 216

Summarising empirical surveys, Gray and co-authors point out that the majority of British firms (at least 85 percent of large companies) recognise the significance of environmental problems and their relevance to business practice, and 60–70 percent claim to have taken steps towards possible solutions. At the same time, it is in general difficult to separate “inertia” and “rebuttal” as corporate environmental strategies (Gray et al. [1995], p. 223). Companies following a “reorientation” environmental strategy explain their greening efforts by direct business considerations; that is, the main reason cited for corporate greening is organisational survival (op. cit., p. 225). However, the firms characterised by either a “colonisation” or “evolution” environmental strategy do not demonstrate straightforward signs of second-order changes as the original model of Laughlin would describe, or if there are any second-order change processes they seem to be mixed with first-order ones (op cit., p. 226).

Gray and co-authors therefore broadened the above model with the terms “first-order colonisation” and “first-order evolution.” First-order colonisation as an environmental strategy is primarily motivated by indirect business reasons; fundamentally, by a sense of threat. Threats can be posed by regulatory procedures, public critique or distrust, and/or accidents and negative influences upon the work morale of employees. A first-order colonisation strategy does not demonstrate deep and widespread changes in business-as-usual management, in contrast to first-order evolution. First-order evolution is motivated by personal or social reasons, such as taking responsibility for local community interests and values, the personal commitment of managers and/or employees or claiming greening as a natural implication of organisational culture (Gray et al. [1995], p. 227). The following two interview citations are telling in this respect:

“There is a *personal concern* for environmental issues by the management of [name of company]. Management are beginning to undertake new thinking. Beginning to recognise that average was not good enough. A major element of our PR is to increase

the amount of debate with the greens, to raise the level of the debate and to influence the political and public agenda.” Corporate Development Manager, large, diversified company

“I know *we are not sustainable* – but what the hell do I tell my fellow directors and my shareholders? We should shut up shop? That may be the right answer but it isn’t going to be accepted you know!” Environmental Director, multinational chemical company (op. cit., p. 227 – emphases added)

Gray and co-authors point out that the signs of a second-order organisational change are very rare and typically characterised by those companies that have either suffered frequent civic pressure for a long time, or are smaller and decentralised, operating in a well-defined local community.

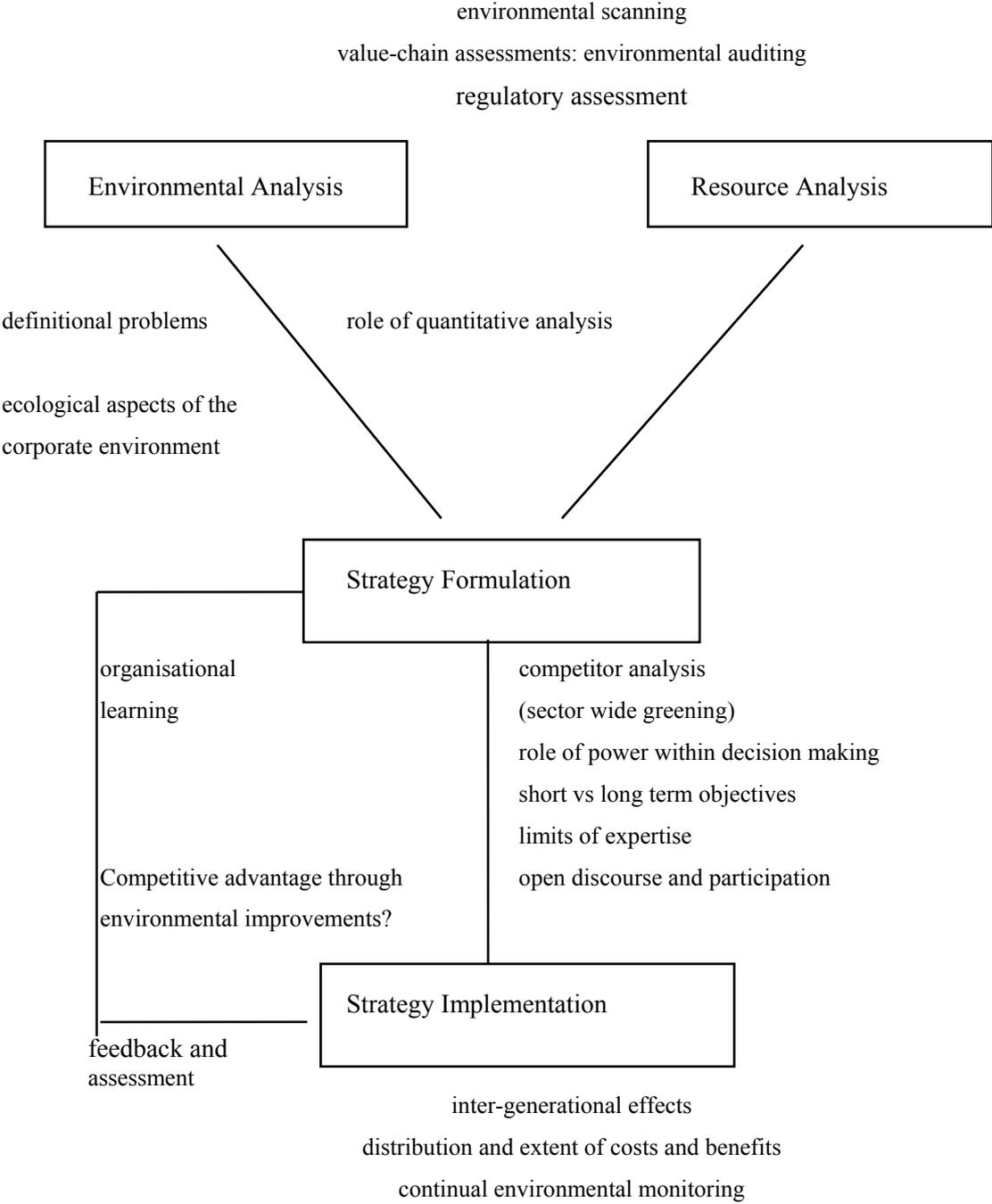
“The involvement with the local community as a factor for change was fairly subtle and seemed to us to be related to the transparency of the organization and a weakening of the traditional separation of business versus personal (community) ethics through which the environmental disturbances – whether environmentalists action or the more general jolts discussed above – could flow.” (Gray et al. [1995], p. 228)

Nonetheless – as the authors emphasise – there are a few firms with the potential for morphogenetic change, although only very few of these have started to reconsider their business-as-usual from an environmental point of view.

3.1. CORPORATE GREENING AS A CHANGE IN STRATEGIC MANAGEMENT

Many authors (see Roome [1992], among others) refer to aspects of environmental management that require changes in the process of strategic management. Moreover, there are models of corporate greening that change traditional models of strategic management by reconsidering them from an environmental point of view. Smith [1992] presents quite a substantial revision of the process of strategic management:

Figure 3 Process of Strategic Management



(Source: Smith [1992], p. 3)

Resource analysis aims at assessing the efficiency of materials and energy input use as well as the resulting environmental impact. The Porterian ‘value chain’ can be linked with an environmental audit in order to uncover those business functions that contribute substantially to the “pollution portfolio” of the company in question. Ideally, the prices of all products and services should include external pollution costs as well. The greening of value chain analysis

may result in competitive advantage over the dimension of corporate environmental performance since it systematically expands the horizon of environmental management from marketing to the management of materials processes. Defining environmental externalities as loss of productive efficiency reveals that improving on the efficient use of production inputs constitutes a “win-win” strategy (reduction in production costs as well as environmental impacts).

Environmental and resource analysis constitute the first phases of the process of strategic management; the next phases are strategy formulation and implementation. Smith [1992] emphasises the role of factors in corporate greening, such as the limits to technical expertise, short-term time horizons and the nature of competition in the sector. Any attempt to “green” strategic management substantively cannot neglect the ecological fact that a number of pollutants have delayed effects: pollutants accumulating in the biosphere may show no sign of harmful effects over the short term, yet manifest themselves much later, in the form of harmful human health impacts or ecosystem collapse. Due to these delayed effects and the widespread uncertainty with regard to cause and effect relationships and irreversible damages, a technocratic approach has inherent constraints and, therefore, should be complemented with an organisational culture open to broad and equal stakeholder dialogues. Consequently, a stakeholder perspective on the potential beneficial and harmful effects of business activities should be developed and cultivated, which necessarily leads to the democratisation of the process of strategic management, in the sense of broad stakeholder involvement. According to Smith [1992], only these sorts of radical and substantive changes might assure that the greening of strategic management in particular – and business operations in general – will move beyond rhetoric towards real commitment and achievement.

Starik–Throop–Doody–Joyce [1996] aim to answer the question of how to integrate environmental considerations into business policy and operations, by changing the process of strategic management. Three stages of the strategic management process are separated, expressed by the acronym, MOSAIC (Mission, Objective, Strategic orientation, Action plan, Implementation and Controls). The first stage involves reconsideration of the existing corporate mission, objectives, strategic position, strategic action and implementation plans, and control mechanisms with regard to their environmental relevance. The second stage requires a thorough analysis of the ecological trends and forecasts of the potential corporate–environment interactions. The third stage is in fact a combination of the previous two stages,

through effective implementation and control (op. cit., p. 15).

The first step of greening strategic management is the specification of environmental commitment in the organisation’s mission statement. Measurable environmental objectives should then be defined, in order to enable the measurement of corporate environmental performance. Next, the analysis of strategic position is ordered with the help of the following framework:

Figure 4 **Types of Environmental Strategic Postures**

		<i>Value Creation Approach</i>	
		Benefit enhancement	Cost reduction
<i>Change Orientation</i>	Proactive	Green product innovation (major modification)	Pollution prevention beyond compliance
	Accommodative	Green product differentiation (minor modification)	Pollution prevention compliance

(Source: Starik et al. [1996], p. 17)

The strategic position of any firm depends upon the path of value creation for environmentally conscious customers (value creation approach) and the attitude towards change (change orientation). For developing action plans, McKinsey’s 7S approach to organisational excellence is offered by Starik and co-authors. Implementation involves the introduction and launch of environmental programmes, policies, and procedures, while control requires the development and operation of an environmental information and monitoring system.

The second step of strategic management as depicted above is environmental analysis. Besides the requirement of stakeholder involvement, Starik and co-authors emphasise the importance of treating nature as a “supra-stakeholder.” The third step is intended to underline the dynamism of strategic management; that is, the necessity of a continuous adaptation of the elements of MOSAIC to the changing general (external) environment and changing environmental expectations and organisational (internal) capabilities.

3.2. Corporate Greening as Organisational Learning

Recently, the concept of organisational learning has been experiencing a revival, partly due to technological changes which have given rise to such concepts as “knowledge workers,” “knowledge intensive firms,” “learning company,” etc. (see Blackler [1995]), and partly due to the concept of “core competence” as the basis for competitive advantage (Prahalad–Hamel [1990]), as well as for a new theoretical approach to organisations, the so-called resource-based theory of the firm (see Edmondson–Moingeon [1996], Spender [1996a and 1996b]).

Many of the most influential and popular work in this vein was done with “interventionist purposes.” Chris Argyris’s well-known cognitive psychology approach represents one type of interventionist research with the individual as the unit of analysis (Argyris–Schön [1978], Argyris [1992 and 1996]). Argyris–Schön [1978] developed the influential concepts of “single- and double-loop learning.” Single-loop learning involves the detection and correction of an error without forcing the organisation to change its present policies or its present objectives; double-loop learning occurs when an error is detected and corrected in ways that involve the modification of an organisation’s underlying norms, policies and objectives.

Another influential account of organisational learning was developed by Stanford’s leading organisational researcher, James March (Lewitt–March [1988], March [1991], Levinthal–March [1993]). In contrast to Argyris’s research, March’s work represents a descriptive approach at the organisational level. Explanations of organisational behaviour are based on organisational routines such as forms, rules, procedures, strategies, norms and beliefs, all of which are primarily constituted by the interpretations of past organisational actions and events, rather than by future strategies and visions. All kinds of organisational experiences are, over time, encoded in organisational routines and, as such, become independent from the knowledge and experience of particular organisational members and therefore, also appropriable by new members of a given organisation. These routines direct the behaviour of organisational members and the whole organisation in question. Thus, March conceptualises organisational learning as an adaptive process which basically has two distinct forms: “exploitation” of old certainties and “exploration” of new possibilities.

“The essence of exploitation is the refinement and extension of existing competencies, technologies and paradigms. Its returns are positive, proximate, and predictable. The

essence of exploration is experimentation with new alternatives. Its returns are uncertain, distant and often negative.” (March [1991], p. 85)

Consequently, adaptive processes typically improve exploitation more quickly than exploration; and the tendency of favouring exploitation over exploration, in the long run, may be potentially self-destructive. Thus, maintaining a balance between the two forms of adaptive processes is essential for the survival of an organisation (March [1991]).

There seems to be quite a natural theoretical connection between the approach of organisational learning and the interpretation of corporate greening as organisational change. Particularly, the approaches to organisational learning represented by Argyris and March are well-tuned to be fruitfully transferred to the substantive research theme of corporate greening (see Post–Altman [1994], Neale [1997], Banerjee [1998], Vickers–Cordey-Hayes [1999]).

The “Post–Altman corporate greening model” (Post–Altman [1994]) depicts three phases or stages of organisational change and learning in a developmental order:

1. Adjustment,
2. Adaptation and Anticipation; and
3. Innovation.

Companies in the first phase of adjustment are compliance-oriented and organisational change is reactive and incremental: primarily single-loop learning takes place. In the transition phase from adjustment to the second developmental stage of adaptation/anticipation, firms are “getting on the learning curve” (p. 72), begin to question “old assumptions” and organisational learning is more and more double-loop in character. Very few companies have reached the third stage of environmental progress; that is, innovation. Organisations in this last phase have undergone a thorough re-evaluation of their structure, culture, and core business activities with regard to the ideal of sustainable development, and have also institutionalised environmental concerns in all parts of the firm. Ultimately, corporate greening results in a culture change, according to Post–Altman [1994], since “sound environmental management affects assumptions about basic business practices” (p. 77). However, transitions on the “corporate greening curve” are made difficult by industry as well as organisational barriers to change (including, for example, capital costs, regulatory constraints, technical knowledge as well as attitudes of personnel, quality of communication, etc. – op. cit., pp. 66–69).

Banerjee [1998] presents a model of environmental learning process:

“a process by which organizations learn to integrate environmental issues with their business activity.” (p. 150)

An environmental learning process may be triggered by several inputs, such as top management commitment, legislation, public concern, and/or need for competitive advantage (pp. 150–154). Organisational actions characterising an environmental learning process can differ in the sense that they are either single-loop or double-loop in character. Banerjee provides a dichotomy of actions entailing either single- or double-loop learning (such as short term versus long term goal setting, compliance versus anticipation, functional focus versus integration, compartmentalization versus boundary-spanning, maintenance versus transformatory support, or limited training versus organization-wide training) (pp. 154–158). The dichotomy runs through the consequences of environmental learning, in the sense that single-loop organisational actions may result in no significant competitive advantage, little change in corporate image, no building of cooperative alliances, and no substantive change in organisational culture. In contrast, double-loop environmental learning processes might lead to enhanced competitive advantage and corporate image, the building of cooperative alliances with stakeholders, and, due to “unlearning” previously established organisational routines, a change in organisational culture:

“Thus, in the double-loop environmental learning case, environmentalism tends to be embedded in organisational memory rather than in individual or group memory, which would be the case in a single-loop context.” (Banerjee [1998], p. 160)

In this sense, many of the often cited success stories of corporate greening seem to involve only single-loop learning lacking any ecologically radical re-valuation and re-direction of core business activities. Take as an example, the case of McDonald’s Corporation and the Environmental Defense Fund (EDF) (Prince–Denison [1992]). In 1990, EDF and McDonald’s launched a collaborative project to search for ways to reduce the company’s solid waste. Their joint task force managed to institutionalise a new corporate-wide environmental policy with a focus on waste reduction and action plans targeting all levels of the company (42 initiatives in the areas of source reduction, reuse, recycling and composting). The waste reduction efforts during 1991 and 1992 resulted in cutting the waste at McDonald’s 8,500 restaurants by more than 80 percent. Obviously, McDonald’s made a great step in

integrating waste reduction criteria into its standard operating procedures, into its day-to-day business practices. As the case is described by Prince and Denison, however, it seems at least controversial to depict these changes as a form of double-loop learning by institutionalising a new environmental ethic. It may be less disputable to interpret this case as one where, faced with increasing external (in this case, consumer) pressure towards greening, the company realised that to be considered responsive does not require fundamental changes in its core activities nor a fundamental reflection on them. Moreover, while as a leader in its industry, McDonald's consciousness about waste problems might have a positive spill-over effect, it seems also clear that it hardly questions the existing 'industry recipe' (interpretive framework) of the fast-food industry. In other words, while the *image* of McDonald's may well have changed positively, its *identity*, on the contrary, seems to remain unchanged (cf. Dutton–Dukerich [1991]).

Nevertheless, it would be very misleading to stop here in the analysis. There are some interesting or even striking features in the McDonald's case. If we can speak about learning to be more environmentally friendly in the case of McDonald's, it would not be a simple case of internal exploitative or single-loop learning because the learning process involved and built upon the cooperation of an outside organisation, in this case an environmental NGO. It can be argued that organisational learning is not only the business of or challenge for a single organisation, but the entire institutional environment. Shifting environmental management paradigms via questioning both the "why and how" of business activities can only be understood by taking into account contextual/situational factors, such as the potential roles of different stakeholders, managerial perceptions and attitudes, and the possible influence of the immediate as well as the broader economic and social environment (see among others Halme [1996], Neale [1997]).

In this sense, Neale argues that the capacity of learning is not enough on its own to help an organisation to become more ecologically sustainable.

“Inwardly focused organisational learning ... can generate environmental innovation, but there is the danger of groupthink, and options which require collaboration with other organisations, *or sensitivity to wider concerns*, may be rejected.” (Neale [1997], p. 95 – emphasis added)

Neale establishes his point by analysing the case of Brent Spar, where Shell UK's "defensive routines," i.e. its insensitivity to issues wider than pure technological and engineering ones, and beyond the UK context, lead to a remarkable loss for the Shell Group. For double-loop

learning to be realised, political processes played a central and facilitating role in the form of NGO and peer pressure, and consumer boycotts.³ Consequently, organisational learning is not only an internal concern for a given organisation, but for a whole institutional environment.

However, it is striking that while organisational learning concepts have become very popular in the field of corporate environmental management, the majority of analyses do not employ the full range of arguments, terms, and techniques available. Particularly, the concepts related to failures and “dead-ends” of learning developed by Argyris as well as March are surprisingly missing from the research tradition of corporate greening.

Argyris’s research and consultancy work in companies demonstrated the great difficulties of double-loop learning: individuals usually demonstrate a firm defensive stance (reasoning) against questioning the underlying premises of their actions. Individuals espouse a theory of action which is different from their tacit “theory-in-use,” rooted in and supported by organisational and/or societal cultures; and, in almost all cases these theories-in-use are counterproductive for double-loop learning (Argyris–Schön [1978]). At worst, this may result in individuals’ “skilled incompetence” (Argyris [1996]): in a turbulent business environment they use routine behaviour (skill) to produce what they do not intend (incompetence) and “leave organisations paralysed by ‘defensive routines’ ” (Edmondson [1996]).

Levinthal–March [1993] underline the fact that “[l]earning has its own traps:” the short run is privileged over the long run (“temporal myopia”); there is a tendency to ignore the larger picture (“spatial myopia”); and, a tendency to overlook failures and learn only from organisational successes (“failure myopia”). Thus, there will be less incentive for experimenting with new technologies and paradigms. It is also noteworthy for our purposes here, that Levinthal and March point out another source of inflexibility and failure to learn; namely, that the processes of interpreting organisational experience and history and of encoding them into organisational routines are inherently political – these are processes by which organisational politics is being institutionalised.

In order to avoid being captured by defensive routines and the self-destructiveness of exploitation of old routines, some “unlearning” may well be needed on the part of both individuals and organisations.

“Knowledge grows, and simultaneously it becomes obsolete as reality changes.

³ See Simmons–Wynne [1993] for a similar finding in the case of the chemical sector’s Responsible Care programme.

Understanding involves both learning new knowledge and discarding obsolete and misleading knowledge. The discarding activity – unlearning – is as important a part of understanding as is adding new knowledge. In fact, it seems as if slow unlearning is a crucial weakness of many organizations.” (Hedberg [1981] cited in Dodgson [1993], p. 385–386)

All of the above mentioned theorists seem to argue that new learning is rare since organisations are overwhelmingly characterised by the dominance of single-loop learning, the strive for efficient exploitation of existing knowledge and competencies (Hendry [1996]). Moreover, forgetting or unlearning existing interpretive frameworks seems to be a crucial step towards true learning which is, eventually, disruptive and stands in contrast with organising, affirming the oxymoron-like nature of organisational learning (Weick–Westley [1996]).

There is another line of reasoning within organisational learning literature which might be applied fruitfully to corporate environmental issues: inter-organisational learning or the spread of environmental learning throughout an organisational field. Levitt–March [1988] emphasises the possibilities of learning from the experience of others; that is, inter-organisational learning. Applying a metaphor from the epidemiology of disease, they separate three mechanisms for knowledge diffusion which basically correspond to the coercive, mimetic and normative isomorphic pressures operating in organisational fields as described by DiMaggio and Powell [1983]. Organisational examples, respectively, can include best available technology (BAT) rules promulgated by government environmental agencies; the ISO 14001 environmental management standard diffused mainly by environmental consulting firms and by buyer-supplier contacts among organisations; and, professional codes of conduct such as the International Chamber of Commerce’s sustainability principles.

If inter-organisational learning is possible, isomorphic pressures are not only manifested in organisational structures and standard procedures but at the level of cognitive structures as well. Organisations populating an organisational field, will therefore tend to apply the same “industry recipe” (Spender [1989]) to a given problem and even competing organisations will belong to the same “cognitive community” (Porac–Howard–Baden-Fuller [1989]). Consequently, the myopia of learning, a defensive stance, as well as the absence of double-loop learning can also be detected at the sectoral level.

Finally, the empirical research and theoretical implications presented by Vickers and Cordey-Hayes [1999] seems to be of high relevance. Based on their field work with thirteen

British manufacturing companies, they analyse the character, strengths and limitations of organisational learning towards implementing cleaner production. Four key drivers of learning to adopt cleaner technologies are isolated: regulation, green market pressures (“green consumers”), quality and technical efficiency considerations, and organisational culture and values. Their understanding of the concept of learning has two key features: learning is an interactive (i.e., social) and practice-based process. Vickers and Cordey-Hayes differentiate four types of learning effects:

- “Learning by doing as a result of optimization of the production process;
- Learning by interacting as a result of contacts between supplier and contractor, or other external sources of knowledge and expertise;
- Learning by using as a result of feedback from users; and
- Learning by learning where organizations develop the ability to be *reflexive*” (op. cit., p. 77 – emphasis in original)

Note that the relatively richer concept of learning employed by Vickers–Cordey-Hayes [1999] directs attention beyond firm-based organisational learning to the need for a wider process of social learning. Firm-based organisational learning is inevitably linked, or interacts with, results and processes of social learning embedded in environmental regulation as well as policy-making and learning on the demand side, to change consumption patterns which involve excessive material and energy throughput and, therefore, environmental disruption. The dangers in primarily inwardly focused (i.e., firm-based) organisational learning are explored and pointed out by the authors with regard to the popular concepts and practices of lean production and total quality management (TQM). Their field research demonstrates that, in contrast to the alleged “philosophy” of these techniques, no real increase in employee empowerment and involvement – that is, a participatory organisation-wide environmental learning – usually takes place. Rather, one finds growing managerial (top-down) control and sometimes even worsening worker health and safety conditions (op. cit., p. 85). It should also be emphasised that lean production as well as TQM (or TQEM) do not involve a re-evaluation of basic technologies and products (i. e. double-loop learning), but instead focus on improving the efficiency of existing systems (single-loop learning).

A practice-based and social/interactive concept of learning moves the analysis beyond the theories of organisational learning mentioned above (that of Argyris and March) and links corporate greening with other streams of organisational learning literature. This different research stream seeks to classify different types of organisational knowledge and knowledge-

creating processes; consequently, complementing and pointing to some limitations of that given above. From this perspective, it is obvious that for instance, Argyris only deals with “embrained knowledge,” knowledge that is dependent on conceptual skills and cognitive abilities (abstract or propositional knowledge; “knowledge what”), while March’s research features “embedded knowledge,” which resides in organisational routines.⁴ This line of research conceptualises learning as a socially constructed understanding emerging from social practice (Brown-Duguid [1991], Lave [1993], Lave–Wenger [1993], Spender [1996], Tsoukas [1996]). Since learning is featured as a dimension of social practice, it is situated in time, space and a particular context; constructed and constantly developing, therefore, is provisional; becomes connected with language and technology as mediators of knowledge; is connected with the object of activities; and, is infused by relations of power and domination (Blackler [1995]). This conceptualisation of organisational learning moves beyond interpreting corporate greening as organisational change and extends its perspective to wider issues of social-political change (a theme of the next chapter of interpreting corporate greening as institutional change).

3.3. Corporate Greening as Technological Change

To the question of what is changing by corporate greening, one widely held response is technology, since the choice of technology constitutes a strategic variable that fundamentally changes environmental impacts, risks and production costs for industrial firms. In other words, corporate greening may be interpreted as technological change.

Shrivastava [1995b] separates five “environmental technology themes:”

1. Design for disassembly;
2. Manufacturing for the environment;
3. Total quality environmental management;
4. Industrial ecosystems; and,
5. Technology assessment (p. 186).

In the spirit of Porter’s win-win perspective, he argues that the development and application

⁴ Reviewing the literature, Blackler [1995] separates three other images of organisational knowledge: “embodied knowledge,” which is action oriented and likely to be partly explicit (‘knowledge how’); “encultured knowledge,” referring to the process of achieving shared understandings; and “encoded knowledge,” which is information conveyed by signs and symbols.

of any of the environmental technologies above are beneficial to the value chain and, thus, provide sustainable competitive advantage.

Florida [1996] reports the analysis of a survey among U. S. manufacturing firms. It is argued that environmental leaders apply so-called bundles of environmental and industrial technologies (i.e., advanced manufacturing techniques, green design, etc.) and integrate environmental considerations into technology development and modernisation. Moreover, Florida takes issue with Porter's perspective on the 'environment-competitiveness' debate (Porter [1991], Porter-van der Linde [1995a] and [1995b]):

“In contrast to the win-win perspective, the rather straightforward hypothesis presented here is that firms that are innovative and adopt advanced manufacturing practices can simultaneously realize improvements in productivity and environmental performance. In other words, environmental improvements to some extent flow from broader corporate efforts to innovate and implement new and more efficient manufacturing systems and practices.” (Florida [1996], p. 81)

The fundamental argument advanced here is that industrial firms adopting advanced manufacturing techniques will enjoy positive spill-over effects in terms of environmental improvement. In contrast to Porter's reasoning, Florida [1996] seems to be persuaded that some “autonomous mechanisms” of technological development lead in the direction of less environmental pollution. The possibility of technological development implying more environmental burden is not even considered.

Perhaps the most radical and promising approach to corporate greening as technological change is industrial ecology (see Richards-Allenby-Frost [1994], Erkman [1997], Den Hond [2000], among others). There is no unified theoretical model underlying the approach of industrial ecology, though it is possible to find its core message.⁵ According to industrial ecology, future industrial systems should change the currently dominating linear production and operations systems to ones with closed material cycles which imitate the functioning of ecosystems. Consequently, there should be a move from end-of-pipe environmental management toward pollution prevention that includes a holistic approach (in contrast to a reductionist approach which treats different environmental media separately). The basic components of industrial ecology are as follows:

1. Improving metabolic pathways (see Ayres [1994]) for materials use and industrial

⁵ Den Hond [2000] presents a detailed analysis of industrial ecology as a vision for a sustainable future, as an emerging interdisciplinary research field and as a source of inspiration for practical work.

- processes (materials and energy efficiency);
2. Creating loop-closing industrial practices (zero waste);
 3. Dematerialising industrial output;
 4. Systematising patterns of energy use;
 5. Balancing industrial input and output to natural ecosystem capacity;
 6. Aligning policy to conform with long-term industrial system evolution; and,
 7. Creating new action-coordinating structures, communicative linkages, and information (O'Rourke–Connelly–Koshland [1996], pp. 3–4).

The often cited, almost “paradigmatic” example of industrial ecology is the industrial symbiosis of Kalundborg, Denmark. A group of companies cooperates in order to eliminate industrial wastes by using each others’ waste flows as inputs for production processes. At the centre of this industrial ecology experiment is the coal-fired Asnaes power plant. The used steam of the power plant is bought by an enzyme plant and an oil refinery; surplus heat is supplied to the city and a fishery; fly ash is sold to a cement factory and high-sulphur gas emissions constitute a useful input to the operations of a sulphuric acid plant. Pollutants rich in limestone residue removed from the smokestacks of the power plant are sold to a wallboard plant. The oil refinery, in turn, provides the power plant with treated wastewater for cooling and also supplies desulphurised gas to burn, saving thousands of tons of coal. Local farms use wastes from the fishery and enzyme plant as fertilizers. The whole system optimises and reduces materials and energy use as well as pollution emissions, while economising on production costs for all companies involved in this network of industrial ecology (see Shrivastava [1995a], pp. 127–129 and [1995b], p. 188).

So far there is no clearcut evidence as to whether industrial ecology will be able to radically transform standard industrial systems, or if it will only contribute to improving the efficiency of materials and energy use. O'Rourke and co-authors [1996] argue that the current theory (as well as the limited practice) of industrial ecology mainly focuses upon the adjustment of information and price distortions; that is, the internalisation of externalities. The “paradigmatic” tool for taking environmental information into account is design for environment (DfE – see Allenby [1994]). Emphasising “the right prices” is of course the well-known logic of standard economic theory (see Kerekes [1993]). O'Rourke et al. [1996] persuasively argue that the transformative nature of industrial ecology is weakened by arguments based on “right prices” and “complete information.” Neither the application of DfE, nor the approach of internalising externalities, set the problem at the level of technological regimes; rather, they focus on the level of single technologies or techniques. To put it more sharply: industrial ecology seems to suffer from too narrow a technological

approach, leaving intact the social and political embeddedness of technological decisions. The bundle of techniques of industrial ecology should be deployed or evaluated within a broader perspective (the one later herein called a “co-evolutionary” approach; see next chapter). Without taking seriously the socio-political element, industrial ecology might support the status quo by freezing relatively less polluting technologies at one point in time and, simultaneously blocking the way for more radical innovations in the longer term. O’Rourke and co-authors warn us against the possibility – not excluded by an industrial ecology approach – of a materially closed, ‘super-ecoefficient’ but still throw-away civilisation (op. cit., p. 19). In order to avoid this, industrial ecology should thoroughly examine the socio-political embeddedness of technological options.

3.4. Corporate Greening as Cultural Change

Another approach applied widely by researchers of corporate greening considers the process as a substantive change in organisational culture. Some authors also express the need for a society-wide value change towards environmental consciousness or responsibility. For example, Shrivastava [1995a] points out that the “management paradigm” valid for a post-industrial society is different from the one dominant today: our “risk society” requires an “eco-centric management paradigm.” According to Shrivastava, the dominant management paradigm has castrated the natural environment from organisation studies and, therefore, it is unsuitable to help corporate greening in practice, as well as in theory. The problem with the dominant management paradigm lies in its promoting unlimited increase in production and consumption, its myopic and narrow financial perspective, and its extremely anthropocentric ideology and value orientation (Shrivastava [1995a], pp. 125–127).

There seems to be widespread agreement within the approach to corporate greening as cultural change that organisational culture constitutes the deepest level of strategy, structure, and procedures (Dodge [1997], p. 107), and that greening organisational culture is a third-order (or discontinuous) change (Jones–Welford [1997], p. 130). An environmentally conscious organisational culture serves as “glue” which sticks the different elements and mechanisms of corporate greening together (Dodge [1997], p. 109).

But how does cultural change start and what sorts of processes are set in motion? Halme [1997] presents the following substantive elements and phases of an environmental culture change:

1. Internal or external trigger for change;
2. Resistance to, denial or rejection of environmental demands;
3. Hesitancy, distrust in prevailing procedures;
4. Unfreezing of old assumptions which exclude environmental considerations from business decision-making and operations;
5. Unlearning old knowledge and assumptions and learning new ones;
6. Competition between old and newly emerging knowledge regarding the environment and business;
7. Illumination: new understanding concerning the business-environment relationship becomes acceptable; and,
8. Consolidation of the environmental principles and practices into the organisational culture (Halme [1997], p. 85).

All the authors in this research tradition agree upon the need for a planned change in organisational culture. A 'green culture change programme' should cover and spread all levels of organisational culture from the most tangible elements, structure, processes and symbols, to espoused values as well as tacit basic assumptions. Starting change requires an external trigger which, at the same time, should meet an internal (organisational) demand as well as capability for implementation. Processes of change – as Halme [1997] explains – do not start in parallel and flow all over the organisation (p. 82). There are core actors in a change process who start and initiate it throughout the organisation. This person or group of persons becomes “the champion of greening” (change agent) within the organisation in question.

Most of the commentators argue that a change agent should reside in top position where s/he may be able to start the change process and manage and implement it by assuming a “cultural engineering” role. Top managers have the responsibility to develop and carry out a planned programme of organisational culture change and, by implication, environmentally sound attitudes and values ‘trickle down’ from the top to the bottom of the organisational hierarchy, fully permeating the whole organisation as well as all employees. The desired result is a “strong” environmentally conscious organisational culture that leads to competitive advantage, as the “excellence” literature on business management would predict and prescribe.

Other authors, including Halme [1997], assert that a change agent of corporate greening might belong to middle or lower management, but everyone agrees that a culture change programme would only be successful if it gains the moral and financial support of top management. For a change agent to be effective, s/he must have a formal organisational position with authority, but will also need professional and political skills for persuading

other organisational members to take her/his side (or follow her/his lead). The only way to reach “greening” goals is to engage others (the majority) by particular actions and emotions, providing for opportunities for others to gain their own experience. This is of particular importance to legitimise greening within the day-to-day organisational discourse, where symbols and organisational history play key roles. If elements or events of organisational history might be used to justify greening, powerful arguments are constructed against the opposition of change. Any efforts toward greening are obviously destined to fail if they require organisational members to perceive all actions and routines of the past as having been completely wrong for environmental reasons (Halme [1997], p. 88).

Researchers arguing for corporate greening as a cultural change agree that hierarchical, mechanistic organisational structures are badly suited for greening in comparison to flatter organisational hierarchies (Halme [1997]; Jones–Welford [1997]). Furthermore, Jones and Welford underline the need for a democratic, egalitarian, creative and participatory cultural programme for organisational greening that influences all the core elements and characteristics of an organisation (*op. cit.*, p. 128).

Crane [1995] presents a well-argued critique of the “cultural engineering” approach presented above and that is dominant in the interpretation of corporate greening as cultural change. The main problem lies in the view of organisational culture being unified and homogeneous in nature (in Martin [1992]’s terms: an integrationist perspective). There is no place in the above analysis for differing subcultures overlapping each other within the organisation that are typically partly in harmony and partly in conflict with each other (i.e., a fragmented organisational culture). Avoidance of the fragmented nature of organisational culture leads to analytical blindness of extant power relations, which at worst results in not recognising within a planned “green” culture change programme that is initiated from the top of the hierarchy, a danger of dominance and “mind control” that clearly hurts individual moral integrity. Crane – following Smircich [1983] and Martin [1992] – instead conceptualises organisations as culture or a particular cultural phenomenon (instead of speaking of organisations having culture). This change in theoretical perspective means that corporate greening is interpreted as an institutional change; that is, the analysis will be sensitive to the embeddedness of a particular organisation under review in wider cultural phenomena or institutions. The main issue then becomes the nature of interactions through which organisational members, organisations, and their institutional environment construct

the problem and understanding of corporate greening. However, this belongs to the theme of the next chapter.

CHAPTER 4

CORPORATE GREENING AS INSTITUTIONAL CHANGE

4.1. SOCIAL CONSTRUCTIONIST APPROACHES TO CORPORATE GREENING

Describing the process that greening of business entails, one should not lose sight of the importance of external factors nor the dynamic interrelatedness of external and internal ones. If one would like to account for these factors and processes, it is necessary to move towards the view of learning as embedded in activity systems and knowledge, or knowing, as practice. One of the first problems that one confronts would be the problem of the relationship between (pro-environmental) attitudes and behaviour. In Argyris's [1992] terms: are our espoused theories in line with our theories-in-use? Bebbington–Gray–Thomson–Walters' [1994] study on the attitudes and practices of corporate accountants provides a good example of the importance of this issue. Based on extensive empirical research, they found that, while accounting professionals in general express a positive attitude towards environmental stewardship, the knowledge of environmental accounting is widely available and senior accountants are usually to be found as part of the senior management team of a corporation (that is, they seem to have enough organisational power to initiate experiments in environmental accounting), the majority of accountants are not responding to the environmental agenda, the level of their involvement is not high. The survey method only allowed them to draw the ambiguous conclusion that

“... accountants themselves are somehow unable to respond to the environmental agenda despite their apparent willingness to do so.” (op. cit., p. 116)

These findings highlight the importance of studying the internal dynamics of corporate greening as determined by the attitudes, emotions, values, perceptions, and knowledge of internal stakeholders (managers as well as employees). This line of enquiry has recently taken

up by some researchers. Minette Drumwright pioneered a study on firms characterised by socially (environmentally) responsible purchasing policy (Drumwright [1994]). She attempted to develop a framework for categorising and describing the organisational contexts within which socially responsible buying initiatives occurred (op. cit., p. 4). Two types of organisational players were identified – “policy entrepreneurs” and “converters” – who had a role in initiating, diffusing and maintaining the establishment of non-economic, environmentally conscious, buying criteria for conducting purchasing policy. Drumwright’s policy entrepreneurs have striking similarities to Everett–Mack–Oresick’s [1993] “principled risk taker” executives: they both demonstrate self-consistency and personal efficacy. They are characterised by “harmony between personal values and business behaviour” (Everett et al., op. cit., p. 67), consciously refusing double-standards, and “bringing up uncomfortable issues that pricked the corporate social conscience and often irritated superiors and co-workers” (Drumwright, op. cit., p. 4). Policy entrepreneurs show high personal commitment and justify their decision by complex moral reasoning and invoking universal values, framing the problems and opportunities with regard to purchasing decisions as ethical dilemmas. Policy entrepreneurs are characterised by a highly developed sense of personal efficacy, of their personal power to affect matters. Their high degree of agency enables them “to diffuse their conviction and efforts throughout the organisation” and to cope with resisters and overcome operational problems (Drumwright, op. cit., p. 5).

Beside policy entrepreneurs, the other typical players in the process of greening purchasing policy were converters, who initially felt “little if any affinity for the social dimensions” and they engaged in pro-environmental efforts mostly “because someone in authority made them to do so;” however, over time a new responsible behaviour “took,” and this change subsequently implied a change in attitudes and beliefs, which in turn “extended into the realm of moral reasoning and conviction,” as reported by the converters themselves (Drumwright, op. cit., p. 6). Policy entrepreneurs acted as “prime influencers,” not as decision-makers, and only through a collaborative problem-solving process, supported by their expert power and astute political skills, could they overcome the defensive mindsets and routines prevailing among relevant decision-makers.

