



## WHY COMPANIES GO GREEN: A MODEL OF ECOLOGICAL RESPONSIVENESS

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We conducted a qualitative study of the motivations and contextual factors that induce corporate ecological responsiveness. Analytic induction applied to data collected from 53 firms in the United Kingdom and Japan revealed three motivations: competitiveness, legitimization, and ecological responsibility. These motivations were influenced by three contextual conditions: field cohesion, issue salience, and individual concern. In this article, we also identify the conditions that likely lead to high corporate ecological responsiveness.

During the last decade, researchers concerned with organizations and the natural environment have investigated why firms respond to ecological issues. They have examined why some firms embrace ecologically responsive initiatives, while others in seemingly similar circumstances do not even comply with existing legislation. Understanding the motives for corporate ecological responsiveness is critical for two reasons. First, this understanding could assist organizational theorists to predict ecologically based behaviors. For example, if corporations adopt ecologically responsive practices merely to meet legislative requirements, then firms will engage in only those activities that are mandated. Second, this understanding could expose the mechanisms that foster ecologically sustainable organizations, allowing researchers, managers, and policy makers to determine the relative efficacy of command and control mechanisms, market measures, and voluntary measures.

Several studies have identified motives for corporate "greening," such as regulatory compliance, competitive advantage, stakeholder pressures, ethical concerns, critical events, and top management initiative (Dillon & Fischer, 1992; Lampe, Ellis, & Drummond, 1991; Lawrence & Morell, 1995; Vredenburg & Westley, 1993; Winn, 1995). Although these studies illustrate widespread interest

in understanding corporate greening, their ability to predict ecological responsiveness is limited. In particular, scholars have not detailed the conceptual distinctiveness of alternate ecologically based motivations or established whether the categories of motivations are inclusive of all