The other important findings of the study concern the context dependence of greening. Drumwright observed that greening proceeds more smoothly if it can be embedded in the historical context of the organisation (“founder’s ideals”), if it is supported by an existing participative management style and “a climate conducive to risk taking,” where there is a

possibility to fail without severe repercussions concerning ones career (op. cit., p. 14). If these supportive, internal contextual elements were partly or entirely lacking, pro-environmental changes tended to be incremental and issue-based, with few emotional connotations. Moreover, instead of framing environmentally conscious behaviour in explicit ethical terms, it was typically linked to the company's success – at best, as “symbolic of the company's good citizenship,” – forced by intense public scrutiny or regulation, or to “whatever their customer perceived it to mean” (op. cit., p. 8, 10). These cases reflected organisational cultures where every effort was evaluated from a strictly business perspective, i.e. translated to the bottom-line, and requiring members to keep their personal convictions out of business decisions.

Stephen Fineman's series of studies (Fineman [1996] and [1997], Fineman–Clarke [1996]) further explore the emotional meanings attached by key organisational members to the process of greening, the narrative framing of environmental problems, and the managerial interpretation of stakeholder pressures towards greening. Reporting on a qualitative study of senior managers in six U. K. supermarkets (Fineman [1996]), it is striking to recognise the prevalence of the psychological mechanisms, as described by Albert Bandura [1991], by which managers disengage themselves from ordinary moral constraints advocated by green pressure groups. Among the eight mechanisms of moral disengagement identified by Bandura [1991], at least three are apparent in the managerial narratives of environmental issues.

“... the ‘working’, or normative, ethics of these managers reflected a mixture of free market economics and utilitarian morality... the customer was reified as an unquestionable standard of correctness.” (Fineman [1996], p. 489)

By invoking values (such as free economic enterprise and satisfaction of autonomous consumer desires) that carry a genuine moral force, managers are engaging in the process of *moral justification*, whereby their environmentally detrimental business conduct is made personally and socially acceptable.

The morally disengaging mechanism of *advantageous comparison* is widespread among managers. Fineman cites many examples of managers' comparing their own objective, scientific approach based on facts, with the campaigners' “commercial naivety” and “too emotional” argumentation, characterised by “lack of balance” and “distortions,” because “they just don't know their facts” (Fineman–Clarke [1996], p. 719). Interpreting the activities of green pressure groups this way makes managers able and comfortable to question the capability and eventually the legitimacy of this stakeholder group to engage in any sensible

dialogue whatsoever.

Managers also tend to *disregard or distort the consequences* of their companies' poor environmental performance, electing to avoid facing the harms they cause or by minimising them, for example, with statements like

“... there aren't millions of dolphins being killed across the world...” (Fineman–Clarke, op. cit., p. 719)

Astonishingly, Fineman's reporting that amongst the managers of the least green companies some were “raging against the green groups, diminishing them” and constructing “a self-protective meaning system which *demonises* those who challenge their right *not* to be green...” (Fineman [1996], p. 492). This demonstrates that managers can dangerously approach the moral disengagement mechanisms of *dehumanisation*.

Another important theoretical contribution of Fineman's studies is his analysis of the emotional embeddedness not only of greening in general but of its ethical foundations in particular, which, of course, is in line with the claims of feminist ethics (see Gilligan [1982]) and some of the psychological accounts of moral behaviour (see Hoffman [1995]). In this respect, Fineman found that the green commitment enacted by managers, even in the greenest companies, was a result of “corporate cultural engineering” rather than “a substantive sense of care or concern for others” (Fineman [1996]; cf. Crane [1995]). Beyond the narratives and rhetoric provided by organisational culture, managers approached environmental issues first by “re-framing and de-emotionalising” them and second, eventually translating them into “safe business language.” More positively, Fineman and Clarke [1996] also observed that managers – particularly in the chemical and power industries – felt alongside their fears and foreboding of threats, admiration and respect towards green pressure groups that scrutinised their environmental performance. This interpretation legitimises environmental pressure groups acting as a “surrogate conscience,” voicing those feelings and moral considerations that would otherwise be absent within the world of business pragmatism that accommodates only the ethics of enlightened self-interest. In this sense, Fineman suggests

“... the constructed moral culture in the greener companies is essentially a refinement of the traditional business one, not a transformation to a ‘true’ ecocentric one.” (Fineman [1996], p. 490)

His studies provide us with an understanding of an important dimension, or criterion, of

greening business; namely, that it is necessary that

“... actors have a ‘conscience’ with respect to their work actions; a felt sense of responsibility, triggered by guilt or shame, for the consequences of their actions.” (Fineman [1996], p. 480)

Andrew Crane [1995] and [1997] seems to strengthen and add further contributions to the insights of Drumwright and Fineman. In his case study on a U.K. manufacturing and retailing firm (Crane [1997]), he focused on the construction of ethical meanings with regard to “marketing green,” yet one again confronts the prevalence of some of the above-mentioned moral disengagement mechanisms. Managers practice *euphemistic labeling* of environmentalists (in Crane’s terms, “distancing” themselves), coining expressions such as “the beads and braids brigade,” “the beard and sandals lot,” “the cranks” (Crane [1997], p. 568).

Managers continually *compare* themselves *advantageously* with environmentalists, contrasting their own “sober and professional, businesslike appearance and manner” and “rational, technical arguments” with the greens’ emotive and ethical ones. Crane [1997] depicts these mechanisms as *image making* constituting one type of management’s *micro-political manoeuvres* in the process of confronting stakeholders’ environmental claims. Furthermore, as another micro-political manoeuvre, managers tend to avoid moral reflection and enact “a moral frame that effectively castrates the environment from ethical meanings” (op. cit., p. 570) Crane also points to managers’ reframing environmental problems as “normal” management issues demanding technical solutions (*moral framing*) and to their narrative tactics to normalise the greening process; for example, as a familiar total quality concern (*narrative surfing*). What is really manifest here is managerial efforts to preserve or manipulate existing power relations by *de-moralising* and *commoditising* the environment and/or “surfing” “various narratives as it is appropriate given the particular contextual and political exigencies of the situation” (op. cit., p. 572).

In sum, it should be evident from the above studies, especially those of Drumwright, Fineman and Crane, that any attempts to understand and explain the process of learning to be a green business cannot take the individual organisation, or its key members, as the unit of analysis. Rather, if an analysis aims to capture the dynamics of agents and structures, as mutually constituting each other and embedded in socio-cultural practice, it should focus on the “socially-distributed activity systems,” (Egeström, cited in Blackler [1995]) or the

“institutionalised logic of managerial activity systems” (Räsänen–Meriläinen–Lovio [1995]) as its unit of analysis. This way, learning is accounted for as a dimension of every social practice, historically and culturally situated, involving power relations and infused with values, while knowledge is understood as a relational concept. The above studies, by reflecting in each case the socio-cultural (systemic) embeddedness of managerial/organisational actions therefore demonstrate the importance of picturing the whole person as an agent as well as a “person-in-community,” acting in and with the world (Lave–Wengers [1993]).

4.2. Co-evolutionary Approaches to Corporate Greening

The interpretation of corporate greening as technological change is blind to the socially constructed nature and institutional embeddedness of technological choices and technology itself. As Kenneth Green and Ian Miles remind us:

“[t]echnology does not stand outside society; it is the result of social choices concerning what knowledge should be developed [and t]he way in which technologies themselves are applied ... If technologies are ... a combination of things, human skills and organised knowledge, they involve an intimate intermingling of the physical world and the social world.” (Green–Miles [1996], p. 105)

What does this more precisely mean? The concept of a “technological regime,” coined originally by Nelson and Winter [1982], is helpful in this context. Kemp–Schot–Hoogma [1998], in analysing which factors impede a shift to more sustainable transport technologies, define a technological regime as encompassing both a prevailing interpretative framework (the paradigmatic framework shared by a community of technological, economic and even political actors) and the embedding of technology in production and operations practices, plants, organisational routines, institutions and infrastructure (“the selection environment of technology”). Or, as Green and Miles phrase it:

“... an industry’s technological regime is an institution ... and it is not only a technical resource but a social, organisational, and knowledge resource as well.” (Green–Miles [1996], p. 132)

Within a technological regime, engineers’ problem-solving activities are, thus, pre-structured. This structure does enable some technological improvements, for example,

different types of eco-efficiency-driven technological advances; however, it also constrains certain more radical changes, from the viewpoint of the core technological framework.

On the part of technological and economic actors, Dosi [1988] points to the powerful operation of an “exclusion effect,” that is, “the efforts and the technological imagination of engineers or of organisations are focused in rather precise directions and blind with respect of other technological possibilities” (cited by Kemp et al. [1998], p. 176). These actors share a model for development, manifest in the so-called “dominant design,” which serves as a starting point for product and process improvements, and beliefs as to what consumers want (cf. Anderson–Tushman [1990]).

Furthermore, in a series of papers presenting the history of wind and wave power research, development and demonstration (R,D&D) in Britain, as well as the exploitation of oil in the North Sea, Genus [1992], [1993a] and [1993b] unravels the extent to which technological regimes are also politically constructed. One of the main barriers preventing the progress in utilising renewable energy sources was, and still is, “pessimistic or subjective assessment” and perception manifest in “a number of myths” concerning the technical and economic potential of wind and wave power (such as that they are too costly, unreliable, are a small resource, the lack of commercial development proves the case against them, etc.). The prevailing interpretative scheme of the public administration machinery is well summarised by Genus:

“Decision-makers... having got used to the large-scale developments of North Sea oil and nuclear energy, have located the technical issues with wind [and wave] energy within this dominant paradigm, thus marginalising its potential for smaller scale energy provision.” (Genus [1993a], p. 30)

Clearly, these enacted pictures of a socio-politically constructed reality tend to “distort decision-makers capacity to learn about the improved construction of technology” (Genus, op. cit., p. 26) and “become a prison into which we are locked” (Westenholz [1993], p. 39). Or, as Argyris and Schön and March have long argued, only within the existing frame of reference can individuals and organisations learn (single-loop or exploitative learning). and they can hardly challenge the limits of these frameworks. Even when they can, let’s say, “think green” (i.e. they have ecologically informed “espoused theories”), it is by no means taken for granted that they will “act green” as well (i.e. develop ecologically conscious “theories-in-use”). Much too often, there is a gap between de-framing (unlearning) the previous frame of reference and organisational action (see Bebbington et al. [1994]; Drumwright [1994];

Heiskanen–Pantzar [1997]; and Scherhorn [1993]). This problem is never discussed in the so-called “cultural fix” approaches: they seem to assume a smooth and unhindered path from changes in value commitments, attitudes and thinking to changes in the course of actions taken.⁶

Moreover, any analysis would be dangerously ignorant, and, unfortunately, an overwhelming segment of the organisational learning literature can be so characterised (cf. Blackler [1995]), if it cannot capture the politics of knowledge and knowing (Clegg–Palmer [1996]). A technological regime is inherently political in nature, since each innovation takes place in a “social niche” and not just a purely technological one: a social network emerges around a certain technological alternative (Verheul–Vergragt [1995]). This formation of a constituency behind a technology can, paradoxically, lead to serious constraints to as well as opportunities for the development and diffusion of more sustainable technologies.

As to the barriers, for example, in British energy policy, the constituency of multinational firms, nuclear energy experts and public administrators has, as Genus [1993a] forcefully argues, promoted centralised, inflexible decision-making processes which excluded other relevant actors espousing more critical views. This resulted in the dominance of inflexible technologies that possess large unit size, require a long lead time, are highly capital intensive, dependent upon specialised infrastructure and, in the absence of some actors (stakeholders) with different commitments, favoured “groupthink” (cf. Neale [1997]). A similar phenomenon of exclusion was detected by Kristin Schrader-Frechette [1995] in the case of Yucca Mountain, where an “iron triangle” of industry, government and contractors/subcontractors promoted the siting of the world’s first permanent geological repository for high-level nuclear waste and spent fuel. The industry-government-contractor triad (“of co-operation, influence, persuasion, and money that is beyond the control of existing laws”), effectively dominated the public discourse and left “little room for consideration of ethical issues related to public safety, environmental welfare, and citizen consent to risk” (Schrader-Frechette *op. cit.*, p. 754). The case of CFC phase-out is usually cited as a success story of international environmental cooperation involving multinational corporations, the analysis by Östlund and Larsson [1994] sheds some light on the pressures and processes operating within a tight industrial network towards institutionalising and legitimising minimal environmental compliance. Important emphasis should be placed on

⁶ See the environmental excellence literature in Chapter 2 and the interpretation of corporate greening as culture change in Chapter 3.

their finding that it is not necessarily conspiracy but rather an emergent systemic effect of individually rational firms attempting to reduce uncertainty and maximise profits, that eventually converged into a minimum effort level. In a tight industrial network, they pointed to the isomorphic pressures of coercion (by market/network dominating multinational corporations and government agencies) and imitation which hindered firms from finding solutions outside the established network and reinforced the institutionalisation of a homogeneous solution for substituting CFCs. Not surprisingly, providing an alternative technological option was taken by the initiative of an environmental NGO (Greenpeace/Germany) in collaboration with an academic institute and a firm standing at the edge of bankruptcy (Verheul–Vergragt [1995], pp. 316–317) – but this leads us to the “brighter” side of the issue.

As to the opportunities for developing and diffusing more sustainable technologies, Verheul and Vergragt [1995] cites some examples of the processes of niche formation against the backdrop of existing technological regimes, such as the Greenfreeze refrigerator in Germany; small-scale wastewater treatment in Flanders; and, windmill co-operation in the Netherlands (see also Irwin–Georg–Vergragt [1994]) – to which we can surely add the so-called “Community Shared Agriculture” (CSA) experiments (see Dyck [1994]). Verheul and Vergragt [1995] coined the term “social experiment” to conceptualise those kinds of bottom-up environmental innovations which are taken not by industrial firms or government institutions but by different forms of civil self-organisation (citizen groups and environmental NGOs) on a smaller scale (op. cit., p. 315). In analysing these social experiments, it becomes clear that something other than the market or bureaucratic institutional logic play a part. As Verheul and Vergragt state,

“... traditional market relations are not suitable for consumers to articulate this demand, or for producers to perceive it and adequately react to it.” (op. cit., p. 320)

Furthermore, in these kind of social experiments

“... traditional market relations are blurred, since products are developed or implemented in reaction to the needs of the network itself, and not a perceived opportunity on the market.” (op. cit., p. 320)

The success of the Greenfreeze or of many CSA initiatives shows that a social experiment of developing more sustainable technologies can have a “catalytic function” for

broader adoption by responding to a demand latently existing in large parts of society. The initiators of these social experiments are typically taking the lead because of their value commitments. Indeed, as Verheul and Vergragt [1995] point out, social niches need some protection from the selection environment, in which a dominant technology is embedded; this protection, while in a typical industrial setting is made up on a cognitive level by expectations concerning the future profitability potential of the new technology, in these cases of sustainable technologies is based on the environmental awareness and value commitment of the actors involved. Though the role of individual value orientation is very important, its importance is inextricably linked to that of institutionalising a non-market and non-bureaucratic logic of action. This enactment of a new institutional logic, in these cases a kind of civil self-organisation, requires changes in the social fabric; it also entails a process of institutional transformation as instilling with values (see Selznick [1996] and Scott [1987]), as well as empowering certain societal groups. However, the “cultural fix” argument has nothing to say about this inherent politic; the problem of domination and subordination in the currently “institutionalised logic of managerial action” (Räsänen–Meriläinen–Lovio [1995]) is not problematised at all.

The problem of institutional embeddedness relates to the detailed discussion by Kemp, Schot, and Hoogma of a number of extra barriers to the utilisation of more sustainable technological alternatives (Kemp et al. [1998], pp. 177–180). There are technological factors, such as the existence of an infrastructure into which the new technology does not well fit; change may be required in a whole series of inter-related technologies; and, further development is needed in terms of user needs which, of course, requires actual use on a larger scale. Some economic factors also play a role, such as sunk investment costs in existing infrastructure and the problem of economies of scale, which make low-scale production relatively expensive as well as contribute to the problem of investment threshold value in infrastructure development. Cognitive factors may constitute quite strong barriers, such as the existence of a core technological framework restricting firms’ technological horizons and vision for focusing on problems posed by existing products and processes; prevailing uncertainty, often exacerbated by regulatory frameworks that do not evince a clear vision of the future and unfamiliarity of alternatives, which leaves consumers and producers unsure about what to expect and makes scepticism widespread beforehand. The new technology is judged on the basis of the characteristics of the dominant one, i.e. they “stay within their existing frame of reference and choose the environmental responses that confirm this frame of

reference” (Westenholz [1993], p. 38). Cultural factors are also at play, since the production and consumption of goods and services involve “the consumer and his or her social relations,” and “goods are not merely service-producing machines” but “also needs-producing machines” (Heiskanen–Pantzar [1997], p. 425); commodities may become “icons of modern life-styles or expression of social status;” and, “they influence the constitution of individual and social identities” (Kemp et al. [1998], p. 178).

“These factors are interrelated and often reinforce each other. What we have is... a structure of interrelated factors that feed back upon one another, the combined influence of which gives rise to inertia and specific patterns in the direction of technological change.” (Kemp et al. op. cit., p. 181)

Hence, as the concept of technological regimes points out, the cognitive structure of a technological paradigm is embedded in broader technical systems, in established production practises and routines, supplier-user relationships, consumption patterns and institutional arrangements infused with values. Therefore, it is necessary to add a societal (or institutional) dimension to these cognitive structures operating at the individual, organisational as well as sectoral levels (Whittington [1992]). There is a process of institutionalisation that moves from cognition to taken for granted “templates of organising” (Greenwood–Hinings [1996]), to which it is typical that in the

“... processes of technological innovation ... decisions about start, direction, branching and termination were taken in groups or networks that shared a certain common problem definition. These networks and these common problem definitions define each other... networks develop over time, responding to certain requirements relating to phases in the innovative processes. Networks grow, become more complex and eventually become latent structures that support an existing technology.” (Vergragt–van Noort [1996], p. 172)

Clearly, the implicit assumption of the “eco-efficiency argument” that technological development has something like an autonomous logic which determines what society can and cannot do, has far reaching consequences.⁷ This view restricts the possibility of double-loop learning (Argyris [1992]), or a cognitive paradoxical process (Westenholz [1993]) facilitated by the encounter of a plurality of perspectives, for bringing about change in the technological trajectories which we are locked in. Since this kind of “technological fix” approach has nothing to say about the institutional embeddedness of technological options, it consequently hides the social, ethical and political issues inherent in our ecological problems. Not

addressing this aspect of technology contributes to the widespread exclusion of other perspectives with a more critical stance. Hence, the development of collective learning capabilities are again severely constrained since learning will tend to be inwardly focused, leaving the organisation or sector/network vulnerable to groupthink. The problematic of organisational greening is thus inherently social and political in nature.

4.3. Corporate Greening as Political-economic Change

Levy and Rothenberg [1999], employing a case study approach, investigated the environmental strategies of two American and two European car manufacturing companies, with regard to how they are responding to the challenges posed by global climate change. Their analysis – in an institutionalist spirit – also covered other actors and processes of the particular organisational field (regulatory authorities, trade associations and scientific institutes, among others). The qualitative research they presented draws a rich and dynamic picture of the processes involved in environmental strategy-making and in constructing the problem of climate change and corporate responses to it. The authors point to some differences in corporate environmental strategies that are due to some salient features of the national organisational fields in question.

Three theoretical perspectives inform the arguments advanced by Levy and Rothenberg [1999]: institutional organisational theory, an evolutionary perspective on technological development and the concept of integrated strategy expanded by a neo-Gramscian approach to socio-technical regimes (see pp. 3–4). Their concept of corporate environmental strategy is therefore significantly different from those discussed in Chapter 2. Based on institutionalist organisational studies, corporate strategy is conceptualised as embedded in institutional environments:

“... strategic decisions are premised upon perceptions of economic interest which are constructed in an institutional context.” (Levy-Rothenberg [1999], p. 3)

The second theoretical stream applied is the one discussed in this chapter above, as a co-evolutionary perspective on corporate greening which:

⁷ See the interpretation of corporate greening as technological change in Chapter 3.

“... locates corporate strategic decision-making in the context of complex social-technological systems.” (Levy-Rothenberg [1999], p. 3)

The third theoretical stream advances or radicalises the concept of integrated strategy as developed by Baron [1995], by emphasising the interaction of corporate political and product strategies, drawing from the neo-Gramscian literature. The latter argues that dominant and stable social-technological regimes rest on three pillars:

1. “the economic and material base of profitable production and sales;
2. the network of organisations operating within the system; and
3. the discursive structure of meaning and symbolism, both cognitive and normative, that guides behavior and lends legitimacy to organisations and practices within the system.” (Levy-Rothenberg [1999], p. 4)

Thus, corporate strategy is integrated insofar as it rests on the three pillars above. This implies that corporate strategies focus not only on protecting specific products or markets, but also on a wider social-technological regime. A regime provides particular systematic advantages to the proper corporate strategies and, in this sense, every corporate strategy, including environmental strategy, is political.

Scientific and (international) political debates with regard to global climate change have had an influence upon specific economic sectors, including automobile manufacturing. In the United States and Europe, institutional environments and corporate strategies as well as dynamic interactions differ in some respects, to a great extent, though they also influence each other. American automobile companies firstly employed a discursive strategy in the global climate change debate that involved a frontal attack on the science of climate change. This was by no means an accident since – as Levy–Rothenberg [1999] points out – a strategic reference to rigorous or objective science has always been a basic element of the “cognitive frame” of the American car industry. Climate change simulations fraught with contradictory, complex relations and inherently sensitive assumptions seemed to be an easy target in the eyes of American corporate managers. Soon, they established their lobbying organisation, the Global Climate Coalition (GCC), which joined forces with other business lobby groups in the debates over climate science. Their main rival or target in those debates has been an international association of climate scientists, the Intergovernmental Panel on Climate Change (IPCC). Levy and Rothenberg [1999] note that although active engagement in the scientific discussions was a strategic choice of the corporate lobby, this approach itself has been institutionalised and integrated into the value as well as meaning structure of the American

car industry (op. cit., p. 5).

In contrast, managers of European automobile manufacturing firms argued that the strategy employed by the Americans could not even be considered as an option, since it would immediately de-legitimise all their interests in the EU. A manager of one European subsidiary of a US-based automobile firm recalled the difficulties in convincing his boss in Detroit not to attempt to debate the question of climate change science with EU officials:

“It was an education process to get them on board. We had to explain that it’s not constructive to challenge the science in Europe, and if we want to influence the debate we cannot move back. Here, the IPCC reports are accepted without question by policymakers. We would be thrown out of the room if we challenged them.” (cited by Levy–Rothenberg [1999], p. 10)

In Europe, strategic lobbying actions may be directed to regulatory bargaining in order to influence the timing and extent of emissions reductions legally required, by setting voluntary environmental improvement objectives. Consequently, European corporations have had no reason to employ legions of privately financed scientists to advance their interests like their American counterparts who have institutionalised this within their organisational field.

One should further note the strategic importance of the difference on the demand side between these two geographical regions. Low fuel prices have acquired a taboo-like position in the US, thought to constitute part of “the American way of life” (i.e., extensive individual mobility). In contrast, European car manufacturers have been accustomed to regulatory forces and incentives, and to civil pressures and consumer demand toward developing and marketing more fuel-efficient automobiles of a smaller size. They have, consequently, gained competitive advantage in those markets.

In the US, a “discursive coalition” was soon established – although not a lasting one – among the fossil fuel industry, climate change sceptic scientists and some key Republican Congresspersons (op. cit., p. 7). At that time, the Republican-dominated U.S. Congress had constrained federal funding for climate research, which contributed to the prevalence of scientific uncertainties. Moreover, the Congress was also successful in limiting to a great extent the room for possible strategic undertakings by the Clinton administration, in relation to the Kyoto process.

The Rio conference in 1992 was recalled as a milestone for the automobile industry by Levy and Rothenberg’s interviewees (op. cit. [1999]). It has established climate change as a strategic issue for the industry as a whole. At that time, new scientific results were published

that weakened the positions of climate change sceptics; many representative companies of other industries (such as the oil and chemical industries) have since announced that they accept the fact of global climate change induced by human economic activities and its relevance to the business sector.

Returning to the issue of marketing low-emission vehicles, one notes a particular difference between the two geographic regions, North America and Europe, which has to do with their past experiences with research and development, as well as marketing efforts. One also notes that developing so-called eco-efficient (or zero emissions) automobiles amounts to investing in, or creating, future markets (as Hart [1997] discusses). US-based car manufacturers have experienced great failures (like that of the “electronic supercar” developed by General Motors). Levy–Rothenberg [1999] argue that product development for those future markets cannot be determined by an “objective” assessment of organisational strengths and weaknesses and current market position, but rather the institutional embeddedness of the firm in question (op. cit., p. 13). The “cognitive map” of managers in the American automobile industry has proven to be much more ethnocentric than that of their European subsidiaries and competitors. This is manifest in the communication problem between Americans and Europeans mentioned above.

At the same time, on the demand side, one might recognise the issue of social embeddedness of technological decisions discussed above by employing co-evolutionary approaches. According to market research done by car manufacturing companies, consumers were afraid of the limited range of electric vehicles compared to the range of gasoline-powered cars. The market failure of VW Umwelt was an often-cited example of the importance of consumer expectations and driving habits. Volkswagen developed and attempted to introduce a car designed specifically for urban transport that was fuel efficient – in the sense that the engine automatically cuts in and out when the driver stops at a red sign and accelerates when it turns to green. However, as a marketing manager explained the failure of this design:

“... customers didn’t like it because their heart stops beating when the engine stops.” (cited in Levy–Rothenberg [1999], p. 15)

This new design characteristic was unfamiliar to consumers; it differed from the ‘dominant design’ to which they were accustomed; the cognitive limits posed by the habituated usage patterns hindered the learning of the new driving style; and, learning by using was not

practicable, because the design was so radically upsetting driving patterns.

Levy–Rothenberg [1999] pointed out a significant difference between the cognitive map of the American and European automobile industry. American car manufacturing companies concentrate on consumers' expectations – treating them as given – while their European counterparts claim that consumer demand might be changed; for example, consumers should be educated to accept and accommodate themselves to environmentally sound vehicles (op. cit., p. 15). The American automobile industry perceives and interprets the problem of emissions reduction as a question of technology development and does not even consider that a sustainable transportation system, as well as the development of cars in the future, might also require changes in mobility patterns, transport infrastructure, and the current social status or picture of the automobile (Levy–Rothenberg [1999]).

After the international environmental agreements and negotiations in Rio (1992) and Kyoto (1997), the institutional context of climate change issues as they relate to industry has been significantly transformed. The fossil fuel industry has experienced a remarkable shift in the position of a number of corporations on the climate issue. One of the major signs of a different industrial approach was a speech by the CEO of British Petroleum at Stanford University, California, 19 May, 1997. In his speech, entitled *Our Common Journey*, John Browne advocated a precautionary approach to climate issues:

“The time to consider the policy dimensions of climate change is not when the link between greenhouse gases and climate change is conclusively proven but when the *possibility* cannot be discounted, and is taken seriously by society... BP accepts that it has a responsibility to act.” (Browne [1997], pp. 19–20 – emphasis in original)

The discursive coalition of climate change sceptics was disrupted. Another organisation, the Pew Center on Global Climate Change, has entered the scene to represent the interests of companies dissenting from the mainstream fossil fuel industry's adversarial position toward the science of climate change (represented by GCC). The emergence of agents in the organisational field accepting and supporting the need for some precautionary action on greenhouse emissions has provided legitimacy and encouragement for automobile companies leaning in this direction (Levy–Rothenberg [1999], p. 19).

Furthermore, the competitive dynamic of innovation has proved to also be influential in disrupting discursive coalitions. Levy and Rothenberg cite the commercial launch of Toyota's hybrid electric–gasoline engine car in the Japanese market in 1998 and Daimler's investment in a Canadian fuel cell company, as factors pushing other automobile companies to follow

their lead. These strategic moves by some of the competitors, “confer[s] legitimacy on the technology and creates pressure on the others to copy it” (Levy–Rothenberg [1999], p. 21). The turbulence in the organisational field due to the strategic challenge of climate issues also motivates corporate managers to take strategic moves in order to reduce uncertainty. Therefore, “discursive coalitions are incomplete, unstable and contingent affairs” (op. cit., p. 19) and there is room for strategic actions, influencing the dominant socio-technological regime and, ultimately, change it.

A number of critical analysis were published with regard to the greening of the chemical industry (see among others Simmons–Wynne [1993]; Tombs [1993]; and Hoffman [1999]). Tombs [1993] investigates environmental strategies prevalent in the British chemical sector, while Simmons and Wynne [1993] analyse the operation and implementation of the world-wide voluntary environmental initiative of the global chemical industry, called Responsible Care and, perhaps surprisingly, both of them reach similar conclusions. The main issue, from the point of view of the global chemical industry, is to regain and maintain public trust and legitimacy. However, chemical firms employ different self-protective techniques embedded in the sectoral cognitive frame that hinder the development of a dialogue between equals; that is, between the companies and stakeholders who perceive themselves as suffering, to some extent, from pollution caused by the industry. Chemical firms typically refuse to accept the harmfulness or toxicity of pollutants emitted, claiming to be in control of environmental performance. The problem instead, as the firms see it, lies in the ignorance of the lay public, including environmentalists, with regard to the scientific “facts” of pollution performance. The chemical sector treats the issue of legitimacy or credibility as a rational, i. e. scientific, discourse, as opposed to an emotionally loaded one. They argue that since the public is incapable of comprehending the science of chemistry, public perception and judgement of the chemical sector as environmentally harmful and risky are unfair and unfounded. Tombs [1993] can therefore separate a typical environmental strategy posture among chemical companies whose essence or logic is “blaming the victim.” For example, managers of chemical firms typically reject responsibility for toxic spills or industrial accidents, by blaming some employees or customers of ignoring detailed plant safety regulations or user directions. The problem, they argue, always lies with the so-called “human factor,” not with the inherently risky operations of a chemical production system. Therefore, chemical firms typically argue for solutions to educate the public technically and scientifically, and to

provide them with more technical information about chemical operations and possible risks (op. cit., pp. 135–137). As Simmons–Wynne [1993] aptly put it:

“... the [chemical sector] is viewing the problem as one of *misunderstanding* due to a lack of familiarity with the knowledge, methods, and processes on which its operations are based, when instead it may reflect a different *understanding*, and grounded mistrust, of the institutional system of organization and control within which the industry’s operations are embedded. This perception of the problem has its roots in the culture of the industry ...” (pp. 213–214 – emphases in original)

In this sense – as Simmons and Wynne [1993] persuasively point out – environmental strategies pursued by chemical firms tend to *de-politicise* issues of corporate greening. By labelling the public in general and environmentalists in particular, as lay people ignorant of scientific facts and relationships, representatives of the chemical industry employ a discursive strategy that aims to exclude many stakeholders from dialogues related to environmental policy-making. Their intention is to restrict the subject matter of environmental policy discourses to “rigorous” science and/or technical issues related to pollution standards or compliance. It might then be argued that environmental strategies of chemical firms are inherently political and attempt to protect not only particular products but a particular institutional setting, as well. The political and the cognitive/cultural dimensions of corporate, or sectoral, environmental strategies are intertwined. The dominant cognitive frame of the chemical industry seems to be blind to the different perceptions and forms of knowledge, and thus cannot see the institutional dimension of trust and legitimacy. Moreover, the strategies and arguments typically employed re-construct and maintain the institutional structure in which public mistrust is grounded.

It might be worth emphasising here that the approach to corporate greening as institutional change claims that organisational capabilities for greening are partly dependent upon the broader socio-economic context. In this sense, corporate greening is situated in a wider social learning process. Note furthermore that organisational greening which does not reflect upon the constraint set by the dominant socio-technological regime cannot be considered radical, and may lose its transformative potential. Corporate greening is, in this sense, not a question of individual ecological consciousness and moral integrity, but one of effective social action.

In sum, the substantial arguments of the approach to corporate greening as institutional change are the following:

- “[T]he process of strategy making is inherently institutionally embedded” (Levy–Rothenberg [1999], p. 22);
- Organisational learning is a socially constructed understanding based on social practice;
- Technological development is path-dependent, due to the cognitive and institutional embeddedness of technological options,;
- “[T]here is no clear distinction between institutional and economic environments, as markets and conceptions of economic interests are themselves constructed in social and political contexts” (Levy–Rothenberg [1999], p. 22);
- Institutional environment may be conceptualised as a socio-technological regime;
- The strategic actions of the different agents in a given organisational field and the institutional structure mutually constitute each other (in the sense of Giddens’ structuration theory);
- There is no sense in separating product strategies from non-market (or political) strategies;
- “[T]he relationship among companies is simultaneously political and economic” (but there are power differences – Levy–Rothenberg [1999], p. 22);
- Radical innovations change the technological, economic, social and political circumstances; that is, they change the existing socio-technological regime;
- “[C]ompanies are members of multiple, overlapping fields, and therefore subject to different pressures,” thus, there is room for organisational strategic actions (Levy–Rothenberg [1999], p. 22);
- “[E]ach company interprets institutional discourses through the lens of its own organisational culture, structure, and history” (Levy–Rothenberg [1999], p. 22–23).

CHAPTER 5

VALUES-DRIVEN CORPORATE GREENING: THE CASE OF ALTERNATIVE CAPITALISTS ⁸

This chapter and the one that follows it present two examples of what might be considered organisational greening in a radical sense. My intention with introducing these examples is to make my theoretical position clearer; that is, the interpretation of corporate greening as institutional change offers the richest and most comprehensive description and understanding of this phenomenon. This theoretical approach enables one to take into thorough consideration the institutional contexts – economic, social and political embeddedness – of processes of greening and thereby critically understand and reflect upon each single case of corporate greening. Processes of corporate greening take place in the “force-field” of different institutional (or structural) logics (such as, e.g., market, bureaucratic or civil) that significantly influence those processes (of course, each case of greening may influence the field-force by enacting the institutional logics available to differing extents). The first case of the so-called “alternative capitalists” is intended to shed more light in particular upon the limits of corporate greening that are dominated by free market logic.

5.1. STAKEHOLDER–CAPITALISM

What makes an alternative capitalist? The first substantial, common characteristic is an identity of entrepreneurship. Alternative capitalists take pains to differentiate themselves from standard corporations, particularly their hierarchical, inflexible structures and planning attitudes. An entrepreneurial attitude is considered to be a fundamental element of the alternative capitalists’ success, even after growing into a global firm. The entrepreneurial attitude is characterised not so much by hard, self-exploiting work, or self-realisation as the main motivating force, but by intuition, passion and a continuous search for new and better solutions.

⁸ This chapter is largely based on the introductory chapter of the book, *Alternative Capitalists*, written and

The second important feature of alternative capitalism is the acceptance, or sometimes even praise, of capitalism, market economy, or free market entrepreneurship, which is, nonetheless, complemented by recognition of and a strong emphasis on community. Alternative capitalists claim no more and no less than that the *raison d'être* of any business activity is the betterment of the communities where businesses operate and to which they belong.

“... Wherever we traded we were an integral part of that community, with consequent responsibilities and duties that could not be ducked. It had always made me angry that most businesses, big and small, operated in almost total social isolation from their immediate surroundings. I think it is completely immoral for a shop to trade in the middle of a community, to take money and make profits from that community and then ignore the existence of that community, its needs and problems.” (Roddick–Miller [1992], p. 150).

“... at the centre of our company... is the spirit, the heart, the feeling that no matter how good success and profit may be, no matter how good rational analysis and strategies toward those goals may be, the common good is better.” (Chappell [1994], pp. 203–204)

As O’Toole [1991] points out, “values-based companies” support the idea of a free market. In no sense do they attempt to develop a business activity based on a totally new political philosophy than that of a free market economy. Instead, they call for businesses which make profit while, at the same time, increase the welfare of the public at large. How they think it is possible – or different – from standard business-as-usual? They reject the idea that purely self-interested entrepreneurial activities will by themselves, due to the “invisible hand,” result in enhanced public welfare. Instead, every business decision and action should reflect a commitment and accountability to the public good. Alternative capitalists claim to take responsibility towards the prosperity of the communities in which they live and pursue their businesses in human or broader ecological communities, be they local or global.

“... [P]rivate aim must be held accountable to the values common to that free society. Our common good calls more and more for respecting the dignity of all life, human, animals, and the environment.” (Chappell [1994], p. 204)

The essence as well as legitimacy of business lies in its active pursuit of the public good. Accordingly, alternative capitalists often refer to the Quaker business norm: “Doing Well by Doing Good.”

Living in our present knowledge- and technology-intensive world, one tends to forget the basic physical (thermodynamic) fact that all economic activities are linked to a natural resource base, providing natural resource flows as inputs or assimilating waste flows, as well as providing life-support services. The dependence and embeddedness of the human economy upon nature's services should be institutionally recognised, implying that business activities which myopically undermine and destroy the integrity of ecosystems are unquestionably illegitimate.

A minimal demand of all stakeholders – local communities, the state, employees, owners, consumers and customers, suppliers, and other business partners – is that the activities of the focal organisation do them no harm. However, it is not sufficient to gain legitimacy for free enterprise, per se. According to the paradigm of the “corporate counter-culture” (as O’Toole [1991] depicts alternative capitalists), the essence of alternative capitalism is to do business in a way that contributes to the well-being of all stakeholders. The health of a business enterprise is linked to the health of all the communities involved – as it is summarised by the slogan, “linked prosperity,” of Ben & Jerry’s (Cohen–Greenfield [1998]). Consequently, it is not enough to make a profit – profit should be shared with stakeholders in the spirit of “enlightened capitalism.”

5.2. THE ENVIRONMENTALISM OF ALTERNATIVE CAPITALISTS

Companies belonging to the mainstream are also expected to improve their environmental performance and fulfill “green” requirements to some extent. What is the difference between them and the alternative capitalists, then? This question has been analysed profoundly by Mirvis [1994]. The first point Mirvis makes is in regard to the relationship of the environmental movement and alternative companies. In many cases, these “environmentally progressive” firms – a name coined by Mirvis – do not separate business from environmental activism. In contrast, business-as-usual is dominated by the very opposite approach, where the Greens’ style (in contrast to the “formal” and “conservative” business style) and their alleged incompetence (in contrast to scientific “objectivity”) are often subject to cynicism and derision. The Body Shop, Ben & Jerry’s, Tom’s of Maine, and other companies with similar commitments are recognised as right because they have joined their forces with civil organisations (i.e., Greenpeace and Friends of the Earth), in order to increase

the environmental awareness of the society and community through their campaigns, and to draw attention to specific local or global environmental problems.

The other main difference between mainstream and alternative capitalists can be captured by the significant disparity between image and identity. Almost all of the environmental initiatives and achievements of the mainstream are plainly aimed at improving image (eco-marketing). Most of the companies have never evaluated their core activities and missions in terms of ecology. In the majority of cases, their *organisational identity* is left unchanged by environmental management. On the other hand, alternative capitalists put heart and soul into questioning their “organisational existence” according to ecological problems. As Mirvis writes, for most of them the use and/or supply of “natural” materials and products are their exclusive practice or aim (see the cosmetics of The Body Shop and Tom’s of Maine, Ben & Jerry’s commitment to milk of cows not treated with growth hormones, or the practice of Esprit and Patagonia to produce garments only from organically grown cotton). Furthermore, Patagonia, a Californian specialty outdoor clothing firm, encourages its customers to buy only the garments needed – that is, it agitates against consumerism and the unjustified increase of sales:

“Our goal is to offer only viable, excellent products that are as multifunctional as possible so a customer can consume less but consume better.” (Chouinard [1993])

Most of these firms clearly acknowledge that there is an intrinsic value to each natural being (individual plant or animal, as well as ecosystems), that is independent of the utility any living being or system may provide to human beings. There is a huge gap between the prevailing anthropocentric ethics and this argument, which represents the philosophical position of so-called *deep ecology*. Alternative capitalists can therefore be said to have a different vision for an economy – a vision respecting nature and the constraints set by nature. It is not inaptly called *restorative economy* by Hawken, the co-founder and owner of Smith & Hawken Company (see Hawken [1993]). Looking at the state of the art – the general business practice and, moreover, the attitude it conveys – these firms differ very much from the mainstream and they do intend to make a difference:

“Perhaps the real good that Patagonia could do was to use the company as a *tool for social change*, as a *model* to show other companies that a company can do well by taking the long view and doing the right thing.” (Chouinard [1993] – emphases added)

5.3. CRITICAL ISSUES RELATED TO ALTERNATIVE CAPITALISTS

5.3.1. *New Managerial Ethos versus Mind-control*

Who defines the social mission of alternative capitalists? This question is raised by Mirvis [1994] very seriously. He – as a former organisational development consultant of Ben & Jerry’s – illustrates the problem with practical examples. The question also very much fits here, because alternative capitalists willingly admit that the company as an institution is not a model for democracy.

Tom Chappell honestly reports that employees called Tom’s of Maine’s mission statement “Tom’s mission” for a long time. Employees hardly perceived any relationship between their values and the mission statement written by Tom Chappell and other top managers of the firm. It took at least two years, a lot of open discussions and a gradual institutionalisation of the values expressed by the mission statement, to get most of the employees behind the spirit of the mission (Chappell [1994]).

Very similar difficulties are mentioned by Fred “Chico” Lager, the former CEO of Ben & Jerry’s (Lager [1994]). Ben Cohen made the same mistake of composing the mission statement on his own, believing that all the employees would eagerly subscribe to it. Embracing the values of the mission statement for most of the employees also took a lot of time and effort at Ben & Jerry’s. However, the political direction of the company’s social mission has never been open to debate. As Lager states and as is also shown by the story of *Peace Pops* ice cream (Mirvis [1994]), the political dimension has always reflected Ben Cohen’s prevailing personal commitment.⁹

A similar problem was encountered by Anita Roddick (Roddick–Miller [1992]). She and her husband were talking with employees in a shop about how to carry out the social mission of The Body Shop. Anita Roddick practically berated employees for not introducing a communal project to help a local nursing home for elderly people. In the end, Gordon Roddick drew his wife’s attention to the possible threat and non-necessity of “emotional blackmail” of this kind.

⁹ The Peace Pops ice cream bars were created and marketed as a protest against the Gulf war, i.e., the U. S. attack on Iraq. The price of the product included a contribution to a peace foundation. This straightforward

Alternative capitalists – as compared to the mainstream – have done and still do a lot to carry the notion of “management by shared values” into effect. However, they also face dilemmas raised by the inseparability of the entrepreneur’s personal values and those of the company. It is difficult to manoeuvre between finding *partners* with the same values and avoiding the threat of management domination and mind control in organisational hierarchy; that is, forcing the values from top-down onto employees.

5.3.2. Dilemmas at the System Level

Dilemmas to be examined in this section have not much to do with the argument that says alternative capitalists are only pursuing a “good market strategy” and making good bargains on social values. This opinion – drawing comparisons within the conceptual frame of the mainstream – reflects a misunderstanding of alternative capitalists’ endeavours. However, if the following question is also raised, a very new and important point will be touched upon. Is the activity of alternative capitalists good under any circumstances within the operative dynamics of the free market system? This is called here a system-level dilemma. In short, it means that when these companies step out from their own cultural community and – similarly to mainstream companies – engage in global market activities, doing good (that has worked well within their native culture) may take a different turn.

The most cheerless precedent for this is the so-called “rainforest fiasco” of The Body Shop and, particularly, Ben & Jerry’s (Entine [1996]). Both companies contacted *Cultural Survival*, an international organisation consisting mainly of anthropologists and aiming at saving the lives and cultures of indigenous tribes in the Brazilian rainforests from huge companies and entrepreneurs who perceive rainforests only as resources to be exploited. The plan – in harmony with the notion of sustainable development – emerged very quickly: indigenous people would sell the Brazil nuts of the rainforests – harvested by their own traditional methods – to the two afore-mentioned firms for further processing and marketing. Evidence of how this “transaction” could be good for business and at the same time good for the environment was believed to have been provided to politicians, companies and the public. The Body Shop’s product, made from Brazil nut oil, and even more so, *Rainforest Crunch* ice cream of Ben & Jerry’s, were great business successes. The ice cream was advertised as a product that helps sustain endangered, indigenous cultures of the Amazonian rainforest.

espousal divided the managers and employees of the ice cream company.

Hence, American consumers driven by environmental awareness provided substantial demand for the ice cream. Demand exceeded ecologically sustainable supply, i.e. the production capacity of the Kayapo tribe of Brazilian Amazonia. At this point, market forces made Ben & Jerry's look for other suppliers. Under the given circumstances, Ben & Jerry's did not withdraw from contracting with Latin-American *agribusiness*, notorious for clearing rainforests to gain agricultural territory for export cattle ranching and mostly enslaving local people as their labour force. Consequently, American consumers could buy their favourite ice cream for a long while without suspecting anything.

Good intentions seem not to be enough:

“Character demonstrated by actions, not by the phantom of good intentions, is the only reliable measure of corporate ethics.” (Entine [n. d.], p. 5)

The Body Shop and Ben & Jerry's have not admitted the tragic failure of their initiative – yet. They still voice the slogan of Anita Roddick: “Make the rainforest economically viable!” Going beyond most of the critics, it is argued that the rainforest fiasco constitutes a necessary tragedy of the institution of a global market economy, i.e., failure of the institutional logic of the free market to solve ecological problems. The concept of a free market, focusing on material well-being, is characteristic to European and North-American culture. Forcing the concept and particularly the practice of free commerce onto other cultures may divert any good intentions. Within these cultures, different logics of economic activity have been institutionalised which are – especially in the case of indigenous minority cultures – much less expansive, if at all, and inevitably succumb to the expanding economic culture that globally dictates the rules of the game. For this reason, in many cases The Body Shop's policy, characterised by the principle of “Trade Not Aid” does not administer the ideal in practice. It does not help cooperation, working together, or “equal exchange,” but rather unwittingly contributes to devastation and the disappearance of biological as well as cultural diversity.

By advocating the beneficent effects of free trade without raising any political question, alternative capitalists make at least one serious mistake. Disseminating this opinion about trade may not only be wrong but even fatal. Sustaining the rights and cultures of indigenous people is first and foremost a political question. These problems cannot be solved exclusively by (market) economic methods employed by a beneficent humanity; furthermore, advertising such methods may even accelerate the tragic processes of bio- and socio-diversity loss.

Building up a global market economy that satisfies the interests of all the cultures and communities of the world seems to be an illusion that might not be cherished. The progression of a global market is advantageous for our culture first and foremost. Furthermore, the institutional logic of a market economy – as Paul Hawken argues (Hawken [1993]) – is in many respects irreconcilable with ecology and preservation of nature's health. Alternative capitalists have to face this dilemma, i.e., the socio-political side of ecological problems at the system level.

CHAPTER 6

INSTITUTIONALISING A SUSTAINABLE AGRICULTURAL SYSTEM: THE CASE OF COMMUNITY SUPPORTED AGRICULTURE

This chapter introduces an example of organisational greening as institutional change. The organisational example under investigation is related to agriculture and, to some extent, departs from the previous theoretical as well as the subsequent empirical chapters, which all relate to industry. However, the difference might not be so large, in the sense that the current food system, and hence agriculture, operates using the very same industrial and corporate logic as other parts of modern, developed market economies.

A Community Supported Agriculture (CSA) group has been established and successfully run for five years in Gödöllő, Hungary. The present author, being a member of the group, does not want to be accused of any bias and therefore, the following discussion will be limited to a theoretical exposition. It will be argued that a CSA is a social experiment aiming to institutionalise an economically viable, socially acceptable, and ecologically sustainable farming and food production system. In this sense, a CSA represents *an* alternative to the currently institutionalised food system, which is dominated by the logic of the free market and the interests of large corporations.

6.1. WHAT IS COMMUNITY SUPPORTED AGRICULTURE?

Community Supported Agriculture has “taken economics out of the centre” of farming – as one CSA farmer had put it straightforwardly (Brookfield Farm, in Groh–McFadden, [1997], p. 135). CSA could be claimed to be good economics, indeed. Of course, one who thinks of economy in terms of what is taught in standard economics textbooks will be puzzled by this assertion. However, there is a lot more to economy than these standard university textbooks would allow.

CSA is good economics not in the sense of – as Karl Polanyi [1977] put it – formal economic,s but of substantive economics. Formal economics is only involved with means-

ends relationships, with solving the problem of optimally allocating given scarce means to achieve some pre-determined and fixed ends (preferences), and this allocation problem is obviously well-fitted to market logic. Substantive economics, however, concerns different modes of institutionalising the economy, i.e., the processes and mechanisms of providing the material bases for human living. Furthermore, the CSA so-called “share scheme” represents

“... the potential for decommodified relations in the CSA and stands in marked contrast to the usual way of purchasing food, in spot exchanges, whether at farmers’ markets or supermarkets.” (Hinrichs, 2000, p. 300)

CSA therefore moves away from treating land as a “fictitious commodity” (Polanyi’s term).

Clearly, CSAs represent a different institutionalisation of agro-economy than that driven by market logic. As one very well knows from economic history and anthropology, non-market logic of organising agricultural – or any kind of economic – activity does not constitute an inferior alternative, not necessarily even in the sense of efficiency. Of course, CSAs have nothing to do with allocative efficiency in the Paretean sense (i.e., Pareto-efficiency), since that belongs to the realm of a market logic driven society. Nevertheless, it does have a lot to do with long-term productive efficiency, quality and ecological sustainability, all of which are or should be, important performance standards for any human economy.

But what exactly is this so-called non-market logic? What is a CSA? Let’s take a look at some definitions provided by the literature on CSAs of which I am aware:

1. “[CSA is] ... a group of city people [who] agree to purchase, in advance, shares of a farmer's harvest of food grown in an environmentally-friendly manner.” (Dyck, [1994], p. 56)
2. “CSA is a partnership of mutual commitment between a farm and a community of supporters which provides a direct link between the production and consumption of food. Supporters cover a farm's yearly operating budget by purchasing a share of the season's harvest. CSA members make a commitment to support the farm throughout the season, and assume the costs, risks and bounty of growing food along with the farmer or grower... In return, the farm provides, to the best of its ability, a healthy supply of seasonal fresh produce throughout the growing season.” (UMass, [n. d.] p. 1)
3. “... a CSA [is] where a group of families would pledge together to cover the costs of the garden, including a decent living for professional gardeners... [S]hareholders... would get a regular supply of fresh, healthful produce during the growing season, and the growers would get an assured living. The farmers would... be freed from the need to take upon themselves the financial risks inherent to farming...” (The Kimberton CSA, in Groh–McFadden, [1997], p. 145)

These quoted definitions obviously include characteristics which point to the different socio-economic logic of CSA, as compared to a market agro-economy. In the following, I would like to expound upon these issues. It will be argued that CSAs represent an experiment in developing a socially, economically and ecologically sustainable agriculture, as an alternative to the global, market-dominated food system. Though these three dimensions of the concept of sustainability cannot be separated, in the sense that, for example, no economic or social sustainability can be practised without ecological sustainability, for the sake of clarifying the concept and practice of CSAs I will discuss them sequentially.

6.2. ECOLOGICAL SUSTAINABILITY IN CSAS

The first quoted definition of CSA refers to the requirement of “environmentally-friendly” farming practices. Farming should be ecologically conscious, nurturing not only the fertility and regenerative capacity of soil but, more comprehensively, the soul of the land. As a CSA farmer puts it:

“We have a responsibility towards the way we treat the earth, and only treating the earth in as comprehensively good a way as we know how, can we expect it to properly nourish us.” (Great Barrington CSA Garden, in Groh–McFadden [1997], p. 124)

Moreover, farming is considered to be not only a craft infused with an ethic towards nature, but an art full of spirituality as well.

There is indeed a well-developed agricultural concept – as Trauger Groh stated – that can guide farming at CSAs (Groh-McFadden, [1997], p. 14). The concept is known as biodynamic farming and was theoretically developed by Rudolf Steiner in the 1920s. At the heart of this approach is the idea that the farm is a self-regenerating organism. As an organism, that is, a living entity, it should be treated and cultivated with respect for the integrity of its inner life as well as the integrity of each of its parts or organs. There is a clear association between Steiner’s concept of land and farming and the later thoughts of James Lovelock, popularly known as the Gaia Hypothesis (Lovelock, [1979]). However, as one of the trustees of the Biodynamic Farmland Conservation Trust in the U.S. pointed out

“... [t]he biodynamic view of the world takes the notion of Gaia... one step further... the modern view of Gaia... is expanded in biodynamics to place the earth in its cosmic

setting: a living universe... In the biodynamic view of the world, the earth's biota is far more than just a complex set of chemical reactions... There's more to it. There's a spiritual basis to everything that we see on the earth." (Brookfield Farm, in Groh–McFadden, [1997], p. 137)

This concept of land has far-reaching and well-articulated consequences for farming practice which are nicely summarised by Groh and McFadden; however, we have no place here to state them in detail, except to point to some of the most important ones. One of these is that to respect and remain in the realm of living systems: all farming measures and applications will exclude all mineral and synthetic substances for use on plants, the soil, or animals. "Life processes can only be generated out of substances already filled with life" (Groh–McFadden, [1997], p. 22); to try to do otherwise is nothing less than exploiting life itself, for short-term human gain and to the detriment of all those living for the longer term.

Another rule is to "buy for the farm as little as possible from the outside world" (op. cit., p. 32); for example, herds should be fed from feeds that are grown on the farm itself and manure and compost from herds and organic wastes should be employed as the farm's soil amendments. Furthermore, degraded or destroyed natural environments should be restored (p. 28) with an aim towards great diversity of plants, combined with crop rotation (p. 24).

Consciously following the rhythm of life and creating farms for a healthy natural environment requires changes in the socio-economic organisation of farming as well.

6.3. SOCIAL SUSTAINABILITY IN CSAS

To take as a contrasting starting point, standard economics and its underlying social vision, one is tempted to say that while standard economics and a market society rest on an atomistic picture of human beings (in its most extreme form, stating "there is no such thing as society," only aggregates of individuals), CSA has a communitarian social ideal at its roots, with a concept of humans as social beings, "persons-in-community" (Etzioni, [1988]).

The words in the second quoted definition of CSA, i.e., "CSA is a partnership of mutual commitment," refer to a new kind of relationship between farmers and consumers; a relationship which is different from the impersonal market relations of shoppers relying on supermarkets. It is a relationship which attempts to re-establish and develop a personal connection between the consumers and the farmers and, through the farmers, between consumers and the land. "Membership in a community farm provides a direct link to food

production” for consumers who can “see their vegetables planted, watch them grow and ripen, sometimes even get dirt under their fingernails helping in the gardens” (Groh–McFadden, [1997], p. 73). Members may develop an emotional connectedness to the land and feel “the farmers face on their food.”

Community building is an essential element as well as an objective of CSAs. Moreover, it can be argued that

“... what distinguishes CSA from other types of direct agricultural markets is its special emphasis on creating and building community around the interwoven issues of food, land and nature.” (Hinrichs, [2000], p. 299)

To connect consumers to the farm in tangible ways, CSA farms are seeking to organise community events, such as “pick your own food” (“U-pick”) arrangements, harvesting festivals and exchanges of recipes, and some farms attempt to involve members in composting, by placing large compost bins at distribution sites for household food scraps, etc. In this sense, people are doing and learning to do something positive together, as a group working towards a healthy environment, a healthy future.

To get people to identify and feel a sense of community is reflected in the organisational structure of CSAs. The main organisational objective is “to foster trust and to build socially-just community.” (Dyck, [1994], p. 57) Responsibilities for farm management many times are divided between a few farmers, but always carried out in a collaborative fashion. Though the farmers’ autonomy and responsibility concerning farming methods and applications are respected and usually every CSA has its own 5-12 member, operative core group, decision-making processes are participatory, including both farmers and “sharers” (consumers); open for dialogue (through members’ meetings and newsletters); and, therefore, characterised by transparency and consensus making with a lot of strong, independent voices. (Groh–McFadden, [1997], p. 100)

CSAs are small scale social experiments, as they should be if they want to preserve their community-building character and promote a diversity that depends on local conditions. Most CSA farms have 35–200 members, though there are some larger ones as well. The size of farmland, on average 35 acres, and sustainable agricultural methods limit the size of CSAs.

Co-operative spirit is an important feature and necessity among CSA farms as well, since organic farming methods are highly knowledge intensive and knowledge is widely considered to be a community possession. Thus, there is a very important educational function of having

apprenticeship arrangements at CSA farms. Furthermore, many CSAs are taking very active and innovative steps for the inclusion of those people in society, in general, and in the neighbourhood, in particular, who are hardest to reach, such as the poor (e.g., food bank CSAs) and troubled people (e.g., the homeless).

6.4. ECONOMIC SUSTAINABILITY IN CSAS

It has already been noted that the economics of CSAs cannot be interpreted in terms of standard (formal) economics. Here we will further explicate those points which make the economics of CSAs different from a pure market logic. These aspects concern microeconomic issues related to the internal economy of CSAs and macroeconomic issues, such as land economics and regional economics.

The first point again refers back to the quoted definitions of CSAs. Both definitions (1) and (2) mention the problem of risks in farming. In terms of risks, CSA offers a non-market solution, that is, a voluntary risk-sharing between the farmers and the sharers, who as consumers pay in advance for the farm's harvest.

“[The CSA] share symbolises members' *shared* acceptance of the risks farmers assume in farming and their willingness to subordinate their own economic interests, if need be, to support the CSA farmer.” (Hinrichs, [2000], p. 300 – emphasis in the original)

It is a rational arrangement from the point of view of farmland preservation and of an economically stable farm operation, providing the highest quality and greatest variety of produce. It also emphasises the community character of CSAs, as consumers are “not just buying vegetables but rather pledging to support the farm” as a whole (Groh–McFadden, [1997], p. 112). In a sense, the farmer is freed from pressure to make enough profit to compensate for possible future losses (freed from the pressure to be narrowly self-interested). This contributes to a long-term perspective where there is no need and place for discounting and striving for short-term gain, since the farmer has enough time and economic security to concentrate on serving the ends: producing healthy products for a community while preserving nature.

The second distinct point related to the economics of CSAs concerns the process and logic of setting a price on the farm's produce. The logic is, in contrast with the subjective

preference based approach of standard economics, a need/cost principle or, as Trauger Groh expresses it, “all participants in the economic process try to listen to the needs of all other partners in the process.” (Groh–McFadden, [1997], p. 34) The decision-making process with regard to setting prices usually follows more or less like this: the farmers with the core group draw up a budget reflecting the production costs for the year that includes all salaries, land payments, machinery maintenance, distribution costs, investments for seeds or tools, etc. The budget is then divided by the number of members and this determines the cost of each share of the harvest. One share usually represents the weekly vegetable needs for a family of four (UMass, [n. d.], p. 2). Moreover, a crucial part of the process may be the possibility for community members to adjust their share purchase according to individual financial circumstances; that is, for example, applying a voluntary sliding scale whereby higher income households may pay more per share than lower income households. This way CSAs do not need to be profit-maximising and, by focusing on the needs of all partners, they replace market prices with fair prices fostering and strengthening reciprocity, trust and solidarity among members.

As to the more macroeconomic issues related to the operations of CSAs, the clear objective is the empowerment of local people by re-gaining their control over food, over what they eat. Directly connecting local farmers to local consumers ensures that food dollars (or forints) will be kept in the local community and will contribute to the maintenance and establishment of regional food production. This development of a regional food supply strengthens the local economy against the well-known tendency of industrial agriculture to concentrate agricultural resources into fewer and fewer large corporations. This industrialised, corporate agro-economic system puts farmers in the position of being hourly workers and is socially not embedded in the local economy, thus lacking any kind of community spirit. Even if it were an “industrial organic agriculture,” it would be completely different from CSAs, since food would still be considered a commodity, albeit an organic one, and consumers as constituting a market to be exploited for profit. However, as McFadden strongly emphasises:

“... [M]arketing is not community, and merchandising is not CSA...” (Groh–McFadden, [1997], p. 70)

The economic logic of CSA goes against that of standard economics, with regard to its treatment of land as well as labour. In standard economics, land and labour are conceptualised and handled as commodities, like any tradable good. However, as Polanyi has insightfully

pointed out, this is nothing but a fiction: the “commodity fiction” of standard economics (Polanyi, [1947]). Land and labour is not produced, sold and used like a commodity. Land stands for nature, for all the living beings and systems, ultimately for the entire earth. Labour stands for human beings. If they are ‘commoditised’ they are prone to be exploited to the extreme and eventually degraded. CSA is committed to take land and labour out of the realm of the market. That’s why it is important for CSAs to preserve and nurture the fertility and regenerative capacity of land and the autonomy and security of the farmer (the art and craft of farming). Nevertheless, how to protect farmland from the development pressure of market forces is still a partially resolved issue. It remains a question as to whether private property can assure it, or whether other solutions, such as the growing land trust movement in the U.S., are needed.

6.5. CONCLUDING NOTES ON CSAS

It was argued that CSA represents a bottom-up social experiment for a socially just, economically viable and ecologically sound agriculture and, in this sense, can be considered an alternative to the predominant agricultural system. As CSAs are institutionalising a non-market and non-hierarchical logic of operation, they might be considered the seeds for a civil economy in agriculture. In this sense, CSAs may be points of initiation for positive and far-reaching social change in market society; therefore, they could turn out to be very useful social experiments, due to their diversity and local adaptability. CSA might be one of the examples, or ways of institutionalising, “civic agriculture,” as Lyson, [1999] defines it:

- Production is oriented toward local markets and customers rather than international mass markets;
- Food production is viewed as an integral part of rural communities, not merely as the production of commodities;
- Producers are more concerned with quality than quantity;
- Farm level production is less capital intensive;
- Producers rely on local knowledge, not best management practices; and,
- Producers forge direct links with consumers. (pp. 8–9)

An attempt was also made above to demonstrate that the prime value for CSA is caring for people and nature, respecting the value of their integrity. Therefore, it may be claimed that value commitment and ideological reasons are the only sound basis for a committed CSA

membership.

Herein, however, might lie some of the possible weaknesses or problems of a CSA system. It is indeed very difficult to maintain CSAs and consider them as a viable alternative food system, if Hinrichs [2000] is right in pointing out that:

“... from the average member’s perspective, the demands of membership may begin and end with the bag of vegetables.” (p. 300)

Furthermore, the communitarian ideal of CSA is hard to realise if

“... the burden for maintaining the valued community dimension which distinguishes CSA fell largely to already overworked CSA farmers. This raises the question of social ties that are unbalanced, absent of the reciprocity implicit in the community ideal.” (Hinrichs [2000], p. 300)

CSAs have a comparatively short history; therefore, it should not come as a surprise that they suffer from many smaller and larger tensions and problems, such as the problems with land ownership, farmers’ pensions, membership turnover, involving low income groups, etc. Clearly, CSA might only be considered as a social experiment; that is, an exercise in social learning about sustainability. In this sense, consumers in a CSA group, for example, may start to learn about ecologically sound agriculture, the health of seasonal produce, etc. In other words, over the longer term, the operation of CSA might have enduring effects on people’s understanding of sustainable food production and sustainable development in general (Stagl [2001]).

Part II

Quantitative Empirical Research

CHAPTER 7

ENVIRONMENTAL PERFORMANCE OF HUNGARIAN INDUSTRIAL FIRMS: A QUANTITATIVE ANALYSIS

7.1. A THEORETICAL INTRODUCTION

The scientific literature on corporate environmental management or ‘greening business’ has no long research tradition despite the fact that public recognition of pollution problems and launching of green movements dates back to the 60s. One can immediately recognise this state-of-affairs by confronting the weaknesses apparent in the literature in terms of both methodology and theory building (Gladwin [1993]). Nevertheless, during the 1990s corporate environmental management has become a popular research area attracting students of economics as well as organisation studies. Also, in the mid-sixties a very characteristic debate emerged that is usually referred to as the “environment–competitiveness” dispute. The defining issue is whether environmental management, both at the level of firm as well as government regulation, can, at the same time, enhance competitiveness as the so-called ‘win–win’ argument states, or, at the contrary, hinders it, that is, constituting a necessarily ‘win–lose’ situation.

The ‘win-win’ argument was provocatively expressed by one of the contemporary gurus of management science, namely Porter [1991]. It attracted a counter reaction by some prominent students of environmental economics at the prestigious Washington-based institute, *Resources for the Future* (Palmer–Oates–Portney [1993]) as well as by environmental consultants at the *McKinsey* company (Walley–Whitehead [1994]). The heated

debate continued on the pages of the *Harvard Business Review* (HBR [1994]; Porter–van der Linde [1995b]) and that of the *Journal of Economic Perspectives* (Porter–van der Linde [1995a]; Palmer–Oates–Portney [1995]).¹⁰

An exhaustive assessment of the ‘environment-competitiveness’ debate reaches beyond the scope of the present paper since it ranges from the very definition of pollution to the question of scientifically appropriate empirical justification. The present focus will be on the different possibilities of empirical testing, at the firm level, of the ‘win–win’ argument, or, as elsewhere is referred to, the Porter hypothesis. To put to direct empirical testing of the Porter hypothesis is not a straightforwardly easy job due to its generality and multi-level reach (from organisational and sectoral to macroeconomic level).¹¹ However, there are researchers who, in one way or another, attempted to come up with direct empirical tests.

Albrecht [n. d.] investigates the relationship between international CFC regulation and the export performance of industry branches whose products contain CFC. His conclusion was that bilaterally those countries experienced an improved international competitiveness at the product level that enacted stricter CFC regulation compared to those with less stringent regulatory requirements. Barrett [1992] interpretes the strategy of the world leading CFC producer, Du Pont by applying a game theoretic framework and explained how this U. S. based multinational could gain competitive advantage over its European rivals by strategic pro-activity with regard to environmental investments and regulation. Nehrt [1996] attempts to operationalise another point within the ‘win–win’ argument, the so-called first-mover advantage. His empirical findings demonstrated a positive relationship between first-mover environmental technology investments and profitability among pulp and paper firms, though he also found that increasing amounts invested in environmental technology, unless there were enough time to reap the benefits of learning-by-doing, negatively affected profit growth. (see also Nehrt [1998] for a more thorough theoretical treatment). Arora–Cason [1996] attempted to examine the motives of American companies voluntary participation in EPA by an econometric model. They concluded that the most probable participating firms were the largest polluters and those with a more direct relationship with consumers.

Testing the Porter hypothesis in a more indirect way has more possibilities. Competitiveness is the *raison d’être* of company strategy and if environmental management

¹⁰ For more arguments, see among others Rothwell [1992], Ashford [1993], Sanchez [1997].

¹¹ At the macro level, empirical studies revealed either no significant negative effects on aggregate economic variables or some minor positive impacts due to stricter environmental regulation (see Jaffe–Pettersson–Portney–Stavins [1995] recent summary).

may improve competitiveness it could be detected by exploring the differences manifest in firms' strategies. Thus, if companies' strategic actions with regard to the environment can be observed, their environmental performance can be operationalised firms' strategic posture towards the environment could be characterised revealing the extent to which they treat environmental management as an issue of competitiveness. Some researchers, following this line of reasoning, attempted to establish an empirical link between some measure of profitability and that of environmental performance. Table 3 below contains the main characteristics of some of these types of research. Most of these studies reached the conclusion that there is a positive relationship between economic (market or financial) and environmental performance at the firm level. Obviously, these research studies cannot provide an explanation whether environmental consciousness itself pays or, rather, only companies successful in a narrow economic sense can afford (or have an organisational slack to turn to) the "luxurious demand" of improving environmental performance as well.

Another type of research – including the one reported below – aims to develop an empirically based typology of company environmental strategies and to separate those firms that consider environmental management as a competitive issue. Table 4 below reports some of the relevant international research efforts. Generally, these research studies reveal considerable differences among firms in terms of environmental consciousness and strategic focus in environmental management. Moreover, many research concluded that companies with advanced production practice and/or with a general strategic pro-activity are typically those with a leading environmental management practice.

Table 4 below reports empirical research with regard to the Hungarian context during the 1990s. The main conclusions include that there are indeed differences among Hungary-based industrial firms concerning environmental performance; though the perceived major environmental pressure on firms are exerted by regulatory agencies, the more export-oriented companies perceive the relevant EU requirements as a similarly important factor forcing environmental performance improvement; and there is a relatively small group of companies that reports growing environmental pressure by all (market and non-market) stakeholders. Table 3 also records a weakness of Hungarian environmental management studies in theory

building and testing.¹²

¹² Brackets are used to indicate that the study in question refers to theoretical models or branches of literature but does not constitute an empirical testing of any models.

Table 3 Main Characteristics of Empirical Research on Environmental Management

	JAGGI–FREEDMAN [1992]	CORMIER–MAGNAN–MORARD [1993]	KLASSEN–MCLAUGHLIN [1996]	RUSO–FOUTS [1997]	FELTMATE–SCHOFIELD [1999]
Research question	The association between pollution and economic and market performance.	The relation between market valuation of corporate stocks and social performance, as measured by pollution record.	Linking environmental management within the firm to financial performance.	The economic impacts of environmental performance.	The relationship between sustainable development performance and share price appreciation.
Sample characteristics	13 U. S. pulp and paper firms with 81 plant locations EPA pollution database COMPUSTAT financial data	74 Canadian pulp and paper, chemicals and oil refineries, steel, metals and mines firms (Quebec and Ontario area)	NEXIS database for publicly traded firms	243 U. S. firms Franklin Research Development Corporation (FRDC) environmental data COMPUSTAT financial data	Toronto Stock Exchange (TSE) 300 firms TSE 100 average <i>versus</i> a portfolio of sustainable firms Large capitalisation firms representing all industries
Indicators applied	Environmental: composite water pollution index Financial: ROE, ROA, cash flow / equity, cash flow / asset, Beta, PE ratio	Environmental: water pollution index Financial: stock prices	Environmental: positive environmental event (e. g. award) and negative environmental event (e.g. spill) Financial: stock prices	Environmental: Franklin Research Development Corp. rating Financial: ROA	Environmental: Sustainable Investment Group Ltd. ranking Financial: average annual return of stock prices
Statistical methods applied	Pearson correlation tests	Ordinary and re-weighted least-squares regression analysis	Event study methodology	Ordinary least-squares regression analysis	(No information)
Hypothesis tested	<i>H1</i> : There is no association between pollution and economic performance over a short time period; <i>H2</i> : There is no association between pollution and market performance over a short time period.	<i>H1</i> : the worse a firm's pollution record, the greater the amount of the potential liability reducing its stock market valuation; <i>H2</i> : common shares of firms with a positive poll. performance sell at a premium compared with firms with a negative pollution performance.	<i>H1</i> : environmental performance affects positively financial performance, and conversely; <i>H2</i> : strong environmental performance has a stronger positive impact for historically clean than for dirty industries; <i>H3</i> : strong environmental performance is increasingly valued by financial markets.	<i>H1</i> : high levels of environmental performance will be associated with enhanced profitability; <i>H2</i> : the greater the industry growth, the greater the positive impact of environmental performance on firm profitability.	(No information)
Main conclusions	<i>H1</i> and <i>H2</i> rejected; pollution performance is negatively associated with economic as well as with market performance.	<i>H1</i> and <i>H2</i> are weakly supported; a firm's pollution performance is interpreted by market participants as providing information about its environmental liabilities; results weakly support the existence of a premium in the stock market valuation of firms that meet environmental regulation.	<i>H1</i> , <i>H2</i> , <i>H3</i> are supported; environmental awards resulted in a significant positive change in market valuation; first-time awards to firms in historically dirtier industries had lower returns; significant negative returns were documented for environmental crises.	<i>H1</i> and <i>H2</i> is supported.	TSE 100 annual average = 12.8 % and SD firms annual average = 21.7 %

Table 4 Some Typologies of Corporate Environmental Strategies in the Empirical Literature

	FLORIDA [1996]	HASS [1996]	HENRIQUES– SADORSKY [1996]	ARAGÓN-CORREA [1998]	JUDGE–DOUGLAS [1998]	HENRIQUES– SADORSKY [1999]
Research question/objective	Relationship between advanced production practices and innovative approaches to environmentally conscious manufacturing.	Develop an empirically based theory of environmental management.	Empirically examine the determinants of environmentally responsive firms.	How do strategically proactive firms differ from other firms in their approaches to the natural environment?	The ability of firms to integrate the natural environment into the strategic planning process.	Determine whether environmentally committed firms differ from less environmentally committed firms in their perceptions of the relative importance of different stakeholders in influencing their environmental practices.
Sample characteristics	Stratified random 450 U. S. manufacturing firms 423 contacted 256 returned (60.5 % response rate) (Win-win perspective)	8 Norwegian printing and food processing firms in the Oslo area	750 large Canadian firms contacted 400 returned (53 % response rate) 331 usable financial data added (No information)	210 CEOs of mostly large Spanish firms of 10 sectors 112 returned (53 % response rate) 105 usable	Random 725 U. S. environmental executives 217 returned (30 % response rate) 196 usable	The same as in HENRIQUES–SADORSKY (1996)
Theoretical model/perspective		Hunt–Auster [1990] stage model of environmental strategy		Roome [1992] stage model of environmental strategy	Resource-based view of the firm and strategic planning literature	Roome [1992] and Hunt–Auster [1990] stage models and corporate social responsibility literature
Statistical methods applied	Cluster analysis	Cluster analysis	Logit regression analysis	Factor (PCA) and cluster analysis, ANOVA, regression analysis	Structural equation model (LISREL) (test for non-response bias)	Factor and cluster analysis, ANOVA, MANCOVA, ANCOVA
Main conclusions	A significant fraction of sample firms are actively pursuing a related bundle of advanced technological and organisational innovations associated with advanced and environmentally conscious manufacturing systems.	An environmental management typology based on two dimensions: structure of environmental management system (low-high) and implementation (struggling-successful)	A firm’s formulation of an environmental plan is positively influenced by customer, shareholder, regulatory and community pressure but negatively influenced by other lobby group pressure and a firm’s sales-to-asset ratio.	Higher strategic pro-activity is associated with the development of traditional/regulated and modern/voluntary environmental approaches.	The level of integration of environmental management concerns in the strategic planning process was positively related to financial and environmental performance; the greater the functional coverage and the more resources provided to environmental management, the greater the integration of environmental issues in the planning process.	There are environment-ally proactive firms whose managers perceive all stakeholders as important except the media; and environmentally reactive firms perceiving no stakeholder as important except the media.

Table 5 Hungarian Empirical Research Projects on Company Environmental Management

	BODA–PATAKI [1997]	PATAKI–Boda–Radácsi–Hope [1998]	CSUTORA [1998]	PATAKI–TÓTH (1999)	KEREKES et al. [2000]
Research question/objective	Exploring the relationship between company competitiveness and environmental management by operationalising environmental strategy.	Applying and re-examining the research question of BODA, PATAKI (1997) to industrial firms.	An empirical operationalisation of company environmental strategy.	Environmental Performance evaluation of manufacturing firms.	How do companies perceive the environmental demand of society and how do they react or respond to them?
Sample characteristics	665 contacted 325 usable returned (49 % response rate) biased to large and manufacturing firms, representative regarding geographical location	The 325 firms sample restricted to 160 manufacturing and extraction industries	Sample 1: 52 chemical products and food products firms (all usable) Sample 2: 600 machine equipment firms contacted 88 usable biased to large firms	Random 350 manufacturing firms Representative by manufacturing sectors, biased to large firms 344 usable Control sample of firms with ISO 14001 (n=26)	152 manufacturing firms, representative by sector, biased to larger firms
Theoretical model/perspective	(Environmental strategy and performance literature)	(Environmental strategy and performance literature)	(Environmental strategy literature)	(No information)	(No information)
Statistical methods applied	Cluster analysis	Factor and cluster analysis	Multivariate regression, factor and principal component analysis, ANOVA	Factor and cluster analysis	Descriptive statistical analysis
Main conclusions	4 clusters: innovative, offensive, indifferent, and defensive environmental strategy	5 clusters of environmental management orientation: leader (12.5 %), average (26.3 %), marketing-focus (8.8%), technology-focus (21.2 %), laggard (31.2 %); no connection with general strategy and operations management clusters and a weak but significant connection with ethical performance clusters	The main motivation of establishing environmental management in the machine equipment industry is to adapt to EU regulations, while in the chemical and food products sectors, domestic regulation and cost reduction potential constitute the main pressure; 5 environmental strategy clusters: indifferent, defensive, accommodating, offensive, innovative conformist	3 dimensions of environmental performance: technology, organisational practice, product; 5 clusters of environmental performance: leader (7.6 %), product-focus (14.5 %), laggard (29.7 %), organisation-focus (11.6), technology-focus/average (26.7 %); 4 clusters of environmental pressure: firms under political pressure (15.4 %), no pressure (34.6), all stakeholder pressure (11.3 %), regulatory and manager/owner pressure (32.6 %)	According to the environmental managerial activities applied, chemical firms are the leaders, next pulp and paper and wood products firms, next firms in food products sector, and textile and clothing firms are the laggards; The main pressures perceived are those of environmental authorities, managers and owners

7.2. RESEARCH METHODOLOGY ¹³

The initial samples of 1996 and 1999 were limited to industrial firms in order not to complicate the analysis with the large differences that inevitably characterise environmental management practice in different economic sectors, such as industry, public and other services, retail. Since the questionnaire included a relatively small number of questions with regard to environmental management it was not possible to address, to a satisfactory extent, the sector-specific differences in business environmental practice and most of the questions were primarily relevant to industry.¹⁴

The size of the two industrial samples (160 and 204 firms) made the application of multivariate statistical analysis possible. The aim was to explore the dimensions of environmental performance and separate, if possible, different clusters of companies in terms of environmental management orientation. A major difference between the analysis of the two samples is that the five dimensions of company environmental performance in the sample of 1996 are theoretical constructs based on an extensive literature review (see among others Vandermerwe–Oliff [1990]; Rice [1993]; Young [1996])¹⁵, while the four dimensions of the sample of 1999 were produced by a factor analysis.¹⁶

A basic assumption of the below analysis is that rating all sample firms on the dimensions of environmental performance provides for the possibility of applying cluster analysis which groups the sample companies according to overall environmental performance revealing different environmental strategy postures or management orientations.

In the following sections, first environmental management practice of the sampled

¹³ The quantitative research reported below was conducted within the research project, *In Global Competition – Microeconomic Factors of Competitiveness of the Hungarian Economy*. A focal element of this basically empirical research programme, initiated and managed by the Department of Business Economics at BUESPA, was two questionnaire surveys, completed by 1400 executives of 325 companies in 1996 and 1220 executives of 319 companies in 1999. The analysis below reports the findings of the survey of 1999 related to environmental management. The financial and technical support of the Department is kindly acknowledged.

¹⁴ Environmental management questions appeared in three separate questionnaires of the whole questionnaire package: question related to the organisational or managerial aspects were included in the “CEO questionnaire” (from No. *v103a* to *v111b*); production and technology related questions appeared in the “Production questionnaire” (from No. *t53* to *t62c*); and ‘green marketing’ questions were included in the “Sales-Marketing questionnaire” (from No. *k15a* to *k15e*). Due to differences in missing data among the three questionnaires, missing answers accumulated that resulted in a sample of 281 companies. The final industrial sample under investigation contained 204 manufacturing and mining firms. (See the Appendix for detailed sample characteristics.)

¹⁵ The five dimensions of environmental performance in the sample of 1996: environmental practice, investment, innovation, marketing, and voluntary information provision (see Pataki–Boda–Radácsi–Hope [1998]).

Hungarian industrial firms will be described by frequency results¹⁷ and, keeping in mind the differences between the samples of 1996 and 1999, the relevant data of 1996 will also be referred to.¹⁸ The next two sections will present the multivariate statistical analysis of the sample of 1999, first company environmental performance dimensions resulted from factor analysis, then the three groups of environmental management orientation resulted from cluster analysis. At the end of this paper some conclusions will be drawn.

7.3. CHARACTERISING COMPANY ENVIRONMENTAL MANAGEMENT: DESCRIPTIVE STATISTICAL ANALYSIS

The relevance of environmental issues for the majority of the sampled Hungarian industrial firms is evident from the fact that 72 percent is obliged to provide annual environmental report to the regional environmental agency (the respective data in the sample of 1996 was 75 percent). Moreover, most of the sampled industrial firms claim to have an employee responsible for environmental affairs (the relevant data for 1996 and 1999 respectively are: 85 and 77 percent).¹⁹ In contrast, only 16 companies (8 percent) claimed to operate an environmental committee that provides an opportunity for functional managers to frequently discuss and co-ordinate environmental management issues or actions.²⁰ The picture becomes more sober with respect to environmental training. Only 12 percent of the sampled companies provide some sort of environmental training for all employees which offers no great promises in terms of environmental awareness at every organisational level. It seems that environmental training is more functionally focused, that is, to the employees responsible for managing environmental affairs: 36 percent of the sampled firms provides this type of

¹⁶ An analysis for the sample of 281 firms was presented in Pataki [2001].

¹⁷ A questionnaire survey does not allow for gathering physical data of company pollution performance. All the studies mentioned in Table 3 and 4 could gain this information from different sort of pollution databases, however, in Hungary such data are not readily available. Questions with regard to financial data, such as for example the annual amount of environmental penalties charged, were also omitted due to limited space in the questionnaires for environmental questions. In accordance with the general structure of the questionnaire package, environmental questions were mainly either-or type and, to a lesser extent, five-scale attitude-type questions.

¹⁸ Note that the sample of 1996 and that of 1999 may be compared only to a very limited extent mainly due to their distributional differences in terms of industrial sectors and company size. Therefore, no tendencies can be reported. Nevertheless, respective data of 1996 will be indicated below.

¹⁹ 20 % of the sampled firms of 1999 reported no position with environmental task assigned (missing answers were 3 %).

²⁰ 89 % answered negatively to this question, while 3 % of the answers were missing. The respective data for the sample of 1996 are 8 % affirmative answer, 92 % negative.

training.²¹ These data suggest a possible weakness of environmental management practice in terms of continuous improvement, knowledge and skill accumulation and upgrading that can, in the longer run, seriously restrict company environmental performance.

A more integrated approach to environmental management would require, at least formally, environmental issues be part of strategic planning. 26 percent of the sampled firms claimed to have environmental considerations integrated into its strategic plan, in contrast to 33 percent negative answers, and 35 percent reported to have no such plan.²² A value chain approach to environmental issues would also contribute to a more integrated environmental management. 32.5 percent of the sampled industrial firms claimed to check suppliers' environmental performance (the respective data in 1996 was 33 percent) and 23 percent established a formal procedure for that purpose. At a five-graded scale, the average importance attributed to environmental issues in procurement decisions was 2.98 (variance: 1.20), and 36 percent of companies rated environmental issues "important" or "very important" in purchasing policy, in contrast to 34 percent who claimed them "insignificant" (data for 1996 were 37 and 28 percent respectively).

A comprehensive tool for systematising and institutionalising environmental management is the ISO 14001 standard. Out of the sample of 204 industrial firms, 14 have operated an EMS, while at 27 companies it was under construction.²³ One fifth of the sampled industrial firms may claim to take steps toward a more systematic environmental management which might offer the possibility for raising environmental awareness throughout the organisation despite the obvious fact that an EMS by itself is no guarantee for environmental performance improvement of business organisations towards sustainability.

Obviously, effective environmental management inevitably requires major changes in investment, technological and research and development decisions of industrial organisations. Firms in the sample of 1999, in general, score better on the technological dimension of environmental performance than on any other. 40 percent of the sampled companies reported environmental investments implemented in the previous three years. (the respective data for 1996 is 43 percent).²⁴ The main motivating factors in carrying out environmental investments,

²¹ All data is quite similar to those of 1996 where environmental training for specialists was reported by 40 percent, for all employees by 7.5 percent.

²² In the sample of 1996, affirmative answers amounted to 44 percent, while 17 percent answered in the negative.

²³ This question was not included in the questionnaire of 1996.

²⁴ The majority of environmental investments implemented were targeted to reduction in emissions to air (25 %); investments in the reduction in waste water, solid waste and noise pollution amounted to 16, 16 and 12 %, while reduction in soil contamination 6 percent.

similarly to data of 1996, were environmental regulation in Hungary (the respective means on a five scale: 1996: 3.7; 1999: 3.7) and improving corporate image (respectively 3.7 and 4.0); stricter regulation expected in the future was attributed a smaller pressure (respectively 3.2 and 3.5) and public pressure (respectively 2.3 and 2.5). A technological improvement may yield additional environmental benefits despite being primarily of an environmental investment: 41 percent of the sampled industrial firms claimed to reap environmental benefits by general technological changes. The majority of them (34 percent) reported changes in basic technology and a smaller group (12 percent) changes in product line as the primary investment purpose that additionally resulted in environmental performance improvement. It is by no accident that data for 1996 demonstrated a higher rate of changes in technology and product lines (respectively 57 and 32.5 percent) since the first survey covered an earlier period of the so-called economic transformation process (1992–1995).

To purchase environmental products and services is an alternative or complementary to own technology development activities aiming at improved environmental performance. More than half of the sampled industrial firms (1996: 60, 1999: 53 percent) claimed to purchase specialised environmental products and services. Both surveys revealed that Hungarian industrial companies do not put much effort in environmental research and development. ‘Greening’ technology R+D seems more widespread among the sampled firms than ‘greening’ product R+D: the respective data for 1999 were 27 and 8 percent.²⁵ Probably due to lack of information surprisingly few answered the question whether there were any market success stemming from environmental R+D activities: 12 percent claimed to reap economic benefits, while 14 percent experienced no market gain. Attitudes toward the importance of environmental considerations in technology and product development were also investigated: 32 percent of the sampled industrial firms rated environmental issues ‘important’ or ‘very important’ in technology development decisions, in contrast to 21 percent who consider them “unimportant” (data for 1996 were 30 and 22 percent respectively); for product development decisions, environmental considerations were judged to be “important” or “very important” by 30 percent and “unimportant” by 22 percent (data for 1996 were 26 and 23 percent respectively).²⁶ Since environmental R+D can hardly be considered as a widespread practice of the sampled industrial firms, it is not surprising that only 12 percent

²⁵ The questionnaire of 1996 did not separate technology and product R+D. There was 33 % affirmative answer; the respective data for 1999 was 30 %.

²⁶ Means and variances on the five scale for 1999 are the following: for product development 3.1 and 1.4, for technology development 3.2 and 1.3. Means for 1996 were 2.9 and 3.1 respectively. Note that missing values

reported sales of environmental products and services developed by the organisation itself.

A separate but no less significant dimension of company environmental performance is communication. Ideally, firms should provide and share environmental information with external stakeholders in order, on the one hand, to enable rational decisions and reactions on the part of its constituency and, on the other hand, to learn and increase organisational capabilities for dealing with environmental issues through a dialogue with external stakeholders. Company environmental communication may be separated to environmental marketing (targeting market stakeholders), obligatory environmental reporting to regulatory authorities (required by law), and voluntary environmental information provision mainly to non-market stakeholders. There some industrial sectors whose products are subjected to regulations requiring information provision to customers, for example, about the proper and safe product use, including environmental information. Not surprisingly, the most frequently claimed environmental communication among the sampled industrial firms was information provision to customers about environmental risks in product use: 39 percent answered affirmatively. Among the possible means of 'green marketing' most of the sampled companies (30 percent) applies some sort of environmental signs on product packaging.²⁷ Environmental attributes appear in company advertising of 25.5 percent and in product advertising of 22 percent of the sampled industrial firms.²⁸ The data presented so far describes those environmental communication efforts that are typically of a one-way nature; sending intended messages from the company to its market stakeholders. Unfortunately, forms and means of environmental communication based on dialogue between companies and their stakeholders – which, at the same time, are the ways of establishing and maintaining trust as well as that of environmental learning – are hardly applied by the sampled industrial firms. Out of the 204 companies, only 22 (11 percent) reported the publishing of an annual environmental report distributed among stakeholder groups and 14 firms (7 percent) organise frequently public hearings on environmental issues.²⁹ In sum, as few as 27 industrial firms (13 percent of the sample) provide voluntarily information about its environmental performance to its wider constituency.

were relatively high for both surveys (e. g. in 1999 33 and 28 % respectively).

²⁷ It should be kept in mind, however, that in Hungary many companies apply environmental signs or logos (such as, e. g., logos for recyclability) that have nothing to do with the real performance of the product in question, that is, those firms misinform their consumers.

²⁸ 'Green marketing' data for 1996 were 37; 22.5 and 22.5 % respectively.

²⁹ Data for 1996 were 14 and 4 % respectively.

7.4. DIMENSIONS OF COMPANY ENVIRONMENTAL MANAGEMENT: FACTOR ANALYSIS

A major aim of the present empirical analysis is to define dimensions of company environmental performance based on the answers of the sampled industrial firms to the environmental management questions included in the questionnaire package. Therefore, factor analysis was applied in order to uncover, if it is possible, a hidden structure of company environmental performance.³⁰ Table 4 shows the resulted three dimensions of company environmental performance.³¹

Table 6 Result of Factor Analysis: Dimensions of Company Environmental Performance

Variables:	Factor 1: Envtal Practice and Stake- holder Communi- cation	Factor 2: Techno- logy	Factor 3: Marketing
Environmental considerations in supplier selection	0.77		
Environmental training for environmental staff	0.72		
Environmental information provision to customers	0.58		
Voluntary information provision (hearings, envtal report)	0.58		
Environmental training for all employees	0.53		
Environmental R+D		0.71	
Investment in environmental technologies		0.67	
Purchase of environmental products and services		0.64	
Establish an environmental manager position		0.62	
Environmental aspects in product advertisements			0.86
Environmental aspects in company advertisements			0.83
Eigenvalue	3.41	1.45	1.14
Variance explained (%)	30.96	13.16	10.35

Extraction Method: Principal Component Analysis

Rotation Method: Varimax (with Kaiser-normalisation)

Questions relating to organisational environmental practices and stakeholder inclusion or communication have higher loadings on factor 1. For example, environmental performance

³⁰ The questions answered affirmatively by less than 10 % of the sampled firms were omitted from factor analysis (e. g. environmental committee) or, where it was appropriate, a composite variable were produced out of them (such as the variable of voluntary environmental information provision from the variables of environmental report and public hearings). The questions where answers seemed particularly untrustful were also omitted (e. g. environmental information on product packaging).

³¹ The methodological validity of the factor analysis presented is underlined by the value of the *KMO*-measure (0.76) and the statistically significant *Bartlett*-test. Following the 'eigenvalue = 1' rule the three factor result explains 54.46 % of vairance which seems quite reasonable considering the exploratory nature of the present inquiry.

requirements integrated in supplier selection have their importance, on the other hand, in institutionalising environmental practices and, on the other, in their communication potential (since they may form a base for subsequent dialogue and co-operation through the value chain). Environmental training for employees may have this same “double character”. Also, variables directly applying to (non-market) stakeholder communication have relatively high loadings on factor 1.

Factor 2 is unambiguously determined by variables related to environmental technology, such as environmental investments, purchase of environmental products and services as well as environmental R+D. Factor 2 includes, though with a relatively small factor loading, the variable of established environmental manager position.

The two variables of ‘green marketing’ constitute factor 3. Thus, it is evident that voluntary (non-market) environmental communication and market-oriented communication (that is, marketing) define separate dimensions of company environmental performance.

In the industrial sample of 1999 three dimensions of company environmental performance were distinguished (as a latent structure of the answers): (1) environmental practice and stakeholder communication, (2) technology, and (3) marketing. By using the scores of all sampled firms on these dimensions, a cluster analysis can be conducted to uncover whether there are different groups of companies. The results are introduced and interpreted in the next section.

7.4. CLUSTERS OF COMPANY ENVIRONMENTAL PERFORMANCE

All firms were scored on the three dimensions of environmental performance and then grouped according to the similarities of their measured performance. Table 5 shows the result of the cluster analysis:³²

³² The methodological validity of the cluster analysis was checked in different ways. First, a hierarchical cluster analysis was conducted, measuring distance by the so-called *Ward*-method. The dendrogram produced suggested a three cluster solution. Next, a non-hierarchical, so-called *K-means* cluster analysis was conducted. The produced three cluster solution was appropriate for substantive interpretation. Then, the sample was randomly divided into two sub-samples and *K-means* cluster analyses were run separately – all of them produced similar three cluster solutions.

Table 7 Result of Cluster Analysis: Three Groups of Company Environmental Performance

Dimensions of environmental performance:	Cluster 1: Inward looking technolog y oriented	Cluster 2: Laggard	Cluster 3: Outward looking practice oriented	F-test*
Envntal practice and stakeholder-communication	- 0.10	- 0.73	1.13	60.15
Technology	0.54	- 0.93	0.33	43.59
Marketing	- 0.73	0.34	0.84	47.72
Number of firms (%)	56 (42.8)	40 (30.5)	35 (26.7)	—

* $p = 0.000$

Number of firms: 131; Number of missing cases (% of the total sample): 73 (35.8%).

The cluster analysis produced three groups of companies that demonstrate significant differences in their environmental performance. The environmental management of companies of cluster 1 focuses primarily upon the technology dimension and, at the same time, demonstrate a very weak performance on, or indifference to, the other dimensions of environmental marketing and practice/stakeholder communication. If this latter dimension is further examined it turns out that cluster 1 companies perform better on the variables of environmental practice (they demonstrate an average performance on environmental practice; better performance than cluster 2, but worse than cluster 3) and their performance on stakeholder communication is as weak as those of companies of cluster 2. Overall, their environmental management is characterised by an inward focus (lack of communication to external constituency) and relatively well-developed over the technology dimension.

Companies of cluster 2 perform poorly in every dimension of environmental management relative to the other two clusters. Neither the technology nor the environmental practice dimensions show significant environmental efforts of cluster 2 firms. Therefore, as industrial firms, they demonstrate a surprising indifference towards environmental issues – they may be considered as laggards in environmental performance.

Companies of cluster 3 demonstrate the best performance on all but one dimension of environmental management. The relatively most apparent feature of their environmental management is its focus upon the practice/stakeholder communication and marketing dimensions – a stronger outward focus compared to the other two clusters. Their performance on the technology dimension lags behind that of cluster 1. Cluster 3 firms show a relatively balanced environmental performance therefore one might risk to term them as environmental leaders. Overall, their environmental management approach is characterised by an outward looking practice orientation.

The substantive validity of the above three clusters solution was also examined by cross-tabulations between cluster membership and other environmental variables not included in the factor analysis. This analysis re-affirmed the three clusters solution.

Cluster 3 companies scored best on the other environmental variables. “Outward looking environmental practice oriented” industrial firms perform significantly better on all other practice related variables than cluster 1, the “inward looking technology oriented” firms. They typically include environmental consideration into their strategic plans; operate an environmental management system (half of the companies among the sampled industrial firms which operate an EMS belong to cluster 3); and 64 percent of those companies that established an environmental committee belong to cluster 3.

Perceived environmental demands of stakeholders also differentiate between the three clusters. Regulatory pressure is perceived by cluster 1 and 3 firms of a similar importance (the cluster means were 3.89 and 3.88 respectively, with a variance of 1.12 for both), contrary to the “laggards” (cluster 2) (mean: 2.80; variance: 1.16). Perceived environmental demands of organisational stakeholders separate the three clusters: owner or shareholder pressure perceived to have a relatively weaker importance for cluster 1 than 3 firms (mean: 3.00; variance: 1.43 and mean: 3.62; variance: 1.28 respectively) as well as managers/employees’ environmental demands (mean: 3.04; variance: 1.07 and mean: 3.71; variance: 0.94).³³ The most striking differences appear, as expected, in the case of external stakeholders. For market stakeholders: consumers’ environmental demands are perceived significantly stronger by industrial firms with an “outward looking practice oriented” environmental management approach (cluster 3) than companies with an “inward looking technology oriented” environmental management posture (mean: 3.41; variance: 1.26 and mean: 2.50; variance: 1.18 respectively); this is also the case as to the environmental pressure of business partners/suppliers (mean: 3.29; variance: 1.00 and mean: 2.58; variance: 1.20 respectively).³⁴ As to the non-market stakeholders: perceived pressure by political pressure groups is generally low and makes no statistically significant difference between the three clusters; in contrast to pressure from local population which is perceived significantly stronger by cluster 3 firms than the other two clusters (mean: 3.23; variance: 1.40; data for the other two clusters were 2.40 as mean and a relatively smaller variance than for the relevant data for cluster 3).

³³ Data for cluster 2, the “environmental laggards” were: mean of owner pressure 2.48; variance 1.34; mean of manager/employee pressure 2.40; variance 1.22.

³⁴ Data for environmental laggards were: mean of consumer pressure 1.97, variance 1.03; mean of business partner/supplier pressure 1.90, variance 1.01.

Overall, perceived importance of stakeholders' environmental demands re-affirm the three clusters solution for the sampled industrial firms.³⁵ Laggards in environmental management hardly perceive any environmental requirements; firms with an "inward looking technology oriented" environmental management perceive relatively stronger environmental pressure from regulatory and organisational stakeholders; and companies with an "outward looking practice oriented" environmental management focus typically report relatively stronger environmental expectations by all stakeholder groups, market and non-market included.³⁶

The relationship between cluster membership and independent variables were also investigated. 57 percent of the large industrial firms, measured by the number of employees, belonged to the cluster of "outward looking practice oriented" environmental management – this cluster was over-represented among the largest industrial firms (No. of employees over 500). 41 percent of the cluster of "inward looking technology oriented" environmental management was a small firm (having less than 99 employees). Similarly, 41 percent of "environmental laggards" belonged to the smallest firms and 39 percent of them to the middle-sized firms (having 100–249 employees).³⁷

There was no statistically significant relationship between industrial sectors and cluster membership, mainly due to the relatively small number of firms in each industrial sub-

³⁵ Controlling for company size does not eliminate the statistically significant relationship.

³⁶ The relationship between environmental performance and perceived stakeholder pressure was analysed in another way as well. A factor analysis was conducted over the variables of stakeholder pressure producing methodologically as well as substantively interpretable result (*KMO*-measure: 0.85 and significant *Bartlett*-test). Though the '*eigenvalue* = 1' rule produced only a one factor solution (53.5 % of variance was explained), the *scree-plot* and our substantive interpretation suggested a three factors solution (explaining 78.2 % of variance). Factor 1 included stakeholder pressure from manager/employee, business partner/supplier, and owners; political pressure groups, local population and consumer environmental pressure had a high loadings on factor 2; while perceived regulatory pressure constituted factor 3. A non-hierarchical cluster analysis produced a dendrogram that suggested a four clusters solution. Out of the 204 firms, 181 provided usable answers for this analysis. 17.2 percent of the 181 companies (that is, 35 firms) constituted a cluster that typically reports no perceived environmental pressure; 39.2 % of firms experience environmental demands from all stakeholder groups (that is, 80 firms); 13.7 % (28 companies) reports pressure typically from organisational stakeholders and business partners; and 18.6 % (38 firms) perceive environmental demands only from regulatory stakeholders. The two cluster analyses demonstrate a statistically significant relationship: 42.5 % of environmental laggards belongs to the group which experience no stakeholder pressure toward environmental management (laggards constitute 68 % of the cluster reporting no pressure); companies with an "inward looking technology oriented" environmental management were over-represented in the cluster of regulatory pressure (they constitute the 61 % of the cluster of regulatory pressure); the typical firm of the cluster of "outward looking practice oriented" environmental management focus belongs either to the cluster of all-stakeholder pressure (69 % of the "practice oriented" cluster) or to the cluster of organisational and business partners' pressure (22 %). It seems that the environmental performance of the sampled industrial firms demonstrate a strong relationship with the perceived environmental demands of different stakeholder groups.

³⁷ $p = 98 \%$

sector. However, some over- or under-representation might be noted. 54 percent of the sampled food, beverages, and tobacco companies (that is, only 7 firms), 60 percent of firms in the metal industry (9 companies) and 83 percent of mining companies (5 firms) belonged to the cluster of “inward looking technology oriented” environmental practice. 60 percent of textile and clothing firms (6 companies) and 50 percent of firms in the machines, equipment industry (7 companies) were characterised as “environmental laggards”. 60 percent of chemical firms (6 companies) belonged to the cluster of “outward looking practice oriented” environmental management.

There was no statistically significant relationship between any variables characterising the general business strategy of the sampled industrial firms and environmental cluster membership. The case was similar for the analysis of the survey of 1996. Environmental management posture showed any kind of relationship neither with general business strategy nor with general production management practice. The only relationship that emerged was the one between the clusters or variables of ethical/social performance and environmental clusters. Though the statistical significance of this relationship could be attributed to the variable of company size: those larger firms that established ethical institutions within their organisational structure belonged to the cluster of “outward looking practice oriented” environmental management.

Despite of this impact of company size, it might be argued that a generally well-developed stakeholder orientation is characteristic to the companies with “environmental leadership” in the sense of demonstrating a relatively “outward looking practice oriented”. This is underlined by the statistically significant relationship between the variable of whose interests count in company decisions (among the stakeholders) and environmental clusters. Again, the three environmental clusters were separated along the perceived importance of non-market, external stakeholders’ interests: companies with an “outward looking practice oriented” environmental management attributed relatively greater importance of taking into account the interests of trade unions, local population, media, and the natural environment in company decisions than the other two environmental clusters.³⁸

³⁸ Controlling for company size did eliminate the relationship in the case of trade unions and the media, but not in the case of the local population and the natural environment.

7.5. CONCLUDING NOTES

A general conclusion drawn from the two empirical studies of the research program, “In Global Competition” in particular and from other empirical studies in general concerning industrial firms’ environmental management in Hungary is that the majority of companies attempt to improve, in some way, its environmental performance, though about one third of this population demonstrate complete indifference towards the environment. A majority of the companies trying to improve their environmental performance treat environmental issues as primarily of a technological nature – the environmental management of these industrial firms is technology oriented. It is a further characteristic of these firms that their environmental approach is “inwardly focusing” in the sense of lacking environmental communication and of those organisational practices and institutions which further stakeholders’ inclusion and dialogue. It seems obvious that this type of environmental management posture perceives its main motivational force by regulatory compliance – this environmental strategy is termed as *compliance-based* or defensive (see Roome [1992], Steger [1993], Kerekes–Kindler [1995]). This environmental management approach characterised some of the smallest firms in the sample.

The dominance of the largest firms in the environmental management cluster of “outward looking practice oriented” firms may be not surprising. A survey type of method does not allow for the possibility to explain whether the firms constituting this environmental cluster are ab ovo environmentally more conscious or, because they are large companies, they inevitably experience stronger pressure from all stakeholders. Obviously, these two explanations or factors may together constitute a better or more comprehensive explanation.

Empirical studies also revealed that Hungarian industrial firms tend to treat environmental issues rather as technological problems than challenges to existing organisational routines or governance structures. The weakest aspect of company environmental management in Hungary is, however, communication. Among the applied ‘green communication’ tools, market orientation (marketing) is dominating over the more voluntary information provisions to the wider constituency. The neglect of these latter type of communication tools may pose problems of credibility and trust since market (competitive) strategy and non-market strategy should reinforce each other in an “integrated strategy” (cf. Schot [1992], Maxwell et al. [1997], Reinhardt [1998]). If this is not the case (that is, without the synergy between market and non-market strategies) the effectiveness of environmental

performance improvements are undermined in the long run and even the charge of ‘green washing’ cannot easily be refused (see Welford [1997a]).

A common finding of the empirical studies in Hungary is that there is a relationship between the environmental performance of industrial firms and the perceived environmental pressures of different groups of stakeholders. In the case of the environmental clusters emerged from the analysis of the sample of 1999, the firms poorly performing on all dimensions of environmental management (that is, “environmental laggards”) typically perceive no environmental pressure; the firms with an “inward looking technology oriented” environmental management posture perceive stronger environmental requirements from regulatory stakeholders; and the industrial firms characterised by an “outward looking practice oriented” environmental management approach tend to attribute relatively strong pressure to all stakeholders.

The only trend that might be seen to emerge between the two surveys of 1996 and 1999 is the trend of increasing stakeholders’ environmental demands perceived by industrial firms. It might be argued that the difference between the two samples may even emphasise this trend since the sample of 1999 consists of more small firms than that of 1996 and, as many studies including this one showed, larger companies demonstrate on average relatively better environmental performance (of course, partly due to the bias of the whole practice and theory of environmental management). It is of a particular interest that the environmental pressure of regulatory stakeholders were not perceived as increasing during this period (though the average strength of this stakeholder is the greatest in comparison to the others; that is, 3.6). All the other stakeholder groups were perceived to inflict increasing environmental demands on industrial firms during the period of 1996–1999. Of course, it should be noted that the increased environmental pressure started from a relatively low level. Nevertheless, this trend and some of the findings reported above might hopefully serve as sensible lessons for all actors in the environmental management field in Hungary.

Part III

Corporate Greening in Hungary during the 1990s:

A Qualitative Empirical Research ³⁹

RESEARCH OBJECTIVE

The objective of qualitative inquiry was to understand the meaning of corporate greening in Hungary during the 1990s (after the regime change). How do managers of Hungarian large industrial firms interpret environmental issues? In what ways do they speak of corporate greening? What kind of discourses dominate in the business sphere with regard to ecological issues? How is the reality of environmental issues constructed by corporations in Hungary? How might this reality be characterised? What kind of opportunities and obstacles are provided by, or inherent to, these constructions of reality and their realisation through actual business behaviour? What are the most salient and influential elements of the institutional context which corporate greening is embedded in?

The results of explorative survey research have demonstrated that business environmental management in Hungary is diverse. Therefore, it is reasonable to expect valuable findings from a qualitative research that is designed to gain a deeper and more dynamic understanding of corporate greening in the Hungarian context after the regime change. The particular methodology of qualitative research was chosen in order to enable the researcher to smoothly move from idiosyncratic characteristics to general conclusions.

³⁹ The research was financed by an OTKA (National Scientific and Research Fund) grant (No. F29121) between 1999 and 2000. The author kindly acknowledges this support. Six colleagues worked with the present author on this qualitative enquiry. I wish to thank Zsolt Boda, Zsófia Hajnal, Attila Harkai, Réka Matolay, Zsuzsa Molnár, and Richárd Szántó for their excellent contributions. No one of them is responsible for possible deficiencies of the analysis presented in this dissertation.

RESEARCH METHODOLOGY

Is it possible though to infer general findings from particular cases, or even reach any level of theory building? A few qualitative methodologies were designed to fulfill just this purpose. The research reported here builds upon three methodological approaches: grounded theory developed by Glaser and Strauss [1967] (see moreover Strauss–Corbin [1990] and [1994]); the case study methodology of Yin [1994]; and, the elements of qualitative data analysis offered by Miles and Huberman [1994].

Seven large industrial firms, based in Hungary, were chosen as subject matters of case studies.⁴⁰ Selection rested on several different theoretical and pragmatical considerations. By the very first criterion, companies included in the sample had to be known by their environmental efforts. Thus, all the firms involved in the sample have been from among companies that were, under Hungarian circumstances, leaders in greening. This criterion stemmed right from the research question. The aim was to understand what corporate greening means to companies. This could be answered genuinely only by firms that had been making efforts in this field for a long time: only they possess detailed and rich experience.

All the seven companies in the sample are large corporations by annual sales and, except one of them, by number of employees, too. This has partly resulted from the intention to find firms for case studies that were already well-known for their environmental efforts. Information about small- and medium-sized companies is relatively more difficult to access, and even in the international arena, there are very few environmental management research efforts directed to firms of this size. Experience drawn from our quantitative research experience also backed the sampling of large corporations: several classical environmental management questions and problems arise and can be examined with regard to these companies, compared to small- and medium-size firms.

Another important consideration for sampling was to choose companies that would be willing to participate relatively easily. This was a precondition for conducting successful and penetrating case studies. Experience drawn from previous conferences or seminars by listening to different corporate environmental presentations helped a lot in this process. Thus, personal acquaintance, relationship and knowledge were important aspects of selection. Apart

⁴⁰ Altogether seven case studies were conducted applying the same methodology, but only three stories of corporate greening will be reported in detail below. However, the analysis presented in Chapter 10 below is

from these considerations, the following facets played important roles in the sampling process: in order to examine the possible impact of sector membership, companies from different sectors were needed; companies belonging to sectors usually judged to have high environmental pollution burden (chemical and cement industry) were decidedly looked for; and to have the opportunity for comparison, firms from sectors of low environmental pollution (R&D oriented companies in electronics) were also chosen; corporations in serious (past or present) conflicts with local communities or green organisations because of environmental problems were important to include, just as firms that have no adversarial public relations; the sample involved companies set up by greenfield investments and also firms privatised through the stock exchange or by professional investors (acquisitions through privatisation); there are companies in the sample with rather fragmented ownership structure and also subsidiaries of multinationals. The following table summarizes the ground for sampling in the present research, compared to the theoretically possible reasons summarised by Miles–Huberman [1994]:

based on all the seven case studies, as might later be evident from the interviews cited.

Table 8 Possible Sampling Strategies in Qualitative Inquiry and the Actual Ones Applied by the Present Research

<i>Type of sampling</i>	<i>Purpose</i>	<i>Present research</i>
Maximum variation	Documents diverse variations and identifies important common patterns	Diversity in industrial sector, ownership structure, organisational history, environmental burden, environmental risks
Homogeneous	Focuses, reduces, simplifies, facilitates group interviewing	Large companies well-known of their environmental management efforts
Critical case	Permits logical generalization and maximum application of information to other cases	One of the firms is a frequent target of a green NGO; while two other have successfully managed conflicts with green NGOs
Theory based	Finding examples of a theoretical construct and thereby elaborate and examine it	–
Confirming and disconfirming cases	Elaborating initial analysis, seeking exceptions, looking for variation	Looking for variations of corporate greening in Hungary
Snowball or chain	Identifies cases of interest from people who know what cases are information-rich	–
Extreme or deviant case	Learning from highly unusual manifestations of the phenomenon of interest	–
Typical case	Highlights what is normal or average	–
Intensity	Information-rich cases that manifest the phenomenon intensely, but not extremely	By doing archival research in newspaper databases first, well-publicised cases of corporate environmental management were looked for
Politically important cases	Attracts desired attention or avoids attracting undesired attention	A desire to present relatively positive examples of corporate greening
Random purposeful	Adds credibility to sample when potential purposeful sample is too large	–
Stratified purposeful	Illustrates subgroups; facilitates comparisons	Two chemical and two electronic firms were selected
Criterion	All cases that meet some criterion; useful for quality assurance	A main precondition was to have a longer history of corporate environmental management
Opportunistic	Following new leads; taking advantage of the unexpected	–
Combination or mixed	Triangulation, flexibility, meets multiple interests and needs	Firms sampled in previous environmental management survey research
Convenience	Save time, money, and effort, but at the expense of information and credibility	Relatively easy access through prior personal contacts

(Based on Miles–Huberman [1994], p. 28)

Overall 56 interviews were conducted between February and December 2000. All the

interviews were taped and then transcribed word by word. The next step was coding the texts. First the most detailed and demanding coding method was used. Progressing row by row in the text, we put the most important words and expressions (either verbs, nouns, or adjectives) used by the interviewees at the end of each row as codes. Then, another coding method was applied. The main content of the rows or interview sections were marked in the text, and concepts covering their subject matters were put down on paper next to the given part. This was also made by a relatively “thick” coding: several codes might designate each section, since more than one significant environmental issue or subject matter could have emerged. These codes were like the following: “Greens,” “local community,” etc. (that is, actors of greening), or, “environmental policy,” “environmental organisation,” “technology,” etc. (that is, issues of corporate environmental management), or, “location,” “leadership style,” etc. (general attributes of company operations).

Analysis went on as follows. The first interview was regularly made with the environmental manager of the company. (The only exception to this rule was the case of the cement factory presented below, Chapter 8. Here, the first interviewee was the environmental officer of the city’s local government.) One of the important tasks of the first interview(s) was to map the organisational field: persons and organisations inside and outside the company that had played some role in the history of corporate greening under investigation. That is, efforts were made to select the most important agents of corporate greening in each case. Moreover, during the first interviews (usually the first 3–4 interviews) we insisted on applying the recommendation of grounded theory to influence the interviewees with questions the least. First, general and open questions were posed in order to be able to understand gradually how they perceived the history of corporate greening, what sort of words, expressions, images they used and formulated. The ability and willingness to speak, of course, were different among the interviewees. Interviewers were always prepared with certain general questions with regard to corporate environmental management, such as to clarify the structural position of environmental tasks and responsibilities within the organisation under investigation, or how the environmental management system was implemented, etc. In the meantime, more and more questions were generated as a result of coding and analysing the interviews done already. Gradually, topics or themes of greening – mentioned by all (or most of) the interviewees or by only one of them but with a great emphasis put on it – emerged, and demanded further “questioning” during interviews with other persons. (Not to impel any interpretative frame on to interviewees by researchers, direct questions were, of course,

avoided in these cases, too.) These issues or concepts were put in the category of “themes” and included codes such as “awareness,” “discipline,” “profit and ecology,” etc.

Certainly, the other main part of our coding (analysing) procedure was the “combination” of the two coding methods. Furthermore, combination meant the assignation of most frequent words and expressions shown up in the sections marked by the “themes” to the “themes” themselves. Consequently, the number of themes could be decreased, and connections among them (irreducible to each other) were explored according to words, expressions used by different interviewees when speaking about different themes during the interviews. By its logic, the procedure applied here is similar to the coding mechanisms of grounded theory. Practically, we, too, attempted to create categories, to explore the relationship among the categories and to segregate the most important categories emerging from within the interview texts.

Each corporate case was examined profoundly by two researchers. One of them was, of course, the researcher who made the interviews, and the other was always the present author. Coding was always done by the present author, and then – in most of the cases – “real life” field experience of the researcher was discussed and recorded. During these conversations, each researcher spoke of his/her impressions, observations about the interviewee, the place and the process of the interview itself. We also shared our views about and discussed what the interview “seemed to be about,” what we learned about the story of greening in question, and where “dark spots,” deficits, and uncertainties are with regard to its details. This way, a shared picture was formulated about each case study. Whenever four-five interviews at a company was made, a groupmeeting was arranged, where researchers presented their findings, initial analyses, and further research needs. Group meetings were arranged in a semi-structured way, participating researchers had to follow some instructions regarding how to present their own cases.

The next stage of interviews was conducted in a more structured way. It was designed to test initial hypotheses, explore the blank points or details of a given story of greening. Significant efforts were made to involve agents outside the focal organisation in order to reduce the possibility of uncritically accepting biased perspectives of organisational stakeholders. (Obviously, the cross-checking of data gained from the interviews with company and other documents was also pursued.)

The next three chapters will introduce three stories of corporate greening in Hungary

during the 1990s. These three cases involve altogether 25 interviews, as it is shown by Table 9 below:

Table 9 Number of Interviews Conducted

	Number of Interviews
<i>Within company:</i>	(19)
• top management	6
• middle management directly reporting to the top	10
• lower middle management	3
• shop-floor	1
<i>Outside company:</i>	(5)
• local government	2
• trade association	2
• environmental NGO	1
<i>Total</i>	25

Out of the seven case studies prepared, the three introduced below seem to represent the major tenets or features of the opportunities as well as limits to corporate greening in Hungary during the transformation period. The first story of greening of a cement plant is, in a sense, a paradigmatic example of turning the threats of public and regulatory pressures into opportunities set by the regime change and the process of privatisation. The story of the cement plant resonates very much with the more comprehensive issue of social-political development of the country towards joining the European Union: the road to become “civilised” and “greener.” The second story has its peculiar feature of being perceived as a continuous process of greening, despite of the social, political, and economic transformation surrounding. A sense of excellence dominates the organisational discourses of greening in this case. The chemical firm under question demonstrates a relatively well integrated environmental management approach, even targeting the fusion of industrial culture with ecology. The third case of a packaging firm has its special feature of being a greenfield investment of a multinational firm dominating its sector globally. In a sense, the story is about the issue of transferring the technological, organisational knowledge and practice, as well as the corresponding ideal of a consumer society of the highly developed nations to Hungary. It is no accident that this story strikingly reveals the inherent contradictions of greening a consumer society.

CHAPTER 8

A STORY OF REBIRTH: CORPORATE GREENING AS NON-MARKET STRATEGY

8.1. INTRODUCTION

This is a story about the greening of a cement factory in northern Hungary. The first encounter with the corporation in question was through a newspaper article which reported an unusually good image and, in particular, a high level of respect for corporate environmental performance among local citizens. Having no prior contact with the corporation in question, the relevant officials of the local government were first approached. The interview with the environmental officer of the municipality revealed this to be an interesting case and one worth including among the sample cases in this study. Later, it turned out that in contrast to the other corporations in the sample, the cement firm has no specific position for an environmental officer and operates without an environmental management system, though this has not constituted a limiting factor in greening at all.

Throughout the case study, extensive archival research was done by analysing documents supplied by the company under investigation and by the trade association of the cement sector (Hungarian Cement Association – HCA), as well as by reviewing relevant articles in the mass media. Overall seven, on average 40–45 minute-long, interviews were conducted, along with a short, 10 minute, conversation with the Chief Executive Officer (CEO) of the cement company.⁴¹ The first two interviews were done with the environmental officer and the Chairperson of the Committee for Urban Development and Environmental Protection of the local government. Four interviews were conducted with employees of the cement factory, respectively: the public relations (PR) manager, the work safety manager, a shop floor worker (a part-time electrician who is reported by the press to be the guardian of the hill where the mines used by the factory are located), as well as a longer interview with the CEO. The then-

⁴¹ The interviews were conducted and the archival research was done by Attila Harkai.

CEO⁴² and then-President of HCA, who is currently doing consultancy for HCA, was also interviewed.

The table below summarises the interviews conducted:

Table 10 Interviews for Story 1

	Number of Interviews
<i>Within the corporation:</i>	(4)
• top management	1
• Middle management directly reporting to the top	1
• Lower middle management	1
• Shop-floor	1
<i>Outside the corporation:</i>	(3)
• Local government	2
• Trade association	1
<i>Total:</i>	7

8.2. GENERAL BACKGROUND

Since after World War II, the existing production capacity of the Hungarian cement industry could not satisfy increased construction demand, the Economic Committee of the Communist Party issued a decree in 1949 to establish a new cement factory of 1 million tons capacity, annually. It was the birth of the cement factory of this story of corporate greening. Though construction of the plant started in 1959, production could only begin in 1963. Limestone, the primary input of the factory, was mined in the nearby hill and transported by open rope-way cars to the storehouse of the plant. Technology was based on five ball and tube mills of a dry milling type, three so-called Lepol-furnaces (each with an 850 ton/hour clinker production performance) and six cement mills. From the very beginning, however, the factory could not operate in the way it was expected:

“There was a lot of trouble... with this cement complex manufactured in the former German Democratic Republic...” (then-CEO)

“The technology could not come up to the expectations at all.” (PR Manager)

The most problematic dimension of the technology was its environmental performance:

⁴² The person called then-CEO was the top manager of the cement factory from the very beginning of operations till the first year of the regime change.

“Primarily, because of environmental reasons, lots of relevant critiques were addressed towards the plant. We paid enormous amounts of environmental penalties both to the state and to private persons. ... when five times more dust was officially measured falling down to town in a month, there was no room for protest on our part.”
(then-CEO)

As the cement factory was established during the times of so-called extensive industrialisation in Hungary, the main concern was the size of production capacity and, therefore, ecological considerations lagged behind which, consequently, lead to an “under-design” of filters compared to production capacity, inevitably resulting in serious air pollution:

“Cement production released a significant amount of dust through the three chimneys, approximately 17,000 ton/year.” (Manager of work safety)

Furthermore, plant location should in particular have required a serious consideration of ecological impacts in the design phase since the cement factory was located in the direction of wind and consequently, all air pollutants emitted overlaid the nearby town altogether. The other serious ecological impact of the cement plant related to its input sourcing: mining considerably reduced the value of the hill as a “favourite beauty spot” of local people and other tourists from the country. Plant location has, of course, its own economic rationality: being close to the main input supply and at the crossroads of different modes of transportation infrastructure (water, rail, road), it contributed to the low-cost position of cement production. Another advantage of this geographical situation is the relative proximity (30 km) of the plant to the capital city; that is, an arm’s-length distance from the country’s largest market for construction materials. Lastly, the supplementary input materials for cement production can be found in the neighbourhood of the plant.

As a well-documented outcome of communist industrial and town planning and development, life in town and the factory were tightly connected to each other. The cement plant, being the largest company in town, was not only the biggest employer but also the main contributor to a better quality of life in many respects. The factory built a block of estates for its employees, a school, sports ground, cultural centre and surgery; it also built and maintained a public park and contributed to the upgrading of energy supply utilities. The prevailing opinion in the factory is as follows:

“We have given a lot of things to the town.” (PR manager)

The cement factory had not only dominated the economic situation in the town but typically, exerted power over local politics as well. The interviewees recalled that “many cadres from the factory achieved high positions in the municipal government,” or “there were no decision taken without the consent of the management of the cement plant.” National politics, local politics and economy were typically tightly connected during those times in the history of Hungary. Not surprisingly, central (state) production plans had a dominance over any other interests.

Despite all the political influence and social contributions of the cement factory, a sort of “spontaneous green movement and discontent” had started in the 70s against the polluting operations of the plant. The environmental officer of the local government, who arrived in the town at the beginning of political transformation, viewed local people suffering from an “inferiority complex” because

“... the entire townscape looked like an industrial plant... the cement plant ejected dust all over the town...” (environmental officer at local government)

Cement dust was everywhere and its visual affect was widespread:

“... cement dust deposited on parking automobiles... and it could only be removed by chemicals.” (environmental officer at local government)

The wonderful natural scenery of the hill and sharp bend of Hungary’s largest river were responsible for a resort area being developed nearby, whose owners suffered a lot from air pollution that inhibited, for example, fruit growing. The cement dust deposited on roof tiles constituted a thick layer that over time further thickened, resulting in a shorter lifetime of tiles and additional costs to the residents.

“In general, the cement factory paid compensation, so it took the harms its operations caused seriously.” (environmental officer at local government)

The “unbearable dust emissions” were not significantly reduced after the first technological reconstruction that was made possible by the so-called new era of economic order (from 1968 on), which was exemplified by more openness to western trade relations and domestic entrepreneurial activities (the so-called second economy has developed this way). From its western exports, the cement factory had also earned some “hard currency” that could

be used to import more up-to-date, western production equipment:

“In 1968 there had already been an opportunity to start to build a new line of furnace that was western by origin and we also had resources for starting the reconstruction of the technology made in the former GDR.” (then-CEO)

In 1970, a Dopol rotary furnace was put into operation, by which production capacity reached well beyond 1M tons annually. Centrally determined production planning was shortly re-established by political and economic centralisation regaining its strength and support and, at the cement factory, this resulted in reducing in rank the then-CEO. Later, due to another political current with a more open political climate, he was able to obtain the top position of the Cement and Lime Works, established in 1980 as the sector-wide, state-owned company of which individual cement factories were subsidiaries. Besides having the top-ranked position in the cement sector, he also increased his political influence by becoming a member of parliament (MP) for three consecutive periods, until the regime change. From these positions, he had opportunities to pull every string to get compensation or resources for the town, in exchange for the pollution it suffered from the cement plant. Before the regime change enough resources were then available from the central government and the sector to start a more comprehensive reconstruction of existing cement technology. It was a relief for the town as well as the factory that the three old, irreparable Lepol-furnaces could finally be turned off in 1990 and different types of filters were applied to the remaining large sources of air pollution.

These were all positive changes on the technological side, but environmental protection has something to do with the so-called “human factor” as well. One former employee of the cement factory saw other problems than those related to outdated technological equipment:

“Human factors had a crucial role to play; hence, we experienced that surprisingly, the factory emitted much more dust during the night... the sack-filters should have been emptied, since they worked like the sack of a vacuum cleaner - from time to time they needed to be emptied... and when the worker in a night shift was in a bad mood... instead of emptying the filled sack, he simply cut it through with his pocket-knife.” (President of the Committee for Urban Development and Environmental Protection at local government)

Local people spoke of the phenomenon as “the factory was blown up.”

8.3. CHANGES IN THE SOCIO-ECONOMIC REGIME (POLITICAL TRANSFORMATION AND PRIVATISATION)

Regime change in Hungary (and in the CEE region) has created a new situation regarding the relationship between the town and the cement factory. Politics was again in the forefront but in a new role:

“Politics separated the economy from local politics. Regime change really brought uncertainty and, at the same time, new opportunities for environmental protection: we could strike the iron while it was hot and we had more opportunities to do so.” (environmental officer at local government)

“Approaching the regime change, we were getting more fearless...” (President of Committee for Urban Development and Environmental Protection at local government)

The broader context was very conducive to green issues; without exception every new party put ecological issues among the priorities of its political agenda. According to some commentators, under the flag of ecology every kind of political interest unified and expressed its discontent with the communist regime: it was a time of national environmental protest. Amongst the most notable of these was the protest against a proposed dam on the Danube, which resulted in significant domestic political struggles throughout the first half of the 90s, as well as in an international conflict with the newly independent Slovakia (ultimately heard at The Hague). Tensions in the case study town were also growing high:

“We had civil actions such as the washing of cement trucks... We blocked the gates of the cement factory and let only those loaded trucks out which were washed inside... police were on our side during these actions, and a policeman was always standing there with us so as to prevent the truck drivers from chasing us away with a steel wheel-loosener...” (President of Committee for Urban Development and Environmental Protection at local government)

It should also be mentioned that, in those times, every truck was covered in dust and, according to observers, at least half a sack of cement dust could be swept off each cement truck – undoubtedly, this had a lot to do with the human factor.

The most important effect of regime change with regard to economic institutions was obviously privatisation. The process of privatisation has turned out to be important for the cement sector in general and the factory in question in particular. The then-CEO has

described the events in detail:

“It began with us... that we exported to Western Europe... Frequently, there were hot discussions with the foreign cement sector because... they wanted to impede our exports since price systems, even in the second half of the 80s, allowed us to export economically on a price level which they considered to be dumping.... we were in constant struggle with them... [T]hey objected that... ‘You don’t have to pay for environmental protection!’... Consequently, we were not exactly in market competition with each other... and, during one of the discussions the idea emerged that ‘Sirs, we, of course, want to change our environmental protection... ‘Sirs, let’s invest in the Hungarian cement industry!’” (then-CEO)

New economic laws were introduced at the time to open up the Hungarian market for foreign investors. First as a joint venture (from January 1, 1990), then, with gradually growing foreign ownership, the privatisation of the Hungarian cement industry finished in the middle of 1994 when western European companies had obtained a 100 percent ownership of the entire Hungarian cement sector.

Western European investors brought an environmental attitude, as well as financial resources, to the cement firm – all our interviewees agreed on this. The opportunities for greening were favourable: the new owner, as a leading cement company in Europe, established the same expectations towards its Hungarian subsidiary as existed towards the factories in its home country (whose citizens are often cited as having a high level of environmental awareness).

“The owners have *ab ovo* had a European attitude... They have demanded us... and required us the standards that are taken for granted in their home country.” (Manager of work safety)

Financial resources were provided by not repatriating profits but reinvesting them into the plant, according to the Hungarian CEO of the cement factory. Nevertheless, the foreign company was careful and committed enough, before privatisation, to invite a group of Hungarian stakeholders, consisting of representatives of local government and civil (including green) organisations to visit one of the factories in its home country. One of the visitors recalls her/his experience as follows:

“We did expect that no old, tumble-down factories could be seen, but to tell the truth our faces fell... [W]e saw their cement trucks painted black that makes any dirt be better noticed and those trucks were absolutely clean... [T]hey showed us how to rehabilitate a wound in the mountainscape... [T]he owner assured us that ‘I would like to make my investment on a longer time horizon and it is at least 150 years. I consider

it not only as a source of livelihood for myself but for my great grandchildren, too, and as soon as my new investment turns to be profitable I will invest not only in the plant but in the town as well.' ” (President of Committee for Urban Development and Environmental Protection at local government)

After privatisation, technological reconstruction was accomplished. All dimensions of production technology were renewed and computer-aided operations and management systems were introduced. Internal and external emissions were reduced below prescribed environmental standards in Hungary; a closed clinker-storehouse was built; filters, cement silos, and internal materials storehouses were all modernised; a closed assembly line was built for transferring limestones from mines; and cement filling stations were also reconstructed to be hermetically sealed. The recultivation and rehabilitation activities in closed mines were redoubled. By the end of the summer of 1996, the plant was certified according to an ISO 9002 quality standard. Though a few sources of emissions charged to undercompliance still exist (at points of in-road cement loading), the general opinion among stakeholders is that “now dust emission in town is only caused by secondary sources;” that is, previously sedimented emissions activated by increased road transportation. The environmental officer at the local government summarises the environmental achievements of the cement plant:

“Currently, there is not any place in town where emissions are registered as above standards.” (environmental officer at local government)

To the great satisfaction of the president of the committee for urban development and environmental protection at the local government:

“... today the pocket-knife of the worker in night shift has no role anymore because the current technology excludes it.” (President of Committee for Urban Development and Environmental Protection at local government)

At the same time, senior and middle management are not oversatisfied with the results reached so far and emphasise the need for further and continuous development in environmental performance. One source of environmental pollution that still exists and awaits a quick solution is the noise pollution in the transhipments port. As the Manager of work safety explains:

“... in the beautiful [name of landscape] we do not want to generate any nuisance...”

(Manager of work safety)

Privatisation has also resulted in an economic rejuvenation of the cement firm. In contrast to many other examples of privatised, formerly large, state-owned companies, the number of employees at the cement firm has steadily been rising, with a horizontal expansion of production activities to include a mortar and plaster plant. Moreover, the company has started a wave of acquisitions by vertically integrating different kinds of primary input producing businesses.

8.4. AND THE CHIMNEYS FALL DOWN... (THE COMMUNICATION AND AESTHETICS OF GREENING)

In October 1997, a symbolic event brought a showy conclusion to the polluting past of the cement firm, as well as to the membership of the town among the “dirty dozen.” Three chimney stacks, each more than 100 meters high, (the remaining parts of the previously employed Lepol-furnaces) were demolished. According to interviewees, the chimneys were symbols:

“The three chimneys became a symbol, a beloved and hated symbol.” (then-CEO)

The chimneys had been included in the arms of the town during the communist regime, symbolising symbiosis of factory and town (and of course, industrial development, too). Though they were erased from the arms in the post-communist years, the chimneys themselves were still standing and could be seen as a torso of the past from every segment of the town. Their detonation was a striking final event in the abolition of the past for local people:

“... the town could breathe freely again, the very last sign disappeared.” (shop-floor worker of the firm and native inhabitant in town)

The disappearance of the chimneys symbolised the disappearance of pollution, as well as a new era of development in the history of the town. A company newsletter speaks about the event as follows:

“The three chimneys were symbols of the factory as well as the town – for a long time they were even included in the arms of [name of town] which brought negative associations up. Their shut down and demolition are obviously of a symbolic significance, since their disappearance symbolises the unhampered development of the factory, the pulling down of out-dated equipment, and a new direction for development.”

Organizing the event involved a conscious PR strategy on the part of the cement company, through which they intended “to explode all the negative associations regarding the plant,” relegating them to the past. They believed that the shadows of the past had to be effectively chased away – a perception that is underlined by a story the PR Manager told about a popular radio cabaret show in which the following joke was shared:

“I saw small grey people around [name of town]. I don’t know whether UFOs has arrived there or there has been a day-shift in the cement factory.”

According to the PR Manager, negative associations are indeed strengthened by the fact that the main product of the company is “grey” and “dust-like,” and therefore, has no prestige value and to which associations such as “dirtiness” and “good for nothing” are easily attached. It is thus not surprising that company leaflets and other promotional materials have been visually renewed to be “more colourful,” “cleaner” and “more natural;” the grey cement (stone) is matched with green ivy (picturing a wall of a house partly hidden under the ivy). Green ivy is intended to refer to the naturalness of stone (cement) in order to build a new set of associations with the product and the firm.

The collapse of the chimneys symbolically initiated a new chapter in the relationship between the town and the firm: a peaceful, harmonious, “mutual life together.” It is perceived as such not only by the managers of the cement company, but by local residents in general and local government in particular. The two local officials interviewed have emphasised that today there is “a trustful, good relation” between the town and the factory which can be considered as a model. A recent survey commissioned by a market research firm further supports a positive judgement by local citizenry upon improving corporate environmental performance. The survey demonstrates an unusually high popular respect for the environmental efforts of the factory and an appreciation of good corporate citizenship. The PR manager proudly states:

“Those people who before emphasised negative things based on previous facts [now]

see, recognise, perceive, and speak about it [i.e., environmental efforts of the firm]...”
(PR Manager)

Change is so striking that the interviewees were lavish with aesthetically rich descriptions. The aesthetic contrast between present and past emerging from the words and expressions they used could not have been greater. The previously enormous air pollution made roof tiles “grey instead of red;” “grey dust was deposited on window sills and automobiles;” or “walking on the grass made one’s feet as grey as cement dust” in the gardens of the resort area; and, the spoils of mines made a striking presence by “a devastating mountainscape,” “a disrupted hill,” or “beauty defects” on the hillside. In contrast, today “green” areas, “nature’s beauty,” and “nature’s harmony” dominate all the descriptions:

“In the courtyard which was before covered with cement dust now green grass is growing... it has become a factory with flowers everywhere.” (shop-floor worker)

“We are proud since we ourselves experience that not only our environment became more beautiful but our workplace became much more beautiful... now circumstances [are] civilised.” (PR Manager)

“... from an aesthetic point of view [the factory] looks now as modern, except a few small things, as at any of the modern cement factories in Western Europe.” (then-CEO)

“Today the factory concentrates its efforts upon building up an aesthetic appearance which suggests that the environment is intended to be harmed as minimally as is feasible.” (President of Committee for Urban Development and Environmental Protection at local government)

The factory and the town together emerged out of “greyness” and now seem to be associated with green and colourful flowers – the aesthetic aspect of rebirth.

8.5. LEADERSHIP

The present CEO has played a key role in the greening of the cement factory. His role is praised by the then-CEO as well:

“This [corporate greening] is partly, or mostly, due to Mr. [name of CEO] and his team.” (then-CEO)

Context and person have merged⁴³ and the CEO – by virtue of his professional skills, leadership style and commitment – could become the “leader of rebirth.” Most of the interviewees underlined his role: “he successfully took over the torch passed on;” “his dynamic and purposeful functioning” provides employees with a strong motivation; he spreads over and forces commitment and attitude change (“he sped up events”); and, in his role of making and maintaining external connections with stakeholders, he is the primary messenger or representative of the greening of the cement company.

There is no leader without followers – and the CEO seems to be aware of this fact:

“An environment cannot be managed by one’s will, it can be done so by motivation and the set of motivations include actions to make the internal [i.e., organisational] environment more beautiful from the social conditions of workers to working-clothes... [I]t starts from those things and then they will believe that the big goals work on the right lines, too.” (CEO)

Thus, “positive motivation,” and “winning workers over to a cause” become a possibility and the internal, or organisational, credibility of a leader can be established and maintained. According to the CEO, it is not enough for a leader to set a good personal example. The task of leadership is built out of “a number of motivational elements,” of which “the most significant” is to “regard the other as a human being,” and if s/he “makes a critical remark” it is “worth reflecting upon it.”

Effective leadership might partly explain why the lack of an environmental manager position has not seemed to hinder environmental performance improvement. Though officially, standard environmental management tasks are assigned to the unit of work safety, this is mainly because of regulatory requirements:

“... to really emphasise its importance [i.e., environmental management] related tasks and responsibilities were, on the one hand, assigned to projects in the previous period and, on the other, to communication. A matrix-type organising of environmental responsibilities work better in a cement factory. Clearly, the principal responsibility lies therefore... with top management, who delegate them down through the hierarchy. But it is always clear with whom responsibility lies; thus, who is responsible when it is related to regulation or communication... as routines are established, these tasks should be delegated down from the top, and top management should only deal with those issues – according to the principle of managing by exception – which concern that level, slowly... we get to this state-of-affairs.” (CEO)

⁴³ The present CEO was previously the top manager of the other cement factory the western European cement corporation bought during privatisation. In 1997 the two factories were unified and the headquarters were located in the town of our story. The top manager at that time in the factory of our story soon retired and then this manager has stepped to the top.

8.6. CREDIBILITY

Another key category in interpreting the greening of the cement factory, beside that of leadership, is credibility.

“These are indeed not unnecessary investments [technological reconstruction], and these should be implemented with the greatest commitment and effectiveness, so as our activities to be accepted by our environment; and to be increasingly felt that we really want to change them [i.e., operations]. It is in our best interest, too...” (CEO)

Yet what process to follow in building up legitimacy?

“It works by the principle of putting together the large and small steps one takes. First, big issues should be put in order so as to be able to deal with the smaller ones... without a fundamental technological renewal and while dust is emitted by chimneys, while storage facilities are open and contribute to dust emission... there is no sense of talking about environmental protection with regard to a cement factory. This was the first step to take... The second one was smaller and was related partly to smaller technological changes and partly to the whole issue of motivation... A cement factory, I think, cannot let anyone entering the plant see no green areas at all... There are such small things as... protecting the shape of the buildings, providing a pleasant look of the office rooms, operating social facilities for workers in a more pleasant and environmentally friendly way. If it is not put together in such a way it is not credible and, without it, all the other economic objectives can hardly be achieved... We will be more credible in our environment, we will be more credible in the eyes of our partners and this will suggest to our customers that the products we offer can safely be used...” (CEO)

One could hardly expect a more straightforward expression of the so-called integrated strategy, referred to in the literature review of Part I. An integrated environmental strategy is characterised by a synergy between the elements of a “green” competitive strategy and those of a “green” non-market strategy. This is a way to establish the credibility of corporate environmental efforts and claims in the eyes of internal (i.e., organisational) as well as external stakeholders. It is not enough to publish an environmental mission statement, however excellently written,⁴⁴ and it is not enough to make a few aspects of corporate operations “greener,” the whole organisation should be positioned strategically as environmentally conscious or sound.

⁴⁴ Indeed, given the case of this cement factory, it might not even be a necessary requirement. The factory has no stand-alone environmental policy statement, though its quality assurance policy statement includes

This story of the cement factory greening is one of regaining local community legitimacy or re-establishing good corporate citizenship. The emphasis was therefore on the non-market elements of environmental strategy.⁴⁵ Conscious efforts and resources were targeted: first, towards comprehensive technological reconstruction in order to significantly reduce environmental pollution, and next, to environmental communication. Not restricted to a one-sided standard marketing or PR campaign, this latter included elements of a more open dialogue. Of course, the non-market communication strategy was to a great extent built upon symbolic actions such as the demolition of the three chimneys (an act of irrelevance in terms of pollution performance).⁴⁶

Regained trust and legitimacy were manifest in the interviews with organisational as well as external stakeholders.

“This [greening] is good and right as it is and as it is done now... We see that everybody does his/her bit in order to reduce polluting emissions of the plant as much as possible...” (shop-floor worker)

“Now we have reached that, if the factory wants to change something, they first come to us [local government] to discuss it... thus we are not confronted things done after the fact.” (President of Committee for Urban Development and Environmental Protection)

It should be noted that, in achieving and maintaining internal and external credibility, the main role is that of the leader who – as far as it is possible to judge – is aware of and cultivates this credibility.

8.7. EXTERNAL STAKEHOLDERS AS AGENTS IN CORPORATE

environmental concerns, too.

⁴⁵ An evidence of environmental awareness can be found in the following citation from the interview with the present CEO, in which he clearly expressed his awareness of the special environmental risks arising from plant operations: “... when [name of factory] is located on the border of the town, it constitutes a different environmental factor or condition, and by taking into account public opinion ... the sensitivity of communicative reactions is different...” The type of environmental risk under consideration here is termed by Kerekes–Kindler [1995] as the social element of exogenous risks.

⁴⁶ The then-CEO of the cement factory also emphasised that a major differentiating characteristic of this case of corporate greening within the cement sector is the very active role of marketing and PR. This fact is partly due to the foreign owner, since – as he also mentioned – its operations all over the world share this characteristic compared to competitors.

GREENING

It is undoubtedly striking that institutional changes (such as regime change and privatisation) constituted, at the same time a threat and an opportunity for the greening of the cement factory. It was pointed out that, as the past regime dissolved and the factory lost its exclusive dominance over the economic and political life of the town, the cement firm found itself threatened by spontaneous environmental protests of the local civil population. The environmental pressure of the local community gained an additional political prominence from the support of the freely elected local government. The local political context has changed radically. This point is well expressed by a sort of self-assessment of the environmental officer at the local government:

“I have come to [name of town] for ten years... I was invited first and foremost not because of my expertise but rather because the town was in need of an environmental engineer who was not yet eaten. Who did eat environmental professionals in town? Well, the cement factory, indeed...” (environmental officer at local government)

As to the opportunities, the role of the new owner has already been discussed and it was pointed out that the under-capitalised cement company has benefited financially as well as technologically from privatisation. Furthermore, it was also mentioned above that the new European owner has brought along a well-established professional and organisational culture including an environmental management attitude that takes for granted dialogue with external stakeholders (even green organisations). Of course, there might not have been a strong influence without the sense of activity of the employees of the Hungarian plant nor without the environmental policy of the local government: however strict, it was always willing to reach a compromise. The latter is evident in the following citation:

“I did always try to reach a compromise and to take the issues accordingly. Thus, entering into negotiation with the management of [name of factory] about how things can better be handled, negotiations started with... a search for actions to make things better for all involved... I tried to support positive solutions... [since] it is always easier to produce a radical critique over something... than to further the object in a positive direction...” (President of Committee for Urban Development and Environmental Protection at local government)

The supportive stance of the local government was acknowledged by the then-CEO as well:

“After they [local government] experienced that something has started [at the factory]

the relationship continually improved and they in fact tried to help in every aspect with it [i.e., greening]... they could, to some extent, attribute the achievements to their own efforts.” (then-CEO)

Factors attributable to the cement sector also played their part in the greening of the plant in question. On one hand, the “cognitive community” of the cement sector is relatively strong. Among other things, this is evident from the dedication to a sector-wide professional culture – a primary example of it being the popularity of the annual “Days of the Cement Sector.” Furthermore, one of our interviewees, referred to as “then-CEO,” can in many respects be considered the “founding father” of the Hungarian cement industry. The interview with him revealed a continuity in the ranks of top management of Hungarian cement firms after the regime change and the process of privatisation.

On the other hand, special care was taken during the privatisation process to preserve the previously established research and development capacities of the cement sector. The existing research laboratories and institutes were put under the direction of the Hungarian Cement Association (HCA), and still today provide services that include environmental research and consulting, for all cement factories in Hungary. The HCA has joined the European Cement Association and the information and knowledge flow from the European partners concerning environmental management issues benefits much of the Hungarian cement sector – as some interviewees emphasised. The HCA employs a full-time environmental expert and has operated an environmental committee for years. Relatively soon after the regime change, all of the cement plants succeeded in certifying their operations according to the ISO 9001 quality standards and in Hungary the first company certified by an environmental management system, BS 7750, was one of the five cement factories in 1996. Taken together, these facts suggest a supportive sector-wide culture and infrastructure with respect to corporate greening.

8.8. SUMMARY ANALYSIS

The above story of corporate greening is not only about a once heavily polluting cement factory becoming “greener” (in terms of physical pollution as well as visually or aesthetically), but also about a development in the relationship between the plant and the local community. The change in the cultural dimension of the institutional context seems to be a necessary explanatory factor in this story of corporate greening:

“I think the pace of development has passed all around. As the quality of our life has changed in many respects... the factory itself and its environment have changed in this [i.e., environmental] field to the same extent... this is [a process of] becoming European. We try to set those standards to us and to our environment in every area of life that is necessary and important for a more civilised way of life.” (PR Manager)

Rebirth was chosen as the key category for this story of corporate greening. Undoubtedly, the possibility for a “greener” rebirth was provided by the wider institutional context (structure), as well as the strategic actions of different stakeholders (agency). The impacts of macro socio-economic changes were discussed as threats and opportunities for corporate greening. The roles of internal and external agents were also introduced – agents who could take advantage of the new macro rules-of-the-game and turn threats into opportunities for greening. This story of corporate greening is situated in the continuous socio-political transformation of Hungary in the 1990s.

Rebirth as a key category refers to an emerging new engagement between agency and structure, in this case of corporate greening. The most important sub-categories are credibility and compromise. From a theoretical perspective, they constitute the fundamental elements of an “integrated strategy.” In a socio-economic context, under transformation, non-market elements of an integrated strategy seem to be of prominent importance. Thus, issues of social legitimacy, trust, and credibility are at the centre. Re-gaining social trust in a multi-stakeholder context may be a slow and troublesome process that necessarily involves frequent dialogue with different stakeholders and mutual compromises for the sake of the common aim to improve environmental quality. The agents of this story of corporate greening seemed to be aware of and consciously seek these out, at the same time taking advantage of as well as strengthening the structural possibilities for greening.

One may wonder whether systematic environmental improvements in the performance of the cement factory will continue unhindered or if the lack of an environmental manager as well as an environmental management system will, at some point, constitute impediments. The usefulness of an environmental management system like ISO 14001 is perceived as follows:

“[W]hile in Europe it is expected to have an ISO-something certification, interestingly there [in the U. S.], I do not say, it is not important because there it is a market factor as well but the point is rather... how the whole operates, that is a *Total Quality*

Management perspective... we have considered ISO 9002 because it has become a market factor. We considered it important because its system proves to be helpful in clarifying processes of doing business, making feedback functions effective, but not in order to have it for its own sake... if ISO 14001 will become a market factor it pays to get it, but that is not the main point... ISO consists of a lot of formalism, and many just get it for its own sake but do not integrate it into their organisational philosophy.” (CEO)

Moreover, a vision for future improvements was also expressed by this interviewee:

“Probably, we will implement it [an EMS] because it is going to be a market factor and also because we will get to the point where our operations will effectively integrate those elements out of which it will be easy to construct... we are continuously preparing ourselves for it... we regard cement production as part of a total quality management system because it is much easier to organise operations accordingly and it pays more to do it accordingly... where the environment and the customer are on the centre stage.” (CEO)

The cement factory seems to define itself as a part of a community of stakeholders. Corporate greening is thus understood as good corporate citizenship. As time passes, it will reveal how firm an organisational identity like this will be as a foundation for continuous environmental performance improvement.

CHAPTER 9

A STORY OF A SENSE OF EXCELLENCE: CORPORATE GREENING AS ECO- MODERNISATION

9.1. INTRODUCTION

The case study below is the story of the greening of the largest chemical company in Hungary. Eight interviews were conducted, all with the employees or managers of this, widely considered “impressive,” chemical firm.⁴⁷ No external stakeholder was found to be relevant in the unfolding of this story of greening. There is no green organisation in either adversarial or beneficial contact with the corporation in question, which is telling in the case of a chemical company, nor has the local government taken the potential risks of petrochemical operations into serious account by establishing any kind of environmental organisation within its own administrative or political structure. This fact seems even more striking if one considers the other two potentially heavy polluting companies – an energy utility and another chemical plant – located close to the settlement in question.

Yet, an external perspective is not entirely missing, as a telephone interview was conducted with the environmental expert of the Hungarian Chemical Association (HCA), introducing the official perspective of the chemical sector on environmental issues and the progress of chemical companies in Hungary during the so-called “transformation period” (1989–1998). The surprising lack of external stakeholders as significant agents in corporate greening was also emphasised by the Environmental Manager of the firm in question.

Another striking feature encountered during the organization of interviews was the eager willingness to communicate on the part of every interviewee, especially compared to the other firms approached for the case studies. This resulted in an over-representation of top managers among the interviewees at the chemical company in question. Four top management ranked interviewees were, respectively, the Directors for Strategy and Business Development,

⁴⁷ All the interviews and archival work were done by Richárd Szántó.

Marketing Communication, Environmental Technology and Research and Development (R&D) (the latter was interviewed twice). Two interviews were conducted with the Environmental Manager and one with the Organisational Development (OD) Manager (the latter reports directly to the Human Resources director). Interviews lasted an hour, on average and the breakdown is as follows:

Table 11 Interviews for Story 2

	Number of Interviews
<i>Within the corporation:</i>	<i>(8)</i>
• top management	5
• middle management directly reporting to the top	3
• lower middle management and shop-floor	–
<i>Outside the corporation:</i>	<i>(–)</i>
<i>Total:</i>	8

As the story unfolds, the reader shall encounter a proud organisational self-identity streaming from the words of the interviewees, without exception – noteworthy sign of a strong culture in operation, at least in the higher ranks of corporate management.

9.2. GENERAL BACKGROUND

The only plant of the chemical firm in question is located near a smaller town (1.5 km to the south). The town itself is an exemplar of the so-called “new communist settlements,” forcefully developed from a small agricultural village to an industrial town during the 1950s and 60s, at the height of central planning in Hungary. It is no accident that many of the interviewees claimed a symbiosis exists between the town and the chemical company as the largest local employer: “there is no life in town without the firm, and there is no firm without the town.”

“The town was built at the same time as [name of company]. There were times when [name of company] itself served as a public utility, too. When the plant was being located here in the beginning of the 60s, the construction of public utility services was started, at the very beginning with a wastewater utility. The firm has treated wastewater from the very beginning of its operations; first, municipal wastewater streams were treated, then industrial wastewater, too.” (Environmental Manager)

The location of the plant has been beneficial in terms of any potential nuisance: it has no direct border with any residential areas.

“The set of initial conditions that served as a basis for subsequent environmental improvements was very advantageous. For it is evident from the location of the plant that there is no direct border between the residential areas and the company. Consequently, environmental effects inflicted upon the settlement can hardly be experienced. Neither noise pollution nor any other types of nuisance can be observed as a sign of our operations.” (Environmental Manager)

It is also beneficial – though primarily from an economic perspective – that the plant is located very close to Hungary’s second largest river of (1.5 km to the east), since this natural water source constitutes a relatively cheap resource for both industrial water supply and wastewater sink. However, there is an environmental risk-increasing condition, in that this plant, with a town-like size (approximately 5 sq km), is located in an ecosystem officially classified under the most environmentally sensitive groundwater category.

The firm under investigation operates as a petrochemical complex, its main products being polyethylene and polypropylene which are “nowadays the most widely produced and used types of plastics all over the world” – according to the Corporate Environmental Report of 1999. As the Environmental Manager, an employee of the chemical company for 36 years, recalls:

“This was a firm in the 60s with great future prospects, and there was very charismatic leadership, too. First, it was a fertilizer production plant, then, from the 70s on, the production activities have shifted to petrochemical operations. This was and still is the very first olefin plant ever built in Hungary. Later, different basic plastics-producing units were put into operation, polymer plants, for example, and, then, plastics manufacturing started to gain significance, too...” (Environmental Manager)

Every manager interviewed considered it to be of prime importance that the chemical company has applied the best available technologies in every respect:

“[Name of company] operates the latest technologies developed in Western Europe and Japan. [Name of company] has ever been operating the latest technologies available; from its very inception, it has ever represented a high-tech production and operations plant.” (Director of Marketing Communication)

All the managers interviewed drew attention to organisational culture as a significant element of the set of initial conditions beneficial to any subsequent environmental improvement. From the start of production in 1964 until 1989, the chemical firm was managed by the same individual, said to be a charismatic as well as authoritative leader. His

personality has left significant imprints in the organisational culture:

“He was an extremely strict person and an extremely precise person. He required everybody to keep order, tidiness, and discipline within the company... then, a civilised surrounding was created and maintained. The production units were in competition with each other over tidiness, being free from accidents, and many other aspects and workers’ consciousness was formed in this way, too.” (Environmental Manager)

The Director of Strategy and Business Development perceived no adaptation problems to the gradual enactment and increasing strictness of environmental legislation and regulations in the years of political transformation, because

“At [name of company] technological discipline was ever so high and widespread that it was extremely easy to build upon it – also with strict discipline – an environmental organisational system.” (Director of Strategy)

Once a state-owned socialist company, the chemical firm became a still state-owned but stock-based company on January 1, 1992 when the preparation for privatisation started, finally (1996) resulting in the chemical firm becoming a publicly traded company, issuing its stocks on the Budapest and London Stock Exchanges at the same time. During the period of preparing for privatisation, the chemical plant was audited three times by western European environmental service companies. The results of all the audits mirrored the widely held belief within the firm that there is no environmental problem out of control associated with the plant – they are leaders in their sector by environmental standards, as well. Therefore, it is not surprising to encounter proud satisfaction in many interviews about corporate environmental performance in general, and the findings of the three environmental audits in particular:

“Corporate environmental performance every time was judged to be good.”
(Environmental Manager)

The political regime change and the process of privatisation meant discontinuous change neither in the economic situation of the chemical company in question nor in the process of greening. From an economic viewpoint, it is significant that the firm had already been connected to developed Western markets well before the large-scale changes in the institutional environment in Hungary, since more than 50 percent of its exports served the demand of these markets. Though in its home country, environmental legislation and other sources of environmental expectation did not yet constitute an important strategic factor, the

environmental requirements gradually emerging in its western markets were channelled to the firm quite early on.

Today, the chemical firm operates organisationally as a holding company, owning many satellite companies and having a number of commercial units abroad. The chemical plant (the firm's headquarters) consists of four business units, of which its petrochemical business is the largest in every respect, followed by plastics manufacturing, services, and environmental technology, respectively (according to number of employees as well as gross and net revenues). This latter and latest business unit includes three legally independent companies (public limited companies, or PLCs). The holding company has approximately five thousand employees, of which the chemical plant employs approximately 2,300. In 2000, a main strategic decision was taken about the gradual divestment, or sale, of the plastics manufacturing business units, which seems thus far to be quite a slow process.

The story of corporate greening being told here is restricted to the chemical plant; it does not cover the whole holding company.

9.3. ENVIRONMENTAL MANAGEMENT WITHIN ORGANISATIONAL HIERARCHY

The Office for Environmental Protection (or briefly, as it is used throughout the firm, Environmental Protection) functions as a central staff unit within the organisational structure, under one of the directors. The superior of this environmental unit was changing almost year to year: for example, in 1998 it reported directly to the Director of Technical Services, whereas in 1999, it was assigned to the Director of Administrative and Legal Affairs, then, during the last two months of 2000, its position in the formal organisational hierarchy changed again when it was placed under the newly-created position of Director of Technical Affairs. Yet, the Environmental Manager himself reports no substantive change in the range of functions and authority of the relatively small environmental unit (consisting of ten positions overall), which covers all the ecologically-related aspects of the whole organisation.

“I can say that our range of functions provides us with an authority over the whole company with regard to environmental affairs. This does not mean that we carry out operative environmental protection measures but we determine the requirements, the tasks according to different jobs; we manage the environmental management system which was the first one introduced by a Hungarian chemical firm in 1997 with international certification according to the ISO 14001 standard. In fact, we coordinate

the treatment and implementation of any environmental problems emerging from production, planning and design and development. We are in contact with the environmental authorities. We have a 'maid-of-all-work' role. And we control how the different units carry out the environmental tasks assigned to them... We are everywhere; we are watching and controlling everywhere." (Environmental Manager)

Thus, the environmental protection department functions as a central staff unit just like the Departments for Health Protection and Safety Affairs, but in contrast to quality issues which belongs to the level of business units. Although all the business units of the chemical plant were certified with ISO 9001 quality management standard until 1993, the ISO 14001 environmental management system was independently introduced and is also independently operated. As an explanation for these early-mover type actions in the Hungarian chemical sector, the Environmental Manager referred to market expectation:

"Finally this was a market factor... If we had ignored these, then... in fact, ... these would have been a cause for market discrimination against us. And we wanted to keep our market." (Environmental Manager)

Of course, he was referring to Western markets. After the introduction of quality standards:

"Stemming partly from the recognition of top management and partly from that of Environmental Protection, top management formulated the idea that in this [environmental] field steps have to be taken as well, because we realised that our business partners have started to ask for information about our environmental conditions." (Environmental Manager)

Compared to the other case companies under review here, this chemical plant does not operate its quality and environmental management systems in an integrated way and quality affairs do not seem to dominate environmental issues. At least one reason is the significant informal power and local expertise of the Environmental Manager stemming from his being one of the oldest employees of the firm. As he said, without any lack of modesty, the history of corporate environmental protection here can be identified with the history of his personal career. Moreover, he proposed a detailed professional explanation of the "qualitative" difference between environmental and quality management systems:

"At [name of company] ten-something quality assurance systems are in operation. Since quality assurance is a product specific system, it is arranged as a connection between the producer and the customer. An environmental management system is designed to set a system of requirements for the entire operations system. Therefore, there is only one environmental management certificate for a company which covers

all its operations. This by itself is a new, qualitative difference between the two management systems. The other difference is that in the case of an environmental management system, technologies can be modified so as to reduce environmental impacts. While in the case of a quality assurance system the interest of the producer is clear and straightforward, the motivation behind an environmental management system is not so. Since the latter provides only indirect benefits to the producer, disadvantages are more prominent especially when a number of steps should be taken in order to be effectively in compliance with the system.” (Environmental Manager)

The difference between quality assurance and environmental protection in terms of motivation is of primary importance. Defects in quality make a product unmarketable (not conforming to the relevant product standard simply excludes a chemical product from the market). In contrast, environmental problems or implementing their solutions “can be delayed.” At the same time the Environmental Manager conveys a sense of superiority of his profession over quality management:

“On the other hand, operating an environmental management system and treating the entire set of environmental problems require substantially more professional knowledge. Because any solutions can only be offered if one has the knowledge about the sources of the problem at hand and it is the entire technology itself... In fact, the majority of those who are now dealing with quality assurance have never worked in the shop-floor, since the administrative system prescribed by the quality standard determines and controls the set of requirements specified for a product and technological knowledge has no importance here.” (Environmental Manager)

The influence and power of representatives of environmental protection were strong enough to maintain their independence from quality management even in the functioning of an environmental management system. However, they were not powerful enough to raise the representation of environmental protection to the level of top management, that is, establishing a position of Director of Environmental Protection.

“We have not been successful in struggling for it. The reason could be that anyway things are going fine at [name of company].” (Environmental Manager)

All the other interviewees at the firm argued against the symbolic importance of having an environmental managerial position at the top level of management:

“His Environmental Manager status and position is ... how can I say ... [name of company] is not such a hierarchical company. The job of the Environmental Manager is very important.” (Director of Marketing Communication)

“There is no need for it [that is, to have an environmental director]. The name of the

position someone has doesn't matter at all, does it?" (Director of Marketing Communication)

"The Environmental Manager ... you can call him Environmental Director, too, if you like, but it would not mean greater authority and prestige for him." (Director of Strategy)

Yet, one of the interviewees revealed that the reason could well be "subjective," in the sense that Environmental Protection does not enjoy full support at every level of the organisational hierarchy, because many perceive it as being a "trouble-making" organisational unit that prescribes more tasks and jobs to other units and strictly controls their implementation. Not surprisingly, this can easily result in conflicts, which the Environmental Manager also referred to when describing environmental consciousness at different organisational levels of the chemical firm:

"It is interesting how environmental consciousness is distributed... Top management fully accepts these requirements; it can be said that they pursue environmentally conscious behaviour. At the shop floor level, including those who control the implementation of environmental tasks... at the level of production... that they control, I can say, environmental consciousness has improved a lot. Interestingly, those middle managers who are responsible for the performance of business units, that is, those who directly report to top management and whose primary responsibility is to carry out the numbers assigned to their units by the annual business plans, are sometimes willing to neglect or, compared to their importance, downgrade some environmental problems because of the priority of cost savings and short-term profits. But we are always able to counterweigh these tendencies, because we are to discuss them. Of course, the change in their [middle managers' environmental] attitudes can be perceived, too." (Environmental Manager)

Seen from this perspective, it is obvious that representing environmental interests and requirements within the organisation is not the most popular task at all and is further aggravated by the usually less influential position of a staff unit in the organisational hierarchy. Nevertheless, the introduction of an environmental management system is said to have strengthened the position of environmental interests within the chemical firm:

"Now we participate in the preparatory phase of every investment project which means that all investments, or plans for investments, have to be presented to us for evaluation. This is a major achievement and of great importance. [This is the situation] since we operate the environmental management system, before it was not so systematic at all. But it is getting more and more systematic. And... this is coming from above [that is, from top management]." (Environmental Manager)

Now there is regular representation of environmental protection in the organisational pre-

assessment of planned development projects.

There are two factors that should be emphasised so as to better understand the organisational position and strength of environmental protection within the chemical firm. The interviews with top managers demonstrated their environmental literacy and commitment; in particular, the language they used to conceptualise environmental problems seemed very modern and up-to-date, and the issues and concepts they raised (e.g. sustainable development, etc.) showed a strikingly homogeneous understanding. Although there is no organisational committee dedicated exclusively to discuss environmental affairs by top managers, the Director of Strategy pointed out that during executive meetings and even board meetings, environmental issues are frequently raised or discussed. The other factor relates to research and development and the brand new business unit of environmental technology. Both organisational units rank at the level of directors and both have a tight connection with Environmental Protection unit. Moreover, the Director of R&D is a university professor whose invention of re-using mixed plastics waste was just patented by the chemical company all over the world. This new plastic material (the result of the mechanical mix of different waste plastics) and its possible range of applications for alleviating different sorts of environmental problems constitute the business logic for establishing a new business unit for environmental technology within the company. For years, the Research and Development Department has had a research team exclusively dedicated to environmental research and development. Therefore, the representation of environmental interests within the chemical firm is much stronger than is simply evident from the position of the Environmental Protection Department within the organisational hierarchy. It can further be argued that these above-mentioned facts provide an enhanced opportunity for a preventative and integrated environmental management approach to emerge within the firm.

9.4. TECHNOLOGICAL MODERNISM

Production of petrochemical primary materials (the olefin factory) is undoubtedly one of the most environmentally risky chemical operations. Petrol and raw petroleum decomposition processes in the cracking bloomeries produce ethylene and propylene; from ethylene, polyethylene and from propylene, polypropylene are produced. During

production, these primary materials are granulated, after which they can be used to manufacture different types of plastics products.

The Corporate Environmental Report of 1999 lists all the different technologies used in petrochemical production and claims them to be “modern, computer aided manufacturing systems.” Furthermore, interviewees talked about the technologies of the chemical firm only in superlatives:

“As to the technologies of the company – noting that all the old-fashioned and obsolete ones were shut off and dismantled – I can say that every one of them are western, up-to-date technologies which comply with the requirements of the European Union and that they are judged to be the best available technologies. This, at the same time, makes environmental impacts easier to treat because modern technologies have the fewest problems... not only in terms of their operations, performance, and product quality but also in terms of environmental affects; environmental impacts are relatively negligible. I am not saying that there are no environmental affects at all since there are no such a technology... but they belong to clean technologies.” (Environmental Manager)

According to the Director of Strategy, the chemical firm operates only well-known technologies, whose licenses are bought from those large multinational corporations that have enough financial resources to engage in the research and development of basic petrochemical technologies. Compared to those corporations, this Hungarian chemical firm is a middle-sized petrochemical unit:

“These technologies are bought from those firms that have been the flagships of environmental movement and improvement. ... These are all... technologies that have stood the test of time and come from West European, developed countries... Consequently, it is ab ovo nonsense that... such a technology is transferred which is not in compliance with the prescriptions defined by [name of company].” (Director of Strategy)

The words of the Director of Marketing Communication mirror no less confidence than his colleague’s:

“These absolutely up-to-date and highly developed technologies are ab ovo designed to have as small an environmental burden as possible. ... The technologies operated here are ab ovo designed to be environmentally sound. ... We operate western European, American and Japanese technologies.” (Director of Marketing Communication)

By studying the environmental reports of the chemical firm (from 1997 to 1999), one

observes an obvious trend in environmental improvements, in terms of reducing environmental pollution to different environmental media. For example, the quantity (kg) of volatile organic compounds (VOC) being released was reduced to five percent of emissions in 1996 until 1999; emissions of nitrogen oxides were effectively eliminated altogether; and, diffuse air pollution was also reduced. Though carbon monoxide and sulphur dioxide emissions remained at the same level, 1999 was the first year when the chemical plant complied with air pollution regulations and was not fined any related environmental fines. From 1996 until 1999, hazardous waste production fell by more than 80 percent. As all hazardous waste materials are stored, treated and eliminated according to the requirements by law, the chemical plant has not paid any related environmental fines for 18 years. Due to the location of the plant, the firm has never caused any environmental impacts beyond standards with regard to noise and vibration pollution. The continuous investments in wastewater treatment have resulted in the plant being free of any related environmental fines for three years. At the beginning of the 90s, serious soil contamination inherited from past unregulated practices was uncovered, which has since then, been gradually treated and eliminated by the firm; final recovery is projected to be finished in 2002.

In sum, the environmental performance in 1999 demonstrates that the chemical firm is in compliance with every relevant environmental regulation and complaints were received neither from environmental authorities nor from the local population. Being absolutely free from any kind of environmental fines is truly unique when compared to other Hungarian chemical companies, as well as probably places this chemical firm, in the international scene, among better performing chemical companies with regard to environmental management. The other side of the coin, of course, is that the basic chemical operations of this plant involve high environmental risks. It is a potentially dangerous production unit and the primary materials of its production are depletable natural resources – thus the firm, by the very nature of its industry and operations, places a considerable burden on the natural environment.

9.5. CLOSING THE PETROCHEMICAL CYCLE?

The above section on technology confirms the sense of excellence manifest in the interview texts of top managers. However, this Hungarian chemical firm claims to go even further: they want to reconcile profit and environmental protection, to provide a synthesis

between industry and ecology. The recently established business unit of environmental technology and the invention of a technological solution for the re-use of mixed plastics waste are considered embodiments of the synthesis desired.

The three smaller companies constituting the Environmental Technology Business Unit have the following operational profiles: there is a firm for the collection, cleansing and preparation of plastics waste; another which operates a special waste incineration technology (a plasma incinerator); and the third company developed, tested and started the production of new plastics material, the result of applying the invented mechanical method for mixing different types of waste plastics. According to a news release of the chemical firm, the Environmental Technology Business Unit aims to close the petrochemical cycle. It promises that the major problem facing the use of plastics – namely, that in the post-consumption phase the different types of plastics are mixed and, therefore, cannot be re-used because of their very different chemical and mechanical characteristics – will be solved by the new method for re-manufacturing developed by this chemical firm. The internal company magazine has recently announced that the new technology will offer “a new career for plastics.”

To date, there are three industrial applications of the new plastics material tested and developed or under development. The most matured mode of application is in road construction: by utilizing an additive agent to bitumen, the lifetime of roads is multiplied. The environmental implications are summarised by the inventor himself, who is the Director of Research and Development at the chemical firm:

“First of all, the public money which is assigned to infrastructural development, consequently to environmental protection, will now be available to build roads with longer lifetime, that is, there will be savings in road maintenance costs... The other thing is that if road closures will be fewer, air pollution from traffic jams would be rarer since there is an enormous increase in emissions from cars and trucks because of road repairs. ... And the third implication is that in principle the damaged asphalt can be recovered and reused, but this is so in fairy tales. In fact, the overwhelming part is damaged so that it cannot be reused and pollutes the natural environment. The new material added to the asphalt can easily be recovered and if not always still its four-five times longer lifetime makes this problem much rarer. So there was one environmental problem: plastics waste – a technology applies it to road construction and apart from solving the original environmental problem, that is, the waste problem, additionally reducing another environmental burden.” (Director of R&D)

Beyond the above application for road construction (mass production is planned to begin in 2002) the new material is also used as an insulating compound. By improving current

insulation techniques applied in waste deposits, construction costs incurred usually by local governments can be reduced.

The third possibility for applying the new material relates to briquetting: steel production has a particular waste material with relatively high iron content that has been treated as a hazardous waste but can be recovered and added back to the production process if it is mixed with the new plastics material. The substantive message of the invention and its applications is formulated by the key person, the inventor, as follows:

“In fact, a major message of [name of company], a new message compared to all other chemical plants of the country, is that the narrow, quasi-regulation-driven and defensive ecological policy, which is generally the case, [name of company] has attempted to broaden and build into its business activity. The underlying reason is that it is not a reasonable starting point that sustainable development for the 21st century will be constructed as a social tax, but it should be built into industry. Despite the fact that something is green, it can be profitable, too. It is not true then if we are greening it will be a burden on our profits. There is synergy between them. If a specific technological cycle is closed it will not certainly be more expensive; it may be the motivation in technology development stemming from ecological principles, because of materials savings, natural resources savings, etc. At the same time, it reduces production costs... The idea of [name of company] was in fact to enter environmental industry and, for this purpose, it develops and applies environmental technologies. Environmental industrial activities constitute such services that offer industrial solutions to ecological problems.” (Director of R&D)

This strategic conception is manifest in the creation of an Environmental Technology Business Unit out of the three companies managed by a director, and in gradually building up an environmental research capability with a team exclusively dedicated to environmental research within the R&D department, as well as the appointment of the inventor/university professor as the Director of corporate R&D. These are undoubtedly steps towards the integration of ecological issues into core business activities. Moreover, to provide a single top-level management position for the brand new business unit, extremely small in standard business terms compared to the petrochemical unit is of primary symbolic importance. It is an organisational symbol of the future prospects of environmental technology as a business activity and that of a “new industrial culture,” as was reported by the internal corporate magazine.

9.6. MODERNISM IN ORGANISATIONAL CULTURE

The above mentioned new industrial culture means the synergy or synthesis of industry and ecology. The question to be examined in this section is what kind of organisational culture has contributed to the emergence of this idea at the chemical firm in question. Due to our research methodology, the level of espoused values within organisational culture may be best grasped. The most striking finding during the analysis of interview texts was the relatively homogeneous language used by top managers to conceptualise environmental issues. This suggests that there is indeed a common frame of reference at the top level with regard to ecology and, in particular, that is persistent and dominant enough that the relatively frequent fluctuation in top managers during the past ten years of macro transformation could not undermine it. Our top-level interviewees were relatively new in their positions; the eldest was Director of Strategy with his one and a half year tenure, the Director of R&D has been appointed for a year, the Director of Marketing Communication for less than a year, and the Director of Environmental Technology for six months.

This apparently quick fluctuation in top-level management has caused neither a discontinuous change in organisational culture in general, nor in the gradual process of corporate greening, in particular. Again, the personal element of organisational history was emphasised by many interviewees:

“For decades the [name of company] was managed by a leader of strong hand. The order and discipline we still have here to a significant extent is due to him. Consequently, ...what employees were socialised into has a continuance. The order and discipline was created in those times. At such a large company, things are not changing so fast indeed...” (Manager of Organizational Development)

These characteristic elements of organisational culture were not even undermined during the turbulent first years of political transformation that brought primarily politically driven changes in top management:

“Then, there was a time when many changes happened in executive positions, during the time of political changes in Hungary... in the beginning of the 90s there were more changes in management. The reason was, at that time, political. It was, consequently, a one-two year long more uncertain period but this [organisational culture] is not such a thing which can fade away in one or two year’s time. Afterwards, it went along as before.” (Manager of Organizational Development)

It is by no means an accident that the words of the Director of Marketing Communication could well be expressed by any of his executive peers:

“It should be acknowledged though that chemical operations here are very dangerous, they require extraordinary discipline, very high technological discipline and an enormous amount of knowledge. It is by no means an accident that [name of company] has a much higher rate of educated workforce than the industry average. At [name of company] a degree in chemical engineering is almost a basic educational requirement. ... in fact, people working here can be said to operate, on a high professional level, high-tech equipments.” (Director of Marketing Communication)

The Director of Strategy concurs with this line of thought:

“Here people have been accustomed to work in a very well-organised way, in a very safe way... people have learned if something is regulated it is not regulated because of subjective reasons but because it can save his/her life. People think like that... And upon this culture it was very easy to build either an ISO 9000 system or an environmental management system. Consequently, people’s ways of thinking have grown accustomed to the fact that everything should be regulated.” (Director of Strategy)

Order, cleanliness, discipline and regulation – the personal marks of the 11-year long, now deceased, charismatic leader are still observable. The visual scene of the plant has its parallel in the individual minds of employees, mirroring definite characteristics of the organisational culture:

“The whole operation of the company from the Chief Executive Officer to the telephone girl mirrors environmental commitment. We are doing nothing to contradict it indeed... It has been built into our organisational culture. If you walk through... you will see absolute order and cleanliness. ... I myself was amazed walking over the plant how fantastically modern and beautiful it is. It is really beautiful. The whole complex is in order, chromium-plated, stainless steel pipes everywhere.” (Director of Marketing Communication)

Again, the Director of Strategy continues:

“It was always a strategic activity at [name of company]... it was fairly consciously built in such a direction not to encounter substantial environmental problems... polluting sources... were fairly consciously treated from the very beginning so as not to experience any problems later.” (Director of Strategy)

The synthesis between profit and environmental protection constitute a common theme for executives interviewed:

“The ideal environmental project, at least in our field of business activity, I think,

besides that it benefits the natural environment, produces profits, too.” (Director of Strategy)

or, as the Environmental Manager explains:

“The most important thing is profit. It is even true if I think it does not hurt environmental features because it is a taken-for-granted thing. ... You cannot separate the two. Speaking about sustainable development does not only mean that environmental quality should be sustained but economic development should be sustained, too.” (Environmental Manager)

The strategic decision of top management to develop environmental technology as a business unit required environmental commitment, a related research and development capability (“an intellectual infrastructure for production” – a term coined by the Director of R&D) and “a kind of entrepreneurial attitude” – as all the executives interviewed agreed. This strategic conception has not faded away after the post-privatisation change in top management: the new executives have brought the chemical company further on the road of eco-modernisation.

9.7. SUMMARY ANALYSIS

There is more than one element of the above story of greening to be rightly selected as a key category. Yet, the sense of excellence that emanates from each word of the executives interviewed tells this story of corporate greening best. A sense of excellence seems to be evident in every aspect of the story. It is easy to see it if one follows the recurrence of such expressions as “first,” “fore-,” “leading,” or “leader,” used by the interviewees in different contexts of greening (emphasis added by the author):

In terms of technology – “It is the most up-to-date polypropylene factory of Europe; ...it is amongst the *leading* chemical firms globally. ... it is certainly in the *first* twenty chemical corporations all over the world.”

In terms of market share – “In domestic markets we are, in fact, market *leaders* with regard to every product of ours.”

In terms of profits – “According to financial indicators, e.g., ROE or ROA, the [name of company] is indeed in the *forefront*.”

In terms of the synthesis of industry and ecology – “It is the *first* chemical company, I think, that has established an environmental technology business unit.”

The same sense of excellence emerges regarding the connection between the firm and environmental regulation: for example, the Environmental Manager made a stark contrast, after a long description of the faults and weaknesses of Hungarian environmental legislation, between his company being able to manage its environmental impacts and the national environmental policy not being able to manage country-wide environmental affairs. In this sense, he claimed that, while Hungary is only preparing for joining the European Union, his company, in fact, complies with the relevant EU requirements:

“We are now in compliance with current legislation in the European Union. ... just like we are part of the European Union. ... The [name of company] could indeed join the EU tomorrow.” (Environmental Manager)

The sense of excellence is perceived to be hold with regard to their competitors, too:

“From an environmental point of view our firm can be compared to any of its big international competitors.” (Environmental Manager)

It is of a particular pride for the chemical firm that

“... [name of company] has never applied for any government support to solve its environmental problems, ...all of them were solved with our own resources.” (Environmental Manager)

The sense of excellence as a key category helps us to understand the continuity of corporate greening in this case: the most up-to-date technologies have been applied and operated by highly educated and disciplined employees, the management of the chemical plant has always followed the actual level of environmental expectations and has been in the forefront of adopting “modern” solutions. “Modern” technologies are *ab ovo* more environmentally sound; “modern” employees are more environmentally conscious and more self-demanding in this respect as well. In the case of a plant with known potential hazards, strict discipline and careful attention are required and systematically organised and controlled by well-established standards; that is, rule-following behaviour is enforced and supported.

The other key category of this story of corporate greening is synthesis. This concept explains the meaning of sustainable development for the chemical firm; namely, industrial development that is in harmony with or more precisely, that is actually improving

environmental quality. Ecology is integrated into industry, into “the spontaneous order of market exchanges” and they are no more at odds with each other. As the Director of R&D frames it:

“The driving force of economic development should be connected up with ecology.”
(Director of R&D)

Therefore, the symbol is “environmental technology” or the new material (named “syntumen” – the etymology speaks for itself), in which need for material wealth (technological sophistication) and for ecological sustainability are synthesised.⁴⁸ In this sense, the road of modernisation cannot and should not be diverged from, since by channelling it into an ecologically sustainable trajectory, that is, by eco-modernisation, as the saying goes: “we can have our cake and eat it too.” It is possible – especially in developed nations – to protect the natural environment and implement a sustainable society without having material welfare or well-being in danger of being reduced. At the corporate or industry level, this means that if industrial systems and the technologies in operation close the material cycle, the increase in production as well as in consumption can go on forever without confronting the absolute scarcity of natural resources. Seen from this perspective, it is considered to be crazy to argue against any limits on the increasing use of plastics, pointing to primary needs for non-depletable natural resources. The cognitive functioning of an eco-modernisation paradigm is well illustrated by an argument given by one of the Directors interviewed, who lived in London for years and remembered producing more household waste there because of the enormous amount of packaging materials, compared to his current lifestyle in Hungary. Notwithstanding, his conclusions are worth quoting:

“In developed industrial countries everything is packaged... in plastics. ... This is the state of affairs... of course, it is good because it protects commodities, ...because they can be stored longer. ... [T]he problem is that, after consumption, these materials go to the dustbin.” (Director of Marketing Communication)

It is striking how the opportunity that emerged for critical reflection of the operative logic of the socio-economic system was immediately lost by the attraction, or activation, of the ideology of eco-modernisation. Since it is “the state of affairs” – a seemingly necessary stage – the problem can readily be (re-)conceptualised within the frame of the dominant paradigm

⁴⁸ One can get a déjà vu feeling – remembering the Hegelian triangle of thesis–antithesis–synthesis.

as a problem of recycling or re-use, in contrast to its radical conceptualisation as a problem of over-consumption of resources. The latter problem interpretation is excluded, or at least dominated, by the prevailing logic of a market society.

The greening of the chemical firm under investigation holds the promise, on the one hand, of developing corporate environmental consciousness to its maximum potential within the dominant institutional logic or framework. On the other, it starkly points out the limits of greening imposed by the same institutional logic.

9.8. PROLOGUE

The last interviews of the case study were conducted, to some extent, under new circumstances. The chemical firm in question became the target, and later a more passive subject, of complex hostile takeover battles within the Hungarian chemical sector and between a Russian energy and chemical corporation and the three largest Hungarian oil and chemical firms. Consequently, the structure of ownership of the case company has been dramatically changed which, in turn, has resulted in important changes in organisational structure regarding environmental management. The most important changes were as follows: (1) among its first steps, the new major owner, who is no longer a financial investor, dissolved the R&D department while maintaining the position of the Director of R&D; (2) the Director of Environmental Technology was dropped in rank to the level of the Environmental Manager (i.e., it is now a Manager of Environmental Technology); and (3) a new position was created, Director of Technical Affairs, under which the Environmental Protection unit, the previous Environmental Technology Business Unit, and the team of environmental research were subsumed, among others. The symbolic downgrading of the Environmental Technology Business Unit was emphasised by the new President of the board, who allegedly said that “an elephant cannot dance with a flea” (where the elephant symbolises the Petrochemical Business Unit and the flea, the Environmental Technology Business Unit). One can only wonder whether this new period of uncertainty will cause a discontinuity in the process of greening as eco-modernisation or if the particular environmental culture of the chemical company uncovered during the case study has had enough time to take root in organisational culture strongly enough to be able to withstand the current, more tentative state of affairs.

CHAPTER 10

A STORY OF CONTRADICTIONS: THE LIMITS OF FREE MARKET ENVIRONMENTALISM

10.1. INTRODUCTION

This case study is about the Hungarian subsidiary of a multi-national company, which invested in new greenfield development during the first years of the post-communist era. Since then, the subsidiary has become the dominant producer of two market segments of the packaging industry; namely, milk and juice packaging.

Ten interviews were conducted for this case study. Eight of these were with employees of the company, one was with a representative of the relevant trade association and one was with an activist from a green pressure group focusing on waste issues (the latter has strongly criticised the multi-national company since the beginning of its Hungarian investments). Six interviews were conducted with the Environmental Manager of the company, one with the Human Relations (HR) manager, and one with the Quality Manager. The breakdown of interviews is as follows:

Table 12 Interviews for Story 3

	Number of interviews
<i>Within the company:</i>	<i>(8)</i>
• Top management	–
• Middle management directly reporting to the top	7
• Middle management	1
• Shop-floor	–
<i>Outside the company:</i>	<i>(2)</i>
• Trade association	1
• Environmental NGO	1
<i>Total</i>	<i>10</i>

Data for the case study analysis were also gathered from documents published by the company (e.g., newsletters and the corporate environmental report of 1999), all of which were provided by the interviewees. Further information was collected from other, second-hand sources, such as published articles, newspaper reports and the regular newsletter of the green

organisation.⁴⁹

10.2. GENERAL BACKGROUND

The multi-national firm describes itself in its Hungarian information leaflet as “[name of company] develops, produces and supplies packaging materials for fluids products. Most important of these are milk, fruit juices, and other fruit-based drinks.” The multi-national firm has 57 factories and 72 commercial offices around the world, and globally employs 18,200 people. The company sells 200 million packaging products every day in 150 countries of the world. The turnover of the firm was 11 billion Swiss francs in 1998 (according to the company’s website).

This multi-national company established its Hungarian subsidiary in 1990, with a greenfield investment. The subsidiary enjoyed substantial economic advantages as provided by the Hungarian state (e.g., company tax relief), as did every 100 percent foreign-owned firm at the time. The multi-national company had developed six different packaging materials production systems; it moved one of these technology systems to Hungary, which produces packaging materials for long-life milk and fruit juices. The subsidiary also sells other types of packaging materials in the Hungarian market that are produced by the multi-national company.

The packaging product, which is produced in Hungary, consists of paper (75 percent), polyethylene (20 percent) and aluminium (5 percent). Onto the paper base a polyethylene layer is pressed, then aluminium and then, two further polyethylene layers. On the other surface of the paper base, some sort of graphic is printed and then a polyethylene layer is pressed atop that. The paper makes the packaging solid; the plastic (polyethylene) provides impermeability; and, the aluminium ensures that the stored fluid has a long shelf-life, by keeping out the light and oxygen. This final product is called “combined packaging material.” The company produces only this packaging material in its factory, which is then shaped and filled with milk or fruit drinks in the outlets of the customers. The subsidiary of the multi-national firm provides automated filling machinery to its customers (through various ways: leasing, selling the property outright, or lease-to-buy) and supplies them with reels of the packaging materials according to customers’ needs. The company controls 70–80 percent of

⁴⁹ All the interviews and archival research were done by Zsófia Hajnal.

the market segment for packaging fruit juices and 30–40 percent of the market segment for milk packaging in Hungary.

All paper used in the production is imported from the country of origin of the multi-national firm. This is because the pine trees in that country have favourably characteristic long fibres when pulped, which means that the papers produced from the trees are of good quality and can be recycled many times. Thus the Hungarian subsidiary does not have a free choice in making decisions about its main basic production materials. Nor can the subsidiary influence its research and development activities, as these are completely centralised in the country of origin of the multi-national firm. Hence, decisions regarding technology and product developments are given, pre-determined factors for the Hungarian subsidiary.

Another important feature of the subsidiary is that the main positions in the firm (such as Managing Director and Director of Production) are still filled by non-Hungarian employees of the multi-national company, although since the start of the greenfield investment and the consolidation of the company's market position in the country, more and more Hungarians have been employed in the management of the subsidiary. The dominance of foreign managers can be partly explained by the ownership structure of the multi-national company. The firm is still owned by the inventor-founder family. This explains – as the interviewees argued – why the company is closed, is not usually in cultural dialogue with the outside environment and applies strict rules of secrecy. These are considered by the interviewees to be general features of the multi-national firm, not only those of the Hungarian subsidiary.

As a result of these characteristics, no data about the production and performance of the Hungarian firm are available. It is estimated that the subsidiary employs around 150 people, which would indicate a middle-sized company. However, its market position and market share suggest that the firm is of a more considerable size (probably among the top 200 largest companies in Hungary). The multi-national company published an environmental report the first time in 2000 (about the year 1999), which summarises the main relevant environmental data for the firm as a whole. According to one of the interviewees, this report and a recent televised interview with the Managing Director of the multi-national company indicate that the firm is slowly opening up and is becoming more communicative.

“The structure of the Hungarian packaging market is similar to those of the developed countries,” emphasised the Secretary General of the National Association of the Packaging Materials Industry (NAPMI), the trade association of the most prominent packing materials

producers in Hungary.⁵⁰ The most significant difference is that in Hungary, per capita packaging materials consumption is half that of more developed countries. Per capita packaging materials consumption is around 70–80 kilograms a year in Hungary, while in Western Europe it is between 140 and 160 kilograms and in the United States between 250 and 280 kilograms. Trends in the developed world indicate that demand for packaging materials increases with domestic economic growth, according to the Senior Manager of NAPMI. Increase in exports creates more substantial demand than expansion of consumption in the home-market, because long distance transportation adds to the demand for packaging materials. As the Hungarian economy and exports have been growing steadily in recent years, NAPMI predicts more expansion in the packaging materials market and in particular, the per capita packaging material consumption in the country is expected to grow.

10.3. GREENING OF THE PACKAGING COMPANY

Contradictions are the main features in the greening of the company, which will be discussed in the following sections. There have been considerable efforts and success in making the company more environmental friendly, however, with limitations and inconsistencies.

10.3.1. Environmental protection in the organisational hierarchy

In terms of responsibilities and duties in the greening of the organisation, the company has a peculiar feature. The spheres of authority (in terms of environmental protection) are not always with the Environmental Manager, and she does not necessarily play a decisive role. This is partly due to the fact that in front of the law there are actually two companies: one is the production site and the other is the commercial and administrative services provider division. The Managing Director is the same person in both companies. The Environmental Manager is in the commercial firm in a staff position, and is directly responsible to the Managing Director. (The Human Relations Manager, who was also interviewed for this research, works at the commercial firm as well. She is directly responsible to the Finance and

⁵⁰ Member companies of NAPMI include, e.g., Coca Cola, Pepsi Co., some of the largest Hungarian chemical firms, etc.

Administrative Manager.)

The environmental affairs of the production company are managed by the following employees: the Director of Production, whose position is second highest after the Managing Director, is responsible for the total environmental performance of the factory; the Quality Manager (one of the interviewees), who is directly under the Director of Production, works as a co-ordinator for the Environmental Management System; the Production Manager, who is the Emissions Coordinator; the Maintenance Manager, who is the so-called “Services Coordinator” and as such, is responsible for the supplying utilities; and, the Logistics Manager, who reports directly to the Customer Services Manager under the Director of Production, is the Materials Recycling Coordinator.

The Quality Manager and her department of six people are the most important actors in managing environmental protection in the plant, in terms of running an integrated Quality and Environmental Management System (Q/EMS). Similarly, in the other part of the firm, the commercial and administrative services providing division, the Environmental Manager is not only responsible for environmental issues, but has to deal with non-environmental tasks, specifically public relations and relations with governmental bodies. The official job title is Communications and Environmental Manager.

The organisational structure, titles and responsibilities indicate that environmental management is divided into two main groups of tasks: internal (within the company) and external (mainly communication and relations with outside bodies and organisations). This is not conventional, as the individual who acts as the Environmental Manager in the eyes of the outside world (authorities, customers, consumers, civil organisations, etc.), does not have direct control and influence over developing the internal greening of the firm, which is overseen by other managers.

This practice in itself is not necessarily a problem, if internal cooperation is effective. Internal cooperation in fact is working. The Environmental Manager provides a sort of environmental consultancy service to her colleagues at the production site. She also has access to the company’s computer database of environmental data and parameters, as she has to authorise compulsory reports and audits for the authorities (she is the only one in the company who has the relevant professional qualification required by the Hungarian Environmental Protection Law of 1995). However, our case study analysis suggests that the internal cooperation is also problematic. Thus, the first contradiction in ‘greening’ of the company is found in the organisational structure of the firm. There are several examples

illustrating this.

One of these is an instance when selective office (not factory) recycling, which was proposed by the Environmental Manager, was halted by the Director of Production.

“... I tried to introduce selective office recycling three or four years ago... but it did not get off the ground... the then Director of Production was against it and looked for technical problems, such as the fact that we would have had to store bales of papers for a month or two until enough accumulated that made it worth transporting to a recycling centre. The Director of Production viewed this as a major problem. He also complained about that when we put used cans into bales, the baling machinery got contaminated and this was unhygienic.” (Environmental Manager)

Another example is the development of the EMS. This process was directed by the Quality Assurance Manager, not by the Environmental Manager. This in itself would not be a problem, yet the interviews suggested conflicts. For instance, the Quality Manager's answer to the question of whether she had to collaborate and work with the Environmental Manager continuously was:

“Yes. Or rather, the Environmental Manager had to collaborate with us. There were more of us at the Quality Assurance Department. Of course, it was important that we worked together on the development of the system [EMS], it was important that the Environmental Manager took part in it, especially because later she had to do the communication of the whole system. Despite this, she could only receive information intended for external communication with the permission of the Director of Production.” (Quality Manager)

This suggests that the company is secretive and reluctant to provide data and information about its activities not only towards the outside world, but in its internal systems, as well.

The third illustration supporting the perception of contradictions is the fact that the Environmental Manager was highly reluctant to talk about her relations with the environmental agents in the factory. She hardly talked about this relationship in five interviews and only when a direct question was asked about it during the sixth interview did she commented upon it. Instead, she emphasised in positive terms her relations with Environmental Managers of other subsidiaries of the multi-national firm:

“The collaboration is very very good. I think the cooperation is much better in environmental affairs than in marketing or sales [however, she excluded the environmental agents in the factory from this!]. It is probably because there are only a couple of people working on these issues in each company, thus everybody knows everybody in this field. We gather together for a three-day working session each year. We also established a small East Central European team a couple of years ago... there

is communication between all Environmental Managers almost every day... this is a great small team... the members of which help each other when they struggle with some problems... this is also because nobody else helps us.” (Environmental Manager)

The first contradiction in the greening of the company, then, is the relative isolation of the Environmental Manager within the company’s structure. The comments cited above indicate that she feels herself to be the solitary person responsible for ‘environmental management’ in the company. The feature of the organisational structure that places the Environmental Manager directly under the Managing Director hardly reveals anything about the real influence and power of the Environmental Manager in the firm. In fact, as our analysis showed, her real influence and power is rather restricted in terms of the greening of the company.

However, this peculiar structure for environmental protection could have easily developed as a result of (partly unconscious) defence mechanisms. Already at the time the subsidiary was launched in 1990, a group of environmental activists were protesting against the investment of the multi-national company in Hungary. For the protesters, it was the company’s main product that was considered problematic and unacceptable from an environmental standpoint. This aspect of the case study will be analysed below.

10.3.2. Environmental aspects of production

A life cycle perspective does play a role in the company. First, the subsidiary’s 1999 environmental report identified this perspective as the essence of environmental management at the company. Second, the company commissioned a group of experts from a Hungarian university to carry out a study that compared the company’s milk packaging techniques with sachet milk packaging, the only alternative in the Hungarian market. The findings of this research, however, are confidential, thus no information about it was provided to us. Each stage of the life cycle of the product is analysed below on the basis of the available information. By analysing each stage of production, discrete environmental impacts – and specifically contradictions – could be identified and considered.

The three principle base materials used in the production processes of the company are paper, plastic and aluminium. These are all imported from abroad. Paper is imported in reels from the country of origin of the multi-national firm. The available information about this

aspect of the production is that the multi-national firm stopped using extreme methods of forest management, such as clear-cutting, which betrays evidence of an ecological consciousness on the part of the company. Instead, more sustainable, selective methods of cutting are used, which leave enough trees for the forest to remain intact. The company also operates tree nurseries. A specific method is used in these nurseries in order to “make” the trees grow quicker: the trees are “deceived” – as the Environmental Manager described the method – by artificially controlling the diurnal-nocturnal cycle. The pine trees then grow faster and become available for paper production sooner. Paper production is carried out in the country of origin of the multi-national firm, from whence the paper is then transported to various subsidiaries, including the one in Hungary.

The greening of the subsidiary is also evident in one aspect of the production of the plastics used. The supplier of the plastic granulate is one of the largest chemical companies in the world. In the first years of its contract, this supplier provided the plastic granulate in large boxes, which were transported by many lorries and left in its wake a huge amount of rubbish. The case company managed to “persuade” its supplier to change this practice, which was seen as wasting both environmental and economic resources. A large silo was built next to the factory and today, “tankers bring the plastic granulate, which is transferred into the silo pneumatically; therefore, no packaging material is required and it works very well,” as the Environmental Manager described the modifications.

In the factory of the Hungarian subsidiary, only the packaging materials are produced and they are not filled there on the spot. At the time of the interviews, the factory is utilised 50–60 percent of its capacity – considered to be high. The company is going to take over the production of another subsidiary of the multi-national firm, from another country, in the near future. The recycling of production waste had already been investigated and arranged when the greenfield investment started. The company signed a contract with a Hungarian pulp and paper firm that is capable of recycling paper waste. The Environmental Manager argued that the positive attitude of the multi-national company towards environmental issues was demonstrated by the fact that in every country in which it invested, production wastes in the subsidiaries are recycled. The company carries out and pays for the selective collection and baling of waste products, as well as for transporting them to recycling firms.

Another environmental issue to which attention was paid by the company was energy consumption. The laminating machines, which press the polyethylene and aluminium layers onto the paper box, use the largest amounts of energy in the production process –. merely

switching these machines on consumes a lot of energy. In order to save energy, the company tries to organise a single production process for a given type of product. They wait until all the demand for a particular packaging product with a particular design has been ordered, and all the production materials are available, and then start the laminating machines. After finishing a lamination run, the machines are turned off and not switched on again until the next production cycle (or design).

Someone is responsible for each type of waste product in the company. S/he must ascertain that the recycling and waste managing firms, which handle the waste products of the subsidiary, do not just dump them at a rubbish tip. Furthermore, the Environmental Manager argued, they also try to minimise waste products by offering financial incentives to the employees, who can earn extra money if they suggest and are able to implement any alternatives resulting in material conservation.

In the company's factory, production basically entails pressing the various layers of afore-mentioned materials – plus the design and print of the required graphics – onto the products. The packaging materials are then reeled and stored until they are transported to the customers. The materials are shaped and filled with either milk or some sort of fruit juice by filling machines, which are placed at the customers' facilities. These machines also carry out various technological processes, such as milk sterilisation.

“The long-life milk in these packaging materials will never go sour” (Environmental Manager)

The company also takes care of waste products from production activities located at the customers' facilities. If required, the firm supplies baling machines, in which the customer could collect the waste products. The company – in fact the Environmental Manager, herself – then organises the transportation of these baled waste products to the recycling machines, which recycle the company's own waste products. However, she admitted that her efforts in this respect were not always successful:

“The system did not really work, mainly because of the attitude of many milk producing companies. There is one such a firm, whom I tried to persuade to accept baling machine and to collect waste products selectively. But the firm still dumps the waste at a tip... On the other hand, there are some companies which adopt the system. For example, one of our fruit juice producer customers has been using the baling machines and selective waste collection for four years.” (Environmental Manager)

However, she also pointed out that even in this positive case, there were some conflicts.

“At the time when this company adopted the system, the owner of the local rubbish tip phoned me complaining that I took away business from him.” (Environmental Manager)

10.3.3. Establishing the environmental management system

An analysis of the establishment of the EMS is important for two main reasons. First, an integrated Q/EMS can play a significant role in developing and supporting environmental consciousness throughout the company. In this case study, the Q/EMS was developed only for the production site of the subsidiary, thus it is not relevant to the commercial and administrative services provider division. Second, the way the system was established, with several ups and downs, can potentially reveal more about the greening of the company and the organisational culture.

In 1992, three years after launching production at the factory, the company received a quality assurance certificate according to ISO 9001 standards. This greatly influenced the introduction of EMS. Establishment of the Quality Management System (QMS) took quite a long time, as admitted by the interviewees, themselves. On the basis of a suggestion, the then-Director of Production, a consultant from the multi-national firm, was put in charge of introducing the QMS. However, the consultant failed to deliver. According to the Quality Manager of the Hungarian subsidiary, this was partly due to the fact that the consultant did not have real power or authority and was not part of the organisational hierarchy, and partly to a lack of interest on the part of middle management. The reason for this – as she argued – was that those managers did not have knowledge about quality assurance, which top management did not realise at the time. Things changed and speeded up when the middle managers received adequate training and a responsible manager with authority and power was appointed to develop the QMS.

“In the end, four middle managers were sent to training. After the training, these four people made a ‘revolution’ in the company as they became dedicated to the issue. They were able to convince other people and influence the whole organisation... This was the first step, the acquisition of knowledge. The second step was that we developed an in-house training about the issue. It was called ‘active training,’ because in those sessions there was a two-way flow of information... we were not only taught what to do and why to do it, but we listened to the employees what they thought should be done.” (Quality Manager)

Introduction of the EMS resembles the establishment of the QMS. The company started to develop its environmental management system following the decision by the multi-national firm to acquire quality management certificate according to ISO 14001 standards for all of its subsidiaries. The management of the Hungarian subsidiary then decided that it was going to integrate its EMS with the already-developed quality assurance system. They also decided that the company was going to develop its EMS from its own resources, without the help of external environmental consultants. The Quality Assurance Manager was appointed to head the team set up for developing the EMS, in order to ensure its integration with quality assurance. The members of this team were middle managers, including the Environmental Manager, the Production Manager and the Maintenance Manager.

According to the interviewees, development and certification of the EMS was a long and troublesome process. The Quality Manager, the head of the team, argued that integration of the quality and the environmental management systems required additional work, as the existing quality assurance control system had to be revised according to new (environmental) considerations. This was viewed as a positive development:

“... the integration advanced the quality control system because it became more transparent. This can be best seen at the shop floor level. The company developed job descriptions for the employees who run the machines... which included quality, environmental as well some labour safety aspects. The latter ones were embraced since humans are part of the environment, thus their protection needs to be covered in an Environmental Management System. ... Hence, the employees today have a job description which includes all three aspects.” (Quality Manager)

Similar to the introduction of the quality assurance control system, ‘active training’ was deployed during the development of the EMS by the management, with the aim of involving employees.

Another problematic area in the establishment of the EMS was the attitude of senior management. The local senior management team reacted quickly following the decision of the multi-national firm to introduce an EMS in each subsidiary. However, apart from the initial decision to integrate the quality assurance and environmental management systems the senior management did not do much. The Quality Manager described the events with some resentment:

“It was hard... we were left with the decision, but then we did not get support. ... The

work of the team was not hindered, but it was not helped either... The senior management did not hamper our efforts, but did not support us either. Rather, I should say... they [senior management] did want the Environmental Management System to be developed, but did not invest in it a lot. And we [the EMS team] felt that. The problem is that if an employee senses that his/her boss is not behind a particular project or task wholeheartedly, the employee will have a similar or sluggish attitude towards that particular project or task. That is what happened in this case.” (Quality Manager)

The Environment Manager gave a similar account in the interview. She argued that the development of the environmental management system was a long process that was initiated and carried out within the company. However, middle management played the main role in the process and not senior management.

“The senior management did not want to spend too much time on this”
(Environmental Manger)

It was difficult even to put the issue on the agenda of senior management meetings.

It is interesting how the Quality Manager explained the attitude of senior management:

“There is obviously a reason, namely the consideration of profits, which is a main aim of a company like this. It is easier to be devoted to quality of production, as there is a direct link there between quality and profits. In the eyes of senior managers environmental issues and considerations mean costs, not profits... they are not viewed as profitable... senior management thinks rationally [in the sense of profit making], hence it is difficult for them to be dedicated to environmental issues, much more so than to quality assurance issues.” (Quality Manager)

Thus, the development of the EMS is another example of contradiction in the greening of the company. While the multi-national firm heralded its commitment to environmental protection in its 1999 environmental report and in earlier company brochures, in its Hungarian subsidiary the dedication was questionable, as senior management loaded the task and the commitment to middle managers.

“... it took rather long to make senior managers realise that reducing waste output actually has extra profits, both for the company and the environment... They believed that having an Environmental Management System merely means investing in waste management... and buying filters... It was rather difficult to change this type of thinking and attitude, and make them realise that all aspects of our production and life are in fact affecting the environment.” (Quality Manager)

Initiating organisational changes at the level of middle management, rather than that of senior management, is not a problem, in itself. In fact, that practice is well-documented in the organisational change literature. In this case study, however, it relates to further, more profound contradictions in the greening of the packaging company. One of these is about the product, particularly the issue of its recycling, and the other is about the communication practices of the company. In the followings these two aspects are analysed in detail.

10.3.4. Environmental aspects of the product

The packaging material of the company can be distributed effectively and transported in great quantities per carrier, which is a positive characteristic of the product from an environmental point of view. The main question in relation to environmental protection, however, is concerned with the product being so-called “combined packaging” material. It was mentioned above that the product contains paper, polyethylene and aluminium. These three components vary considerably, from an environmental point of view. One of the most significant differences is that while paper is made of a renewable resource, the other two components are not. The Environmental Manager emphasised this aspect of the constituent materials:

“I – as consumer – would choose paper packaging material, if I could. Simply because I know that it is made from renewable resources, namely trees... and when the product is thrown out it would disintegrate to a certain degree...” (Environmental Manager)

Recycling of combined materials is more difficult than those of products made of a single material. The Environmental Manager pointed out that there were three ways to recycle the company’s products after they are consumed. First, the waste materials of the products can be reused by the pulp and paper industry. It was mentioned above that the subsidiary has had a partner in the Hungarian paper industry from its onset, who collects and removes the waste materials both from the factory and its willing customers. According to a representative of this paper company, the firm struggles with recycling and received hardly any support from the subsidiary in this respect.⁵¹ It should be mentioned, however, that the paper firm does not pay for anything, even the transportation of these waste materials, which could be reused.

The paper material is separated from the other two components in a pulper. The paper

⁵¹ Telephone interview with the representative.

gained from the waste materials this way is reused, while the polyethylene and aluminium are dumped. A company report claims that 550 tons of waste materials were recycled this way in 1994, which is 2 percent of the total packaging materials the firm produced that year. According to the Environmental Manager, the figure increased to around 800–1000 tons by the end of the decade, as a result of expanding production and growth of waste materials both at the factory and the industrial customers of the company. However, the waste which results from individual consumption of milk or fruit juice packaged in the company's product is not recycled at all. The Environmental Manager estimated that 50–60 such boxes are used per capita annually in Hungary.

Another way to reuse the waste materials from the company's products would be with "techtan-based" recycling. In this process, all three components of the waste are ground, heated and pressed. During the process, the polyethylene glues together the paper and aluminium. This pressed material is then cut up and used in the production of various goods, such as worktops or plaster walls for dividing rooms. This method, however, is not employed in Hungary; although the latter products are produced in Slovakia. The Environmental Manager was puzzled about the reason:

"Not one Hungarian entrepreneur was interested in this production technology. I have no idea why." (Environmental Manager)

The third main option for recycling the waste materials would be to burn them. However, this method is not employed in Hungary, either.

"... in Finland, for example... one third of the waste materials from the packaging products are burned in boilers." (Environmental Manager)

In other countries, the cement industry produces energy by incinerating the waste products. According to her, this cannot be done in Hungary for technological reasons. However, the view of the Environmental Manager is questionable, as some cement factories in Hungary do burn solid waste materials for energy (for example, the practice of burning used tyres).

Environmental perceptions of the product depend on recycling, although as was discussed earlier, only to a limited extent. The fact that the product is of combined materials restricts recycling considerably. The company did make some effort to improve the reuse of waste materials; however, due to the nature of the product they were largely unsuccessful.

One of these efforts was to reduce the weight of the packaging material from 32 to 28 grams; another was to decrease the thickness of the aluminium layer by 30 percent.

Efforts to improve recycling and deposition of waste materials, however, focused only on waste accumulated in the company's factory and at its industrial customers' plants. There is no concerted attempt whatsoever to recycle waste from the end-users of the packaging material, the individual consumers of the milk or fruit juice. The company seems to refuse any responsibility for this volume of waste, a position often criticised by green organisations.

The company has to pay the environmental product fee imposed on all packaging material in Hungary since 1995. According to the Environmental Manager, the amount of this tax was not considerable for the subsidiary, yet the company used it as an excuse for not doing anything, insisting that the tax now makes it the State's responsibility to handle selective waste collection from individual users (through general local public waste collection, etc.). The company would also argue that the fact that the State spends the amount collected from this environmental product fee on other things is not a fault of the firm. The view of the company is that it does everything for recycling and environmental protection that the current legislation requires. Actually, they would claim to have gone a step further, in working through the trade association (NAPMI) of the packaging sector.

The Association developed a model for waste management, which – according to the members – conforms to European Union standards. In this model, the state hands over the environmental product fee and the duties and responsibilities of waste management to a non-profit organisation. Such an organisation was already established by members of the Association under the name, ÖkoPannon. The Environmental Manager of the company plays an important role in the development of this model and in general in the environmental ventures of the Association: she is currently President of the Environmental Protection Committee of NAPMI.

The representative of the Association believes that the system embedded in the model would establish a "closed-cycle economy," desirable for sustainable development. The system "would have to prefer materials which could be recycled at relatively low costs," he maintains. It is questionable whether combined materials – such as the case company's expensive packaging materials – would survive in the market under such a system. Furthermore, as described above, it is more difficult to manage wastes of combined materials that make recycling more complicated and expensive. Given these features of the product, it is difficult to argue with the accusations of the interviewed representative of a green

organisation:

“... packaging method of the company is... the most squandering and the least environment friendly method... They [the case company] try to present their packaging material as the most environment friendly, while in reality it is actually the most expensive and the most wasteful.” (member of green NGO)

Arguably, the contradictions could not be more evident. The discussion of the next aspect, on corporate environmental communication, reveals even more contradictions.

10.3.5. Environmental communication

It was mentioned above that the multi-national firm tends to be secretive and closed to external observers. This does not mean lack of communication from the company; rather it implies peculiar ways of communication. An unusual organisational feature is that apart from the Marketing and Communication Departments, the Environmental Manager is also responsible for external communication. The odd feature of this is that she does not only deal with external communication in terms of environmental issues, but with communication in general, as well. For instance, the Environmental Manager edits the company newsletter, one of the most important PR materials, albeit colleagues from the Marketing Department help her with this task. Another example is that the Environmental Manager is responsible for developing and maintaining the company's website. The Environmental Manager's view is that the Managing Director gave her this task because “he thought he would not have PR problems with it then”. However, she admitted in the interview that the responsibility for the website is a nuisance for her, and that she is much more interested and committed to communication regarding environmental protection. She is active in the latter respect and has even published quite progressive writings.

Under the editorship of the Environmental Manager, environmental issues, questions and information are discussed regularly in the newsletter. Among these was the firm's environmental policy statement, which even in her judgement was rather pompous. The colourful newsletter is distributed to every employee, as well as to all business partners.

The Environmental Manager also edits another publication, which she inherited from the previous Environmental Manager (who was from the United States). The title of this publication does not refer to the company but to the integration of environment and business.

Indeed, the quarterly journal, which is of quite high quality, does not serve direct PR purposes. It obviously publishes issues relevant to the company's work, such as introduction of the EMS; however, most articles discuss problems of environmental protection in general, ways of solving these problems, events related to environmental protection, or reviews of relevant books. The journal includes news and information about activist green organisations, such as Greenpeace, as well as about the trade association, NAPMI, its plans and model(s) for waste management in Hungary.

The target audience of the journal is quite different from that of the PR newsletter. Although the publication can be found lying around in company meeting rooms, it is mainly distributed to experts working on environmental issues, such as researchers, university lecturers, journalists and politicians. This sort of external communication best shows the Environmental Manager's commitment to environmental issues. Arguably, the journal could be seen as her own publication, since other employees of the company – including senior management – do not even read it regularly. The openness to dialogue with the outside world that the journal represents seems to be an isolated phenomenon, rather than part of the organisational culture. From the point of view of the company, the publication contributes to the development and improvement of external relations, which in fact is another responsibility of the Environmental Manager.

Two programmes aimed at school-aged children were among the most significant projects in external communication. One of the programmes was the school milk project and the other was an environmental education project with a special 'instructive bus' (called 'eco-bus'). The main aim of the school milk project did not initially involve environmental issues. It was run in cooperation with companies in the milk industry. The Environmental Manager played an important role in the project, which presumably is why environmental protection was then integrated into the aims of the programme. However, not only the Hungarian subsidiary ran a school milk project. According to the 1999 annual report of the multinational firm, similar programmes were operated by several subsidiaries in different countries.

The main aim of the project was to promote daily milk drinking among school-aged children, who increasingly consume various carbonated soft drinks, such as cola. These drinks are usually perceived to be less healthy than milk. The company – with the milk industry – could provide milk considerably cheaper to schools that participated in the project, because the costs of retailing were left out. The milk, which was packaged in the combined packaging

material of the company, stayed fresh for a long period even without refrigerating. Thus deliveries did not need to be every day, which was seen as an environmental advantage reducing transportation. The Environmental Manager arranged that every school received a special rubbish bin to collect the milk boxes, the waste of which was removed regularly by the company.

A further element of the project was that the company provided the children with an educational pack about waste materials in the packaging industry as well as various gifts, such as timetables from recycled paper. The subsidiary had high hopes about the programme, yet despite all their efforts, it did not expand to a national level. The Environmental Manager's view is that the project became the subject of heated political debate and as a result, the company withdrew from the programme. Today, one of the ministries organises the provision and delivery of free milk to some schools. With the changes in the programme, the environmental aims disappeared completely. The Environmental Manager saw this as very regrettable:

“... when we organised the project, we paid a lot of attention to environmental considerations.” (Environmental Manager)

The other main programme of the company, the environmental education project with a special “instructive bus,” was also the Environmental Manager's idea. She developed and organised the whole project. The idea behind the project was quite unusual (though companies in food industries usually have programmes in which products, such as chocolate or drinks are given to children free in schools). Thus, the Environmental Manager had to argue and press for support and money for more than a year, as senior management was initially quite sceptical about the project.

She acquired and rebuilt a bus, which was provided with computers and furnished with techtan-based furniture. (She chose techtan-based furniture in order to make the point that there are various possibilities for recycling waste materials.) Initially there was one part-time teacher, who travelled with the bus to schools in different parts of the country. The project became quite successful, and later two part-time teachers were employed. The teachers held classes about waste management, especially in relation to packaging waste materials. Computer game programmes were used in the classrooms, in which the children could play and imitate the various stages and problems of waste management.

An important symbolic part of the project was that at the end of the class, every child

received a small paper box – which interestingly was not made of combined materials – and in which there were a few pine tree seeds. The children were then supposed to plant them with the box. This symbolised – at least for the company – that the packaging materials of the firm have become a part of natural material cycles and in time, new life would grow out of them. The project was aimed not only at children but teachers as well, who received teaching packets about waste management. The programme lasted for two years, during which the senior management became increasingly supportive – not least because of the positive media coverage the project received. The Environmental Manager was given some time to devote to the project’s organisation, which she was pleased about. (She was very enthusiastic about this project and once even substituted for one of the teachers who had fallen ill.)

Despite some differences, the two projects are similar in that they both contain contradictions. The aims of both programmes are noble and desirable: it is important that children drink more milk for health reasons and it is also desirable that environmental education is improved in schools. However, there are deep-rooted contradictions in the two projects. The aims of the programmes serve the interests and well-being of members of society. Arguably, however, as these are aims of society, it should be the community who aspires and works for them, not a private company. If private companies take up social aims, problems arise. Most significantly, it is very difficult, if not impossible, to draw the line between working for social aims (promoting milk or environmental education) and working for the aims of the company (to sell more products and increase product awareness among customers).

Green organisations did accuse the company of using “dirty tactics” and trying to “brainwash” people. Given the fact that it *is* very difficult to draw the line between these conflicting aims, these accusations could not be easily defended, especially because the targeted audiences of the projects were children, usually perceived as more vulnerable and receptive to advertising. The marketing profession, as well as the Environmental Manager, would counter-argue that children are not treated as school-aged consumers in promotional campaign, but as what they are: children.

However, the extent to which children could distinguish between the importance of milk drinking and the usefulness of the company’s packaging material is highly debatable in the campaign described above. Furthermore, the milk provided in the school programme was distributed by the teachers to the children in the classrooms, and teachers are generally seen as role models and one of the most important authority figures for children. Hence, the

representative of the green organisation seems justified in arguing that:

“... this was a very deceitful campaign, because... it was aimed at children. It is not ethical to teach in the classrooms that the milk which is in the packaging material of the company will last long... We [the green organisation] condemn that these types of campaigns target children.” (member of green NGO)

Promotional campaigns that are aimed at adult audiences are usually seen as less problematic. However, these can also be misleading. For instance, a television advertisement about the packaging material for milk produced by the company is rather ambiguous. In the ad, the layers of the product are shown visually, but in a way that audiences could easily think they comprise a single-component product. It is not evident from the ad that it is a product made of combined materials, not only from paper, a renewable resource, but from polyethylene as well as aluminium.

One of the environmental PR materials published by the company about its product also contains misleading images. For example, in the illustrations, decomposition of the product is compared to the process of peeling an apple. This and other such images suggest to the readers that the product is natural, easily decomposed and could be recycled without major difficulties. This is either a clever plot by the company, using more environmentally friendly paper packaging material with a thin polyethylene layer in the advertisements, which is distributed but not produced in Hungary, or it betrays a conscious decision on the company's part to keep quiet and misinform about the recycling more general environmental problems related to this product.

The Environmental Manager was aware of the contradictions in the marketing communications of the firm. She made considerable efforts to assure that the components of the packaging material are at least indicated on the bottom of the product.

“... I managed to convince my bosses last year to print the composition of the product on the boxes. It has not happened yet... This would be a very important step to inform customers what the product actually contains.” (Environmental Manager)

However, colleagues in the Marketing Department do not agree with her. According to their market studies, customers are satisfied with the packaging product from an environmental standpoint. “Why should we include then more environmental considerations and concerns about the product in our promotional campaign?” (as the Environmental Manager later recollected). Arguably it should be important, because it would provide

genuine information about the product for customers.

The Environmental Manager has so far not managed to convince her colleagues, most of who thought she worried too much about the issue. "... [T]he concern that customers might have misconceptions about the product is only in your head... you only see the worst case scenarios... those which are heralded by green organisations... or by some biased MPs," she was told (as she further recalled). The Environmental Manager clearly saw the danger in the strategy of keeping quiet about some environmental aspects of the product and using an ambiguous promotional campaign. In the interview, she made the point in relation to this that the green organisation, which criticised the company's ad campaigns, had already filed an official complaint about another packaging company misleading the public to the Customer Protection Agency. That company, which ultimately was fined, used the international symbol for recycling on its product whilst it was well aware that the symbol did not mean anything in Hungary because there was no selective waste collection in the country. Albeit this was a more serious case of misleading the public, it could nonetheless serve as a precedent for our subsidiary.

10.4. THE EXTERNAL CONTEXT OF GREENING OF THE PACKAGING COMPANY

Two types of organisations are particularly important in the analysis of the greening of the company. These are the green organisations, who challenge the environmental practices of the company, and the industrial trade association (NAPMI), which has been quite active in environmental affairs.

The Environmental Manager explained in her first interview that NAPMI plays a pivotal role in environmental issues within the industry, and that the packaging industry lobby is rather strong in environmental affairs. The interviewed representative of NAPMI said that their 92 members, most of which are large companies, "represent the whole supply chain of the packaging industry." The environmental committee of the Association was set up shortly after the establishment of NAPMI itself at the beginning of the 1990s. The committee, the members of which are Environmental Managers of the member companies, develops the environmental policies of the Association.

The immediate reasons for setting up the committee were the official preliminary steps

towards introducing an environmental product fee in Hungary and the ongoing efforts of the European Union to issue a directive on packaging waste materials. NAPMI has been proactive on environmental issues, which is evident by its work to develop plans and a model for waste management in the sector, to establish a non-profit organisation for waste management (ÖkoPannon Kht.), and in its cooperation and lobby work with the authorities on the environmental product fee and waste management laws. The Association has been working on environmental issues for more than eight years, and the company of the case study has been quite active in this work, particularly through the Environmental Manager. Therefore, it is not at all surprising that the “cognitive framework” prevalent in the sector is to a great extent shared by the packaging firm in question.

One of the fundamental premises expressed by both the Environmental Manager and the Secretary General of NAPMI is that packaging fitted to the given function in itself constitutes environmental protection, because it protects a product from harm. A given function is determined by the demand of the customer (what kind of a product, how much it costs, distance it must be transported, etc.). It follows that the economic interest by itself provides for the “optimal packaging solution” because

“... the self-determining laws of the [market] economy will, sooner or later, eliminate wrong packaging decisions, though there are... problems of over-packaging.”
(Secretary General of NAPMI)

At the post-consumption phase, the crucial issue is

“... how much expenditure is needed for directing materials back to the circulation of products?” (Secretary General of NAPMI)

And the optimal packaging solution will be achieved

“... [i]f these [environmental expenditures] are internalised in product prices, then it will in fact automatically go in the direction that price and cost conditions will determine which [packaging] solution will be applied.” (Secretary General of NAPMI)

In other words, if the external costs of environmental pollution are internalised, the economic system automatically will turn to a materially closed, “circular economy.” Furthermore, the Secretary General of NAPMI placed heavy emphasise upon the fact that it is not possible to go against “the rules of market economy,” it is only conceivable to “correct”

them where they fail to function. All interventions into the operations of free markets undermine efficiency and such intentions will be “crushed by the rules of market economy.” Moreover, these “rules” do not respect national borders:

“... we participate in an international division of labour and thus it is not possible to enact a number of environmental regulations nationally because negative consequences will be greater than positive ones. ... We [trade association] do not believe in solutions focusing solely upon Hungary ... [since] it is an international competitiveness issue.” (Secretary General of NAPMI)

By implication, it follows that since current consumption of packaging materials in Hungary amounts to half the European average,

“... reduction in packaging consumption is not a reasonable objective for Hungary, it will necessarily increase... in the process of catching up to the average economic development of the European Union... what can reasonably be expected to be reduced is per-unit packaging consumption” (Secretary General of NAPMI)

It can be argued that the Secretary General has articulated an environmental approach that could be called “free market environmentalism.” The starting point of this approach embraces a particular definition of “being developed” and of the necessity of “the process of development.” From this perspective, the West (with a capital “W”) and the EU constitute the apex of “being developed.” The currently dominant form and operations of a market economy have a “rule-like” nature; the only environmental improvement one has to seek is making the market function efficiently – in terms of pollution, by correcting market prices through internalisation of external costs – it is the way to institutionalise an eco-efficient market economy. An eco-efficient market economy produces “sustainable economic growth.” In contrast, there is no room for constraining growth – that is, reducing production and consumption in absolute terms – since it is not compatible with “the rules” of free markets. Intervention is justified only to the extent that it “corrects” relative inefficiencies. Moreover, the proper parameters for intervention are the subject of political debates where corporate lobbying activities should be pursued “because they are very important from the perspective of society.”

From an industrial perspective, the greening of the packaging firm appears to be a positive example, since the company focuses its environmental management efforts upon improving eco-efficiency, by reducing the weight of packaging products or the thickness of aluminium layer, etc., while functionally satisfying consumer demand by making more

appealing packaging products with plastic caps, etc.

The other external perspective from which the greening of the packaging firm may be seen is that of the environmental organisation, which has expressed a radical refusal toward the product in question. The environmental organisation interviewed has a country-wide reputation with regard to waste management and considers itself a civil organisation holding a radical green philosophy against the global market economy. The leader of the green organisation summarises his opinion about the packaging firm in question as follows:

“The packaging product of [name of firm]... is the most wasteful and most environmentally harmful type of packaging... Therefore, the greening efforts of the firm constitute a special problem... and it is absolutely undeserving of the environmental ideal... on top of it all, they have initiated so-called environmental education programmes... [which] we call, from its onset, brainwashing...” (representative of green organisation)

It should be emphasised that “the greens” do not have a problem with internal greening measures at the packaging company:

“We have no problem with the technology itself.” (representative of green organisation)

Their critiques do not concentrate on the eco-efficiency of production and operations processes of the packaging firm, nor on the core activity of packaging product manufacturing. The environmental critiques target the main packaging product, made of combined materials, that is manufactured in Hungary.

“This packaging material is unsuitable for recycling.” (representative of green organisation)

The greens have been highly critical towards the packaging firm in question from the onset of its greenfield investment, since the transfer of combined packaging product manufacturing to Hungary symbolised for them the arrival of “throw-away civilisation” from the “developed” West. No eco-efficiency improvement in the production process or in the product itself can change the rejection expressed by the greens against the product and the packaging firm.

“These combined packaging materials are the most harmful... next, those throw-away packaging which are made of homogeneous materials... and then returnable systems... The best [packaging materials] are returnable bottles... [Though] bottle packaging involves some environmental problems as well, but a returnable bottle turns forty times in the market on average; that is, it is re-bottled forty times.” (representative of green organisation)

The so-called “green” critique is much more complex than has thus far been discussed. The functioning of a large multi-national packaging company is also believed to involve an “aggressive market expansion” policy that sooner or later eliminates or at least reduces alternative packaging options available to consumers:

“... [the packaging firm] is undoubtedly becoming a monopolist in the juice market... and consumers are forced to buy... this expensive packaging...” (representative of green organisation)

Moreover, the communication policy pursued by the firm to support its market expansion is considered unethical by the greens, since primary school children are targeted as consumers – as “mini-consumers” – in the name of environmental education. A crucial point is that the greens’ understanding of communication as such differs from that of the packaging corporation, as does their understanding of the role and opportunities of consumers. From a green perspective, it seems obvious that consumers’ opportunity set has shrunk, with regard to fluid product packaging over the years of economic transformation, and consumers are targeted by “manipulative” campaigns that seriously undermine the ideal of “consumer sovereignty.” It should be pointed out that a fundamental difference between the frame of reference of greens and that of the packaging industry lies in their respective visions of the economy. The greens’ economic vision involves an economy based on local resources and economic relationships:

“... small milk production facilities and local, regional markets should be promoted... concerning milk supply, the best solution would be to use milk-cans for transporting milk to the schools and children would drink milk in school.” (representative of green organisation)

From the greens’ economic perspective, corporate greening in general is only deserving of the environmental ideal if there is a change in institutional structures as well, otherwise greening of large corporations leads to a dead-end. Visions of an economy framed by the radical green approach implies a general negative attitude and judgement toward the greening

of the packaging firm in question, and a continuous conflict between them and the “free market environmentalism” expressed by the packaging firm as well as NAPMI.

Closer scrutiny reveals that even the points of agreements between the two conflicting sides lead to the suggestion of radically different solutions. Though both industrial and green representatives agree on the failure of current Hungarian regulation regarding environmental product fees and call for a radical reform, they suggest different solutions due to their different institutional ideals. The institutional ideal of free market environmentalism leads industrialists to support free market solutions to the packaging waste problem, suggesting a voluntary agreement between regulators and industry that puts the management of environmental production fees in the hands of an industry not-for-profit organisation, with the assigned task of establishing and operating selective waste management practices. In contrast, the greens’ distrust of central government and for-profit corporations calls for a solution that establishes strict social control over waste management. Civil distrust stems from unequal political power relations:

“... we [civil organisations] can express our opinion only from the edge of the playing field... [name of representative of NAPMI] goes to the Ministry for Environment as frequently as I go to the railway station. They have enough time and money to lobby at the Environmental Committee of the Parliament for changes in draft laws favouring their industrial interests.” (representative of green organisation)

The Environmental Manager of the packaging firm under investigation also acknowledged the weaker political position of environmental NGOs compared to that of the industry, but at the same time, condemned the media for providing the greens’ agenda with too much publicity.

Both representatives of industry and environmental NGOs pursue a practice of “disadvantageous labelling” of each other. Representatives of the packaging industry are annoyed by the “emotional politics” of greens who “look for trouble wherever they can” and “if you try to convince them by explaining facts they start to bull or shirk the issue.” They charge the greens of “tending to write about issues from the point of view of their own interpretation and theory that are false” and of expressing “statements out of which fifty percent are false,” and so forth. A deep distrust on the part of the civil sector was expressed many times during the interview:

“This corporate greening is doing well since some thousandths of the corporate budget are spent to make consumers believe that ‘we follow an environmentally conscious

business behaviour,' but then the structure of production and product line is just the same as before... we can hardly see a true intention, but such a nice colourful publication [referring to annual environmental reports] has already been produced... the surface is beautifully painted green but inside you find the same shit as before. And the enormous volume of products manufactured and the type of marketing activities pursued, all influence millions of consumers and promote consumption..." (representative of green organisation)

Despite all this opposition, there are still some points of agreement. Both representatives of the packaging industry and environmental NGOs speak of the need for internalising externalities in order to make waste recycling economical and achieve a closed material cycle. Both parties distrust environmental regulation enacted by central state agencies. Moreover, greens also acknowledged the time factor in corporate greening:

"... they [companies] cannot stay competitive in this market if they wanted to solve all these [environmental problems] at the same time ..." (representative of green organisation)

From this fact, however, it is not the omnipotence of "the rules of free markets" that is implied by the greens, but the necessity to change the rules of the game (i.e., a change in institutional structures). A more constructive and rewarding dialogue might seem to be institutionalisable by making both positions be perceived more "equal" in politics as well as in the media.

10.5. SUMMARY ANALYSIS

Five contradictions emerged in this story of corporate greening:

Contradiction 1: Separation between environmental communication and organisational greening

From the perspective of organisational hierarchy, the position of the Environmental Manager is separated from the control and management of the environmental impacts of productions and operations. The primary authority and responsibility of the Environmental Manager lie with environmental communication, public relations, and government affairs. This contradiction is manifest in the under-representation of actions and the results of greening organisational routines and operations in the messages of environmental

communication.

Contradiction 2: The issue of product recycling

Though to some extent a theoretical possibility exists for complete product recycling, it poses enormous practical difficulties. At the current level of technological capabilities, to recycle a composite packaging material requires a huge investment of energy and therefore, seems to not be economically viable at the present time. A related problem is the issue of product liability. Here the sector-wide attitude is currently characterised by a “washing one’s hands of it” posture. As the environmental fee imposed upon the sector by regulation – although considered even by the firms themselves to be too low to induce industrial actors to pursue a more environmentally conscious behaviour – is paid to the central state budget, the prevailing view of the packaging profession is that they carry no responsibility to seek solutions for treating household wastes related to their products.

Contradiction 3: Corporate environmental communication towards consumers

The packaging company under investigation here is aware of the fact that in general, its consumers are not aware of the actual composition of the packaging material utilised for milk and juice drinks, and that consumers perceive it as more benign environmentally than in fact it is. While the packaging firm produces advertisements that visually associate its product with an “all-natural” image, one can posit that the company does not just “forget” to inform consumers but actually misinforms them, in order to keep consumers’ misperceptions intact. One can also argue that even if it is acknowledged that Hungarian consumers in general lack an environmental consciousness (as many commentators claim), this has nothing to do with corporate malpractice in the form of false environmental communication.

Contradiction 4: Corporate communication targeted to children

The high-minded claims of the company with respect to its two environmental and health campaigns targeted at primary school children confronts us with the paradox of the separability of private and common interests. It can be argued that the campaigns directly targeting children in primary schools initiated by the packaging firm blur the distinction between private profit motives and community health, environmental and educational objectives, and in a way that creates too much room for the potential manipulation and corruption of public interests by private ones. These campaigns do not seem to be genuine

public-private partnerships; at least the more indirect forms of corporate involvement seem to be ethically preferable in community education, if corporations belong there at all.

Contradiction 5: Paradoxes at the individual level

Thus far, the individual level has not been touched upon; however, a careful reader might have sensed some apparent contradictions in the words of the current Environmental Manager of the packaging firm. This issue requires a little more elaboration than the other four contradictions since it was not mentioned explicitly before.

In a sense, the paradox of a “loyal radical” confronts us here. On the one hand, there are clear signs that the Environmental Manager interviewed for this study is relatively more committed to environmental improvement than many of her peers in other companies. It seems that she seeks to reduce the environmental impacts of her private life by reducing personal consumption and “greening” consumption activities. Her environmental commitment was even appreciated by the environmental NGO in continuous conflict with the packaging firm she represents:

“... she has always tried to be friendly with us and talk to us in an informal tone of voice. She looks to be very committed and to take environmental issues very seriously.” (representative of environmental NGO)

She also acknowledged that in a sense, she is in the same boat with the civic environmentalists. On the other hand, her personal reasons for espousing environmentally conscious consumer behaviour seem to not be in line with the support she gives to the environmentally friendly characteristics of the product made by the packaging firm for which she works. The Environmental Manager clearly expressed her preference for packaging products made of renewable materials over plastics in her day-to-day consumer decisions:

“... I don't like plastics [packaging].” (Environmental Manager)

At the same time, she praised the packaging firm's product for being made of wood, while ignoring the fact that the product also contains two non-renewable materials. Furthermore, the multi-national packaging company, whose Hungarian subsidiary she works for, has just launched its new business unit for plastics packaging materials production. How does she perceive it?

“Consumers like plastics packaging because it is easy to open it as well as close it and it is of a light weight... therefore we [i.e., the packaging firm] try to adapt [to those preferences].” (Environmental Manager)

Consumers are obviously regarded here as ‘sovereign’ decision-makers whose likes and dislikes impose strict constraint upon corporate product decisions. The Environmental Manager also claimed that every one of us should be aware of “the importance of environmental protection at shopping decisions,” pointing to a possible solution of “consuming no more than what we really need.” Yet, she does recognise systemic contradictions prevalent today:

“... to induce people to behave in a way... which is in the opposite direction of the development of the economy is... especially difficult. Not only to motivate them to consume more and more, buy more and more, but to some extent, to take care of what and how much to consume and what happens to things after consumption – it is much more difficult.” (Environmental Manager)

This remark made by the Environmental Manager clearly points beyond the logic of a market society that institutionalises, as one of its fundamental rules-of-the-game, the principle or promise that “more is better.”

The Environmental Manager has personally experienced the conflicts between her environmental commitment and the “business-as-usual” attitude of the companies she worked for.

“I have had it many times ... that ‘Dear [her name], this is not an environmental company. Have you had a look at what is written above the main entrance when you came to work this morning? There is no word for »environment« there!’ (Environmental Manager)

Yet, she believes that

“... from within [the company] it is possible to do more for the environment than working for the environmental movement... there is money here for it. If the money will be spent carefully and thoughtfully here, then it is possible to take preventative actions, not only end-of-pipe ones... It is possible to do this job very correctly and well, in a way which also corresponds to the economic policy of the firm.” (Environmental Manager)

This story of greening of a packaging firm seems to highlight that the optimism of the Environmental Manager, as expressed in the last citation above, may be considered well-

grounded if one regards market-based approaches to environmental issues (“free market environmentalism”) as a sufficient tool (or cognitive frame) for solving our ecological problems. The so-called “radical green NGOs” (like the one in this story) typically doubt the effectiveness of the free market approach and envision a more radical departure from the institutionalised logic of a market society. In this sense, the story of greening of the packaging firm highlights the limits or contradictions inherent in the paradigm of free market environmentalism; one might also sense a conflict between potentially different institutional logics of corporate greening. It is by no means intended here to argue that those different institutional logics are of an antagonistic nature, since there are “points of agreement” between them (e.g., the accepted need for internalising externalities and for constraining central state intervention). However, it is asserted that those institutional logics differ substantially from each other in the sense that they envision different social, political and economic arrangements. The table below highlights some points of difference between the institutional logic of free market environmentalism and civic environmentalism, referring to the above story of greening of the packaging company.

Table 13 Two Competing Institutional Logics of Corporate Greening

Comparative criteria	Free Market Environmentalism	Civic Environmentalism
Environment-economy vision	Global, materially closed, circular economy	Local/regional economy within the limits of ecological carrying capacity
Economic vision	Globally free market competition plus a “nightwatch” central state	Local/regional economy with limited market competition and constrained central state intervention
Objective Tool	Sustainable growth Eco-efficiency	Sustainable livelihood Reduction in production and consumption
Role of consumers	Sovereign consumers and children targeted as consumers	Consumers protected against manipulation and exclusion of children as consumers

It may not be necessary to emphasise that the two institutional logics of corporate greening given above are not the only possibilities, but that contrasting them in the above table is intended to focus on this specific story of greening. This story highlights the limitations to a theoretical approach (to corporate greening or environmental management) that limits its reach to organisational processes and actions, without linking them to the mechanisms and factors at work in the institutional context. The story of greening of the packaging company would only be a story of environmental excellence if one concentrated on

the environmental performance of production and operations, and the various environmental communication efforts. To understand it as a story of contradictions within a corporate greening process requires a perspective that takes into account the broader issues of institutional structures (e.g., through the contrasting perspective of the environmental NGO). Subsequently, it helps to critically interpret the story of greening of the packaging firm as the operation and/or activation of free market environmentalism.

CHAPTER 11

MAJOR THEMES IN CORPORATE GREENING

The analysis based on coding the interview texts has produced some major themes of corporate greening in Hungary during the 1990s. These themes might deepen our understanding of the main factors, characteristics, processes, and discourses of corporate greening in Hungary in the given time period. First, two themes – “regime change” and “privatisation” – will be introduced that demonstrate the influence of the wider social, political, and economic context upon corporate greening. The socio-political transformation of the country as well as the process of privatisation (and the institutional development of a market economy in general) have had a profound impact: environmental or ecological issues have become, although to differing extent, strategic concerns to corporations. The next two themes – “leadership” and “environmental manager as agitator and mediator” – demonstrate the limits and opportunities of individual agency with regard to organisational greening. It will be pointed out that, during the institutional re-structuring at the macro level, there has been room for taking strategic actions and influence the extent and direction of organisational greening. The next major theme of corporate greening relates to organisational power. The most salient power conflict emerging in the processes of organisational greening is the conflict between quality management and environmental management. Many times this conflict is manifested in the process of institutionalising an EMS. Then, the aesthetics of organisational greening as a main theme will be introduced. The visual aspects of *greening* have come to dominate, to a considerable extent, organisational discourses to our great surprise, sometimes reaching to the aesthetics of industrialism itself. The next three themes relate to the enactment of separate discursive legitimacy orders of corporate greening. The first one – “becoming European” – is very specific to a country of transformation from a Soviet-type authoritarian regime toward a democratic European nation state, being in the process of accession to the European Union. Another discursive legitimacy order identifies the modern, culturally as well as technologically, with being environmentally sound. The last discursive legitimacy order advocates the approach of “free market environmentalism.” The last major themes emerged as dimensions of muteness in corporate greening and relate to the de-emotionalisation and de-moralisation of corporate greening, unchanged or unquestioned

organisational identity, and lack of critique or reflection at the system level.

Obviously, the separation of these major themes serves analytical purposes and they are necessarily intertwined in understanding the particular cases of corporate greening. Although they might be of a general theoretical relevance for building models of corporate greening in a so-called transition economy.

11.1. “STRUCTURE” IN CORPORATE GREENING

Political and economic regime change constitutes the structural (macro-level) aspects of corporate greening in Hungary during the 1990s. These changes in the socio-economic regime implied a clear rupture in basic organisational characteristics (technology, culture, organisational structure) at the majority of the case companies. Consequently, regime changes triggered a discontinuous organisational change. However, one company, the case firm of the second story reported above, was an exception. Apart from two years of uncertainty due to incompetent management caused by unwanted central government intervention, the chemical company has demonstrated an unusual continuance in organisational identity. The relatively stable market position this firm enjoyed due to strong export performance in western European countries made this chemical company avoid the financial difficulties that were typical to most of the state-owned large industrial firms during the first half of the 1990s. Moreover, its strong organisational culture, characterised by a sense of excellence, enabled the company to gradually accommodate changing expectations and demands, including environmental ones. Nevertheless, for large state-owned industrial firms, regime change brought a crisis situation, with threats and opportunities at the same time.

11.1.1. Political regime change

In interpreting organisational processes of corporate greening the large-scale changes in the socio-economic regime in Hungary obviously constitute crucial factors. The institutional setting of political democracy re-arranged the relationship between economy and society in general and between local communities and corporations operating in their neighbourhoods in particular. Overall the institutional changes resulted in increasing the significance of social legitimacy as a strategic issue to corporations: How credibility and trust can be regained or

rebuilt in a new institutional context? To a great extent, legitimacy constitutes not merely an ethical or political issue but has serious economic implications (see, e. g., adversarial relations, or mistrust, between a firm and the local government might cause delays in the permission process for new investments resulting in huge amounts of unrealised profits).

Nevertheless, significant differences may be detected in the importance of legitimacy processes of corporate greening. The contrast, in this sense, between the our first story of rebirth and that of a sense of excellence above is the most striking. In both towns local economy and politics were intermingled and dominated by the case companies respectively during the communist regime. However, the major difference in technology – technological excellence of the chemical firm as opposed to the relatively outdated technologies of the cement factory – constitutes only a partial explanation of the difference in environmental strategies of the firms in question. There is much more than that for a more complete interpretation. There were significant differences between the historical development of the two settlements, where the firms are located, that has, to some extent, influenced the possibilities of corporate greening. The town where the cement plant is located has been a settlement with a stronger, and longer, history of civic development, while the chemical plant is located in the neighbourhood of a small village which was forced to become a new industrial town during the era of communist urban planning. Consequently, in the town where the cement plant caused its enormous air pollution, there is a population with a more genuine civil attitude than in the newly industrialised town where overwhelmingly the employees of the three large companies settled as newcomers.⁵² This fact had enormous consequences for the local political contexts of greening during the post-communist era as well. In discussing the case of the cement factory, it was pointed out how the importance of a “spontaneous civil movement” against pollution in town and, then, green concerns have gained momentum in local politics, including local government policy making, after the regime change. Moreover, and relatedly, the local government of this town with a civic history, during the first years of institutional transformations, attempted to loosen its economic dependence on the cement factory imposed during the communist era and has been successful in establishing a more diverse and prosperous local economy by attracting many new investments. The local government of the newly industrialised town had no such intentions at all, as they had enjoyed comparatively more resources from the central government during the communist era

⁵² For example, one of the largest and most influential green organisation in Hungary has been established in this town.

and, after the regime change, it was satisfied with the revenues coming from local industrial tax, paid by the three large companies operating in the neighbourhood. The chemical plant has always been considered a modern industrial complex in the CEE region and there were no pressures, or local demand, exerted upon the firm to change policy regarding ecological issues after the regime change.

Our findings may also be read as strengthening the general conclusions of sociological analyses of environmental interests in Hungary in a historical context. These studies conclude that towns with a longer civic history in the pre-communist era were able to recognise and protect their own interests; to organise civil co-operation in conflict situations; and solve their problems by themselves. In contrast, the newly industrialised towns were not able to act as autonomously as the towns with civic history to develop and protect their own interests with regard to ecological issues; consequently, they were more exposed to the domination of short-term interests over the longer ones (see Szirmai [1999], especially pp. 50–53 and 90–91).

From the point of view of formerly state-owned corporations, the previous neglect of environmental performance began to take its toll in the form of a legitimacy crisis. After the regime change large corporations perceived that public mistrust was typically widespread with regard to their environmental performance. Many state-owned companies faced serious financial difficulties and were balancing at the edge of bankruptcy; internal problems were aggravated by a depressed organisational climate due to uncertainty over the future. Sometimes the growing voice of civil organisations – due to the enacted legislation related to negative freedoms⁵³ – triggered a profound change process at such industrial firms. For example, one of our case companies, a large chemical firm had to face frequent and strong civil pressure after the leakage of information about an accumulating serious soil contamination problem. Therefore, one of the most urgent tasks of the new top manager – as he recalled during the interview – was to develop plans for cleaning up past contaminations, institutionalising good housekeeping practices, stabilising the chemical firm's financial position, and establishing a cooperative organisational climate, while achieving a positive change in stakeholders' perception in order for the company to survive and revitalise.

Political regime change thus re-organised power relations between economic agents and local communities by eliminating the overwhelming dominance of the former over the latter through new legislation that has institutionalised the fundamental civil rights. From the point

⁵³ Such as the freedom of press, of association, etc.

of view of business, this change pushed legitimacy issues in the fore front. It seemed very obvious that in the climate of public mistrust there is no possibility to conduct business-as-usual, even if competitiveness is not at stake in the short run. Consequently, non-market strategies gained prominence as large industrial firms struggled to re-establish and/or maintain their credibility (to overcome organisational crisis). Corporate environmentalism was, in this respect, problematised as a minimum requirement for good corporate citizenship.⁵⁴

11.1.2. Economic regime change: privatisation

Privatisation – through different phases and different methods and many times publicly heavily contested – has resulted in the acquisition of large Hungarian companies by foreign owners. The new owner has brought additional resources and/or new management attitude and practice, and ultimately survival for many large industrial firms. Providing financial resources for corporate greening (e. g. technological restructuring) constituted a contribution by foreign owners at least to the extent that enabled the cleaning up of past environmental burdens. This was clearly motivated by shorter term financial interests of the new owners in the sense of reducing financial risks emerging from bad environmental performance and reputation. In other instances, in order to be able to be privatised through the stock market, huge environmental investments and establishment of environmental management systems were straightforwardly needed (financed by central government funds as a re-organisation before privatisation).

However, there seems to be some difference between financial investors and professional ones with regard to the continuance of environmental motivation. Financial investors are primarily interested in avoiding financial risks due to bad environmental performance (e. g. falling share prices due to bad reputation, worsening insurance conditions, etc.) and do not force, though do not hinder either, environmental improvements beyond that level. Professional investors, in the form of acquisition by a foreign firm with similar business profile, typically bring their management style and practice which, at least through a good housekeeping attitude, help further environmental improvements. In these latter cases, owners typically force an institutionalisation of some form and extent of stakeholder dialogue and

⁵⁴ See Vári–Caddy [1999] for an analysis of current possibilities for public participation in environmental decision-making in Hungary that obviously relates to the strength of civic pressure on corporate environmental

involvement. They are primarily motivated by gaining a good corporate citizen position within the local community.

Note, however, that improvements in corporate environmental performance due to privatisation are by no means an intended result of well-designed processes and methods of privatisation in Hungary. In fact, as Csanádi-Páczai [1998] and Csanádi [n. d.] point out, environmental concerns were consciously suppressed by Hungarian state privatisation agencies in favour of short term financial revenues. In a sense, therefore, the structural changes in economic institutions contributed to or enabled corporate greening to the extent if organisational change agents, more specifically, a green champion and a supporting leader, could take advantage of the crisis situation and initiate environmental improvements.

11.2. “AGENCY” IN CORPORATE GREENING

Institutional changes at the macro level have clearly had a profound influence upon corporate greening, though there still remained room for strategic actions with regard to environmental issues. Which direction and to what extent corporate greening would take has been affected by individual agents as well. Two types of individual agency were apparent during organisational crisis and contributed to the institutionalisation of environmental concerns within large corporations: leader and green champion. Environmental managers has typically played the role of the latter. It seems that the function of an environmental manager is heavily loaded with internal as well as external communication and, since environmental issues might emerge in relation with all functional areas of business, their task requires a special sensitivity to organisational politics, too.

11.2.1. Leadership

The role of a leader seems to be of primary significance in processes of corporate greening, particularly when greening is enacted at a time of discontinuous organisational change. Political regime change, with ongoing socio-economic changes, in the Central and Eastern European (CEE) region in general and in Hungary in particular put many firms in a crisis situation: declining market shares resulting from outdated technologies and product

performance.

lines and import competition; collapsing Eastern (COMECON) markets; lack of financial resources following a sharp decline in state financing or subsidies; legitimacy deficits in local communities. Therefore, greening was typically emerged as part of a broader organisational crisis. To find a way out for formerly state-owned, large corporations in an emerging market economy, transformative leadership was essential at top management level.

In order to overcome the organisational crisis, leaders typically face the complex task to regain public trust and, at the same time, reduce uncertainty and conflicts within the organisation in question and eventually establish a co-operative organisational climate. The three stories of greening above provide a detailed description of the former task. However, the latter was equally difficult and complex as the following citation from two top managers of another chemical firm demonstrates:

“I met all the engineers... but the first half a year at the company was devoted to [assure them] that they can be honest, there will be no harm to anyone. I explained that the whole thing is happening so as to improve on all things. It took about a year to make the engineers of business units be open and write down what they see to be wrong and how they see it is possible to change it.” (CEO, chemical firm)

“We met the experts, technicians, plant engineers, and managers of business units and... in fact we had to establish a common language... A process started at the company that we called truth-telling. Reality should have been uncovered honestly because we had to solve the problems...” (Business Unit Director, chemical firm)

Sometimes the leader him-/herself is the green champion, too. S/he might almost be considered as a “trouble-maker” but s/he should clearly have personal credibility:

“... and a gentleman arrived here who is a green man... Who immediately wanted to realise a number of things here that he had previously seen all around the world. Generally, the problem was that he couldn't make as great a progress as he wanted to. ... [He was] a man who took enormous steps in demolishing polluted buildings and gave week-long or ten days long deadlines for handling toxic wastes... He was a man of credibility. Of course, it couldn't happen differently anyway since no one follows an incredible person...” (Engineering Director, electric equipment manufacturing firm)

From the perspective of greening, it is not necessary that the leader himself initiates the processes of greening, though it is important that s/he develops a general programme for organisational change and demonstrates a commitment whereby greening efforts from the lower echelons are supported and encouraged. Our case studies suggest that a leader can succeed with greening without a “green change agent” at lower echelons (that is, s/he is the leader as well as the “green champion”), but “green change agents” typically at middle

management levels cannot be successful in their greening efforts unless at least one leader back her/him up. Some of the cases examined demonstrated that, for example, after the leader's leaving the organisation greening was "frozen" at the level reached, and new initiatives of the green champion are no longer welcomed or supported. It might be said, as the case study of a food company has profoundly demonstrated, if managers replace leaders after a gradually regained market and non-market position, ecological concerns tend to be relegated to an operational level and organisational resources are channelled more into increasing or maintaining market share. Short-term market goals might easily subvert longer term non-market ones; environmental initiatives should compete with other projects on a very narrow cost-benefit calculus.

The firms where leaders are still in power might promise a better prospect for future environmental improvements than those "lead" by managers. The importance of leadership was, in a sense, supported by the cases of corporate greening without leaders at the top. The story of the chemical firm above speaks about an organisational culture that was established during the past political regime by a charismatic leader. Not having been experienced the deep crisis, typical at the first half of the 90s in the Hungarian economy, this culture of excellence set an evident, or non-contested, stage for greening – there was no need of a leader, in a transformative sense, to initiate or back up efforts to "green" the firm. Similarly, the third story of corporate greening above presented a different organisational context for greening: green leadership was typically missing whereby seriously restraining the legitimate room for an internal green champion (recall the selective waste handling initiative of the environmental manager, or the perception of the quality manager about top managers support to the introduction of an EMS).

11.2.2. Environmental manager as agitator and mediator

No corporation among our case companies provides a senior position in top management for environmental affairs. Corporate environmental officers tend to be either in staff position directly reporting to one of the directors (or executives) or in a middle management rank. Thus, they characteristically function in a "buffer zone" from where they struggle for transferring environmental ideas, or awareness, to the top, as well as to the lower levels of organisational echelons. They are, at the same time, facilitators, agitators, and influencers who have to develop excellent communication skills to succeed in their day-to-day jobs and

overcome organisational resistance arising typically from short-run cost minimisation and profit maximisation concerns. Corporate environmental officers struggle to construct a legitimate discourse about environmental issues, essentially public affairs, within a private institution – a task unavoidably full of contradictions.

“The environmental protection [unit] is a mediator – it mediates those tasks that business units should deal with technically or otherwise. Of course, we have tasks to be implemented at a company-wide level and also very difficult co-ordination tasks. But our role as mediator is more significant than the other two. To accomplish it, very good human skills, persuasiveness and an ability to communicate are needed. Top management should be persuaded about the importance [of environmental issues] because it requires a lot of money. Then, one should also persuade those who will eventually carry out the tasks. To assign tasks for others is not happily accepted in any community, is it? There should be an intention to do it but they should be persuaded about the necessity of those [environmental] steps.” (Environmental Manager, chemical firm)

“... I have to develop very sophisticated small strategies... when, what, how, whom, and why I tell something... Sometimes I make mistakes.” (Environmental and Quality Manager, electronics firm)

Furthermore, environmental managers are at the border of their own organisations, thereby typically acting in a dynamic stakeholder context: keeping in touch with street-level environmental regulators, green NGOs, and local people; exposed to the possible tensions between those different but legitimate stakeholder interests. Corporate environmental officers thus experience their professional life as a constant struggle.

11.3. THE ORGANISATIONAL POLITICS OF CORPORATE GREENING

Since environmental managers reside typically in less influential organisational positions (e. g., in staff position or in middle-management), organisational power relations may pose critical problems to them. Many environmental managers argued that the introduction of an environmental management system (EMS) has increased or broadened their range of influence. Institutionalising an EMS (either ISO 14001 or EMAS⁵⁵) within the organisation makes environmental tasks systematic and routine-like, forces all employees to take environmental concerns into account to some extent. The principle of continuous improvement included in an EMS provides a rationale for arguing for more environmental

⁵⁵ European Environmental and Auditing Standard

efforts implemented over time.

However, the idea and the actual process of implementing an EMS creates specific organisational conflicts or tensions between representatives of quality management and those of environmental management. Since quality assurance standards were typically institutionalised before EMS, quality departments have usually more organisational power and influence than their environmental counterparts. By implication, when debates arise whether to implement either an integrated quality and environmental management system (Q/EMS) or separate systems, representatives of environmental interests find themselves in a weaker position compared to those of quality issues. It is not at all unusual that the quality assurance department directs the process of implementation of an EMS, as well as the day-to-day management of the integrated system (see e. g. the third story of corporate greening reported above). All these processes are full of possible and actual conflicts, resulting at worst in the total subversion of environmental concerns and resources to quality assurance interests.⁵⁶ The following relatively longer quotation of the relevant explanation given by an environmental manager at another chemical firm is telling in this respect:

“Quality assurance is a department and environmental protection operates as a different department... They are stand-alone organisational units. Within the overall management system, quality assurance and environmental protection are linked together. But only within the overall system, not functionally... Both of them are stand-alone professional units, though they are unified under the company-wide management system... One should be very careful of not speaking of fusions... [Quality and environment are linked] only at a company-wide management level, not at a professional level. These are nuances, but they are very important.”
(Environmental Manager, chemical firm)

The more influential organisational position of quality assurance interests is not only a historical contingency but also has a lot to do with the managerial perception of their respective business importance. Some of the interviewees cited above (particularly the quality manager of the packaging firm, the third story, and the environmental manager of the chemical company, the second story) noted the main difference between quality assurance issues, perceived by managers as having direct competitive advantage, and environmental considerations, perceived mainly as costs of doing business or, at best, having indirect beneficial effects on competitiveness.

⁵⁶ As it has happened with one of our case companies, the food products firm, where the entire environmental unit was eliminated and the environmental manager has been put under the direction of the quality assurance manager.

11.4. THE AESTHETICS OF CORPORATE GREENING

Organisational greening has a profound aesthetic dimension. Greening is often described as an aesthetically discontinuous change over time. While the past state-of-affairs is characterised as “dirty,” “polluted,” „grey,” „dusty,” “messy,” and “untidy,” aesthetically more positive terms are attached to the present, such as “green plants,” “flowers,” “tidiness,” “cleanliness,” “harmony,” and “beauty.” The aesthetic dimension of corporate greening is a particularly salient feature of the story of the cement plant above. However, in the story of a sense of excellence reported above, an aesthetics of industrialism appears in the words of the Director of Marketing Communication:

“ If you walk over [the plant]... you will see absolute order and cleanliness. ... I myself was amazed walking over the plant how fantastically modern and beautiful it is. It is really beautiful. The whole industrial complex is in order, chromium-plated, stainless steel pipes everywhere.” (Director of Marketing Communication, chemical firm)

11.5. ENACTED “LEGITIMACY ORDERS” IN CORPORATE GREENING

The case studies revealed some specific discursive patterns emerging during many interviews or appearing in many written documents. Those discursive patterns have a common characteristic: they all amount to attempts to legitimise or rationalise efforts at corporate greening. The three discourses separated by the analysis draw, in a sense, the frame of the dominant discourse of corporate greening in Hungary during the 1990s. The discourses legitimise specific ways of thinking and acting while, at the same time, de-legitimise other, competing ways of thinking and acting with regard to corporate greening. The three discourses might therefore be called “discursive legitimacy orders.”

The first one introduced below seems to be very specific to the Hungarian context, to be more precise, to the context of a so-called accession country. “Becoming European” (perhaps again), that is, joining the EU, constitutes a widely used discursive element in public fora all over the Central Eastern European (CEE) region. The other two discursive legitimacy orders, however, seem to have a more general applicability. It might be argued that they constitute a dominant frame of conceptualising sustainable development by the North. In this

sense, discursive patterns that identify environmental soundness with being modern and advocate the logic of free markets to be applied for solving, or mitigating, ecological problems clearly relate to the paradigm of “eco-modernisation.”

11.5.1. Becoming European

The EU-focus in political discourses in Hungary has its impact upon the interpretations of corporate greening, as it is reflected by the texts of interviews conducted. References to the regulations, norms, practice, and awareness in the EU serve a point of comparison as well as a source of legitimacy.

“These are all... technologies that have stood the test of time and come from West European, developed countries...” (Director of Strategy, chemical firm)

“The technologies operated here are ab ovo designed to be environmentally sound. ... We operate western European, American and Japanese technologies.” (Director of Marketing Communication, chemical firm)

Concerning, for example, environmental regulation, the main point of reference is, again, the “reasonable” policy of the European Union, as opposed to the Hungarian:

“... [I]n this respect, western Europeans are... the best examples... [since] one should set reasonable and economically feasible tasks. It is nonsense to put unproportional burdens upon... a company... and wanting it to solve problems within a year because it will lose its competitiveness compared to other companies... If it loses, it will go bankrupt.” (Business Unit Director, chemical firm)

A number of interviewees spoke of greening as a process of becoming more “civilised,” or of accessing “the developed and modern West.” The EU and other developed countries are considered to be the ideals, both technologically and culturally. In this sense, processes of greening amount to the import and application of environmentally sound technologies, as well as a cultural transfer.

11.5.2. Being Modern

Another widely applied discursive pattern emerged from the interviews was the identification of “the modern” with environmentally sound in terms of both technology and

culture (awareness). An up-to-date technical solution or technology is argued to be, at the same time, environmentally more friendly than its previously applied counterparts. Modern technology is argued to be necessarily producing better environmental performance. By implication, technological modernisation does typically provide “win–win” outcomes: improving competitiveness and environmental quality at the same time.

Similarly, a modern organisational, hence corporate, culture cannot almost be imagined without environmental awareness. As modern technology is becoming cleaner than the one previously applied, modern organisational men are growing an environmental consciousness that was not at all typical in the past – so the argument goes. Modern organisational men are said to be “aware,” “disciplined,” and “taking care” of the tidiness of their environment. Modern technology needs modern men in order to proceed further on the road of modernisation – this time, though, on the road of eco-modernisation (or ecological modernisation). Ecological modernisation seems to be a natural extension of the developmental thinking of modernity. Further, or more and more modernisation, with regard to both technology and culture, will automatically solve ecological problems.

11.5.3. Free Market Environmentalism

Three major logics of modern social organisation are the market, the bureaucracy, and the community (or civic logic). The role of them with regard to corporate greening is also evident and expressed by the interviewees, though the importance attributed to each of them greatly differs. “Free market environmentalism” is chosen here to underline the dominance of the logic of the market as an institutional frame to be applied to making sense of ecological issues. Many discursive patterns revealed this dominant frame. For example, a well-functioning economy is advocated as a fundamental condition for providing resources for environmental protection. Environmental management, both at an organisational and societal level, can only be pursued at or beyond higher levels of economic development. Relatedly, environmental protection is better to treat the “laws of the market” as given and attempt to capture the dynamics of free markets in favour of conservation or preservation interests. Free markets might serve the interests of ecology – as the argument goes – if the rules of the market game is properly set. This leads to the well-known argument for internalising externalities, that is, eliminating price distortions due to unaccounted pollution costs. However, if all costs are reflected in market prices, free markets will automatically produce

an eco-efficient economy that proceeds on a green growth path.

The task of integrating environmental considerations into the rules of the game is obviously assigned to the government sector. Environmental legislation and regulation is justified to the extent of internalising pollution related externalities in ways that do not hurt business competitiveness. The bureaucratic logic has, therefore, its special role to play but clearly within the dominant frame set by the free market logic of social organisation. During the interviews, for example, it was often referred to that corporations are primarily for making profit and environmental protection will be pursued to the extent that it may make itself compatible with business' financial objectives (shareholder value). The issue of international competitiveness is also cited as an objective condition which environmental regulation should accommodate to.

“If Hungary does not take on parameters according to her stage of development, or perhaps overbid current European directives, legal rules will look impressive, but will be unfeasible. It will retard the country's growing international competitiveness. Thus, we are struggling for creating legal standards which are feasible and do not lead to reduction in competitiveness for the growing Hungarian economy.” (Environmental Manager, chemical firm)

Moreover, corporate environmental managers – according to the interviews – perceive environmental regulators as more professional at the lower echelons of environmental bureaucracy (street-level environmental inspectors) than at higher ranks. They typically report good, professional connections with environmental inspectors but complain about the role of the Ministry for Environment and other government bodies of environmental policy formation:

“... mistrust is intended to be deepened by those who formulate legal requirements. It is nonsense that in Hungary authorities could fine for everything... Obviously, such a system naturally involves resistance against fines, as well as attempts to refrain from fines... The method of enforcement – in a democracy – should be the legal way.” (Environmental Manager, chemical firm)

The role of environmental NGOs seems to be accepted in general, particularly from the point of view of the “civil identity” of corporate people interviewed. Civil organisations are widely seen as a necessary constituency for a democratic political setting. At the same time, the acceptance is only partial, and fraught with contradictions, in the sense that corporate people perceive and claim civil agents to be unprofessional, emotional, and aggressively radical. Therefore, the majority of green NGOs are considered not to be potential partner for

business.

“When greens call for a return to nature, it sounds good and promising, as well as for shutting down industrial operations... [but] it should not be taken seriously... If we acted that way we would do so much harm that would undermine conditions for environmental protection.” (Environmental Manager, chemical firm)

The case studies of corporate greening are telling in another respect: discourses of greening are mute at least regarding three important dimensions.

11.6. CORPORATE GREENING STRIPPED FROM ETHICS AND EMOTIONS

Almost no interviewees applied any frames of ethics while speaking of corporate environmental management. When questions of responsibility or moral conduct were directly posed to them, they typically eluded straight answering. Emotionality with regard to the environment was also missing to a great extent and when emotions appeared, they were related to the beauty of some natural landscape (that is, aesthetics of nature).

Ethics was relegated to the private sphere, as demonstrated, for example, by the personal environmental commitment of the packaging firm’s environmental manager, as well as by the following interview:

“Responsible Care is a form of behaviour... This is an expression of a sense of responsibility for others. Strictly speaking, this is not a matter of business. Practically, this is a humane issue...” (Environmental Manager, chemical firm)

It is only at one firm where ethics, or to be more precise, social responsibility of business is an issue of importance. The top manager of an electronics company has long been demonstrating, or widely known of, his commitment of corporate social responsibility. It is not accident that he places the issue of ecology in the wider discourse of the social responsibility of business:

“Experience that I had either in my personal environment or during travelling abroad has motivated me to spread it [environmental commitment]... This is a mission. In my family, everyday we speak about environmental protection. I would like this 600 people working here to talk to their children about such issues... This is an internal

motivation. You happen to be in such a situation, you are well-known, have influence, can make decisions and you have to take responsibility for it. Obviously, it is not at all indifferent what you support and prohibit.” (CEO, electronics firm)

The case studies show corporate greening as generally de-moralised and de-emotionalised processes and interpretations.

11.7. CORPORATE GREENING AND ORGANISATIONAL IDENTITY

It might be argued that it is indeed a telling example of the extent and transformative power of greening that no one firm appointed a top manager position for environmental management. It is of a symbolic importance whether environmental issues are structurally assigned a strategic significance, or not. It seems therefore that the representation of environmental interests remains with leaders as well as change agents and greening has not come up to an organisation-wide transformative potential.

Relatedly, no one firm investigated has started a process of third-order change, in which organisational identity – core activities, main products or business units, organisational routines – is questioned or reconsidered from the point of view of ecological impacts.

“Compliance with environmental requirements... are always emerge with regard to issues of production, or increasing productive capacity.” (Environmental Manager, chemical firm)

When questions at the level of organisational identity or core activities are posed by outside stakeholders, typically environmental NGOs, it is not even understood, or taken seriously, by corporate people. It seems that corporations do not consider the question how to produce profit without environmental harm, rather they stick to the question how to produce as much profit as to be able to allocate subsequently some part of it to environmental protection.

Organisational identity is tightly connected to the moral side of corporate greening. The issue is well captured by the following interview:

“It has to do with who we are. This is important so as to make 600 people start to think in this way... [and] not to make others see us this way... We are not doing it because of this [the latter]. Strip everything what is PR, what is business, and what remains is a sense of social mission.” (CEO, electronics firm)

This statement clearly confronts us with the essential difference between image and identity, referred above in the chapters reviewing the literature. Greening organisational image falls short of greening organisational identity with regard to the transformative potential of change processes involved.

11.8. CORPORATE GREENING WITHOUT CRITICAL REFLECTION

Corporate greening as revealed from the case studies lacks a critical reflection upon the practice and legitimacy of business-as-usual. Put it differently, the primary social responsibility of business is considered to be business (i. e. making as much profit as possible). Furthermore, there is no critical reflection upon the concept of development or the production and consumption orientation of developed nations from an ecological point of view. By implication, the North, particularly the EU, is understood as an ideal to be strived for concerning environmental regulation, environmental awareness, and environmental management. The EU is identified with environmental excellence, environmentally sound technologies – the EU is a prime example of ecological modernisation. There is only one way of development that is followed by the developed nations through economic growth with environmental protection added on. Raising issues of ecological problems related to over-development or over-consumption is not supported or even discarded. Sustainable development is the way of development that Western European and North American countries have taken. It seems that as growth with equity was accomplished by the welfare state, green growth is being implemented by the European Union and other highly developed countries nowadays. There is no need to change the paradigm of development because of ecological considerations. The dissenting voices again come from the civil sector (see the summary analysis in the third story of corporate greening, Chapter 10).

11.9. A THEORETICAL PROLOGUE: GREENING INDUSTRIAL BUREAUCRACIES

Based on the major themes of corporate greening introduced above, the rudiments of a model of greening industrial bureaucracies. It seems that the dominant logic and mechanisms

of corporate greening might be interpreted with the help of the Weberian ideal-type bureaucracy. The Weberian model seems to explain the possibilities as well as limits to corporate greening:

- The dominance of a rational discourse (stripped from ethics and emotions);
- The attitude of modern professionalism, that has come to include environmental awareness as well as related management skills; and,
- Corporate environmental management can only be effective if it is operated as a system – an environmental management system (EMS) establishes a cognitive order (disciplined and rule-bound individual cognition) on the one hand, and makes organisational processes predictable and controllable.

Modern industrial bureaucracies – that is, corporations – are so-called man-machine systems. A man-machine system has two fundamental elements: organisational culture and technology. A modern industrial bureaucracy is greening itself both culturally and technologically in order to come up to the latest expectations and remain up-to-date. An ideal modern industrial bureaucracy operates a cleaner, best available technology that comply with the most stringent environmental regulations; strives for continuously improving eco-efficiency (i. e. efficiency of energy and materials use) and establishing a closed material cycle.

Moreover, modern organisational men are the only ones who are able to work with such an up-to-date, high-tech technology. A modern organisational man is disciplined and environmentally aware. A modern organisational man is aware of the fact that all modern industrial operations have a certain risk potential. To be in control, thus, organisational men need rules and routines to follow. At the level of organisational culture, therefore, ecology (or environmentally aware routines, behaviours, values) should be synthesised with the industrial and business culture. Accordingly, modern organisational men attempt to control ecology in order to gain sustainable competitive advantage and reap the benefits/profits of win-win opportunities.

The disciplinary order and up-to-date professionalism of a Weberian ideal-type bureaucracy rationalises ecology. An ideal industrial bureaucracy has a technology that is safe and clean by design and employs personnel who are aware of and disciplined by the rules, norms, standards, regulations, etc. set by the bureaucratic organisation in question. Top

managers of the ideal industrial bureaucracy are in control. They established a rational order – a system – for managing ecology related to the organisation in question. Within the framework given by the established system (such as an EMS), all organisational men know their tasks and responsibilities, all behaviour seem predictable and all employees are controllable.

This rudimentary model of greening industrial bureaucracy is obviously abstracted from the particularities of the Hungarian context, but to a great extent depends upon, or situated in, the dominant institutional logic of modern, market societies. Consequently, it is historically situated, therefore does not constitute an attempt to build a universal model of greening business enterprises. A green industrial bureaucracy is a particular product as well as a constitutive element of the particular institutional setting in which it is situated. The operations and effectiveness of green industrial bureaucracies can be interpreted with reference to the prevailing socio-technological regime. The institutional logic of the prevailing socio-technological regime opens up opportunities for corporate greening, though, at the same time, closes off alternative ways of social learning to become ecologically sustainable. As an opportunity, ecological modernisation is called for. The paradigm of ecological modernisation might be interpreted as an inherent part or the extension of the project of modernity.

However, the project of modernity governed by instrumental rationality also has its inherent limits and dangers. The disenchanting world (as Max Weber put it) ruled by instrumental rationality might easily lose substantive values or ideals that cannot rationally argued for or explained. The dangers lie partly in a de-emotionalised and de-moralised approach to issues of ecology and partly in the lack of critical reflection upon the power dimension or the “logic of dominance” inherent in the paradigm of ecological modernisation. Arguably, it is a paradigm emerging from the European–North American cultural tradition – it is therefore historically, culturally situated. It is of primary importance to reflect upon the system level of the operating logic of ecological modernisation in order to prevent the loss of cultural diversity and, correspondingly, ecological diversity. Greening as ecological modernisation might constitute one useful logic and way toward sustainability, but it seems more prudent not to be considered the only way available.

CHAPTER 12

CONCLUDING NOTES

The main objective of the present dissertation and doctoral research work was to explore theoretically as well as empirically the possibility for an ecologically sustainable corporation. To accomplish this task, first the different interpretations of organisational greening found in the relevant literature were reviewed. A theoretical typology was developed in order to clarify the assumptions and analytical structures of the different theoretical interpretations of greening. Note however that the typology presented above is not complete in every respect. It may be argued that the organisational crisis management literature provides a particular understanding of corporate greening that should be dealt with separately. Moreover, particularly reflecting upon the debates between so-called anthropocentric versus ecocentric prescriptions of greening, a separate and important line of research has emerged which employs a theoretical perspective informed by and rooted in the rich tradition of feminist social sciences. A feminist perspective has a clear relation to the interpretation of organisational greening as a political-economic change since both approach focus upon power relations and the “logic of domination” prevailing in the discourses and practices of organisational greening (see Meriläinen [1998]). It might be further argued that a “Third-world” (or “indigenous”) perspective on organisational greening in particular and on sustainable development in general has been emerging and informing related discussions by pointing out some of the ethnocentric tenets of the dominant discourses and practices of greening (see Banerjee [1999a] and [1999b]). An important research task for the future is to integrate these perspective with the typology presented above, or re-assess the typology of corporate greening in light of these different lines of reasoning.

The theoretical discussion or analysis of the case of values-driven corporate greening acquired a particular importance with regard to the chosen task of the present dissertation. It was argued that good (i. e. environmentally conscious) intentions aside, within the prevailing institutional logic of a globally free market economy, the missionary efforts toward a sustainable business practice (“the business manager as a sort of eco-hero/ine” – Newton–Harte [1997]) may too easily fail. It might be argued that the “institutionalised logic of

action” in a market society has serious inherent flaws from an ecological point of view that seriously limit the transformative potential of greening efforts. Or, as Princen [1997] puts it:

“Business strategy and state policy tend to create a never-ending search for frontiers, however simulated and however unecological they may be.” (op. cit., p. 235)

The myth or logic of a “frontier economy” is institutionalised within modern market societies and the social agents, be they producers, consumers, or political decision-makers seem to act upon it and, at the same time, continuously re-construct it. However, this myth or logic is in contradiction with the basic laws of thermodynamics as well as ecology of today. In a physically finite world, unhindered economic expansion is not possible for all. Consequently, as Sachs [1995] argues among others, the crisis of nature is, at the same time, the crisis of justice. Students of organisation studies should therefore be aware of the system level in addressing the issue of a sustainable organisation or organising for sustainability.

The case of community supported agriculture was decidedly introduced and analysed since it is believed that a more effective search for a sustainable organisation (or organising logic) might be found in elevating the community or civic logic of action and its corresponding institutional structures. In contrast to the frontier perspective inherent in today's market logic and the de-emotionalised, de-moralised logic of bureaucracy (i. e. dominant business organisations), a civic economy might be characterised to take into account the ecological and social limits of expansionism since it is situated in time and space, in a particular ecological and cultural place. While the bureaucratic–market logic may call for sustainable development, green growth, high-tech eco-efficiency, and green image building, a civic or community logic might pave the way for sustainable livelihood, smaller scale technological solutions, and an organisational identity situated in a cultural and ecological place. Being aware of the dangers of utopianism, it is argued here instead that a civic or community logic of action might fruitfully be employed as a complement and antidote to the bureaucratic–market logic dominant today in the so-called developed part of the world.

The qualitative research reported above might have shed some light on the operating dynamics of corporate greening and the opportunities as well as the inherent limits mentioned above. Moreover, the paradigm of ecological modernisation emerged as the discursive frame of reference legitimising efforts to green corporations. Ecological modernisation calls for as well as promises a huge improvement in eco-efficiency of production and business operations, a development and expansion of future markets for green products and services

for the environmentally conscious and demanding consumers, and a synergy between the industrial/business culture and ecology. The driving force of ecological modernisation can be the Weberian ideal-typical bureaucratic corporation. Corporations are argued to possess the financial, organisational, and human resources needed for implementing any change on a relatively larger scale. Up-to-date technology is operated by a highly skilled and disciplined workforce. The instrumental rationality embedded in bureaucratic organisational structures and routines are argued to be directed toward the objectives of making ecology efficient and competitive.

Clearly, ecological modernisation requires the speeding up the co-operation between the bureaucracy of modern science (scientific institutes) and that of the economy (corporations), while supported by bureaucratic organisations of the political arena. The idea of progress, the authority of science and technology – essential features of modernity (see Redclift [1993]) – are not given up, indeed they are further reinforced, this time, in the name of ecology. However, one should be aware of the darker side of the modernist discourse and practice. As Zygmunt Bauman forcefully argued in his thorough and provocative analysis of the Holocaust committed by the Nazis against Jewish population in Europe, the rational world of modern civilisation has made the Holocaust thinkable and, tragically, realisable (Bauman [1989]). The machine of destruction set in motion by the Nazis was operated and accomplished by the predictably rational routines of bureaucratic organisations and with industrial efficiency. In other words, the instrumental rationality of modern science, technology, and organising tend to avoid, neglect, or even eliminate discourses particularly about power, the dangers of dominating knowledge, as well as ethics and emotions. In this sense, it may risk to contribute to the realisation of a “brave new world” ruled by an elite obsessed with the idea of material progress and instrumental rationality.

In a sense, it is inevitable that the ideas and reflections pursued in the present dissertation constitute an inherent part of the “becoming-a-doctor game” (Räsänen [1998]). Clearly, there were periods of writing when this feeling has been dominating. However, there were also periods when the present author could enjoy seconds of intellectual honesty and a sense of responsibility. Hopefully, the latter feelings might come to dominate all scientific endeavours.

APPENDIX

The first data collection phase of the research programme, *In Global Competition*, lasted from March to the end of June 1996. The sample was selected based on a 1994 database of the Ministry for Finance. The basic population of firms was restricted to legal entities that were doing business before 1992, used double-entry bookkeeping, and employed more than 50 employees. Out of 5618 companies, a representative sample was created according to four aspects: industrial branch, geographical location, size, and ownership structure. However, to the 593 firms that got into the sample, companies ranked by net revenues in 1995 (the so-called Figyelő Top 200) were added (resulting in a sample biased towards large firms). Altogether 665 companies were contacted and 325 provided usable data. The second phase of data collection started in February 1999. Out of the previously responding 325 firms (1996), 285 was successfully contacted in 1999, the rest were closed down or moved to unknown places. Since a significant part of the firms contacted refused to participate in the second survey, it was necessary to enlarge the sample. The Ministry for Economic Affairs provided two representative samples, including 252 and then 203 companies, as well as further 94 firms were also asked to participate by the interviewers. Finally, out of the 834 companies contacted in 1999, 319 provided usable data – amounting to a 38.2 percent response rate. Test for non-response bias was not conducted. For further details with regard to the final sample of 319 firms see Czákó–Zoltayné Paprika [2002]. The tables below summarise the characteristics of the sample of 204 industrial firms on which the quantitative analysis reported in this dissertation was performed.

Table 14 Sectoral Distribution of Industrial Firms in the Sample of 1999

Industry Sector	Number of Firms	Percentage
Food, beverages, tobacco	22	10,8
Textile and clothing	19	9,3
Leather products	6	2,9
Wood products	4	2,0
Pulp and paper, publishing and printing	44	21,6
Energy, cokes, oil products and nuclear fuel	4	2,0
Chemical products and fibers	14	6,9
Rubber and plastics products	11	5,4
Other non-ferro mineral products	11	5,4
Metal raw materials and metal products	23	11,3
Machines, equipment	16	7,8
Electric and optical equipment, telecommunication products	10	4,9
Road and other vehicles	2	1,0
Furniture and other manufacturing products	9	4,4
Mining	9	4,4
<i>Total</i>	<i>204</i>	<i>100,0</i>

Table 15 Distribution of Industrial Firms in the Sample of 1999 According to Company Size

Category of Company Size (Number of Employees)	Number of Firms	Percentage
-99	64	31,4
100-249	77	37,7
250-499	25	12,3
500-	32	15,7
In Sum	198	97,1
Missing Values	6	2,9
<i>Total</i>	<i>204</i>	<i>100,0</i>

Table 16 Distribution of Industrial Firms in the Sample of 1999 According to Net Revenues

Category of Net Revenues (M HUF)	Number of Firms	Percentage
-250	41	20,1
251-500	38	18,6
501-1,000	42	20,6
1,001-2,500	33	16,2
2,501-	42	20,6
In Sum	196	96,1
Missing Values	8	3,9
<i>Total</i>	<i>204</i>	<i>100,0</i>

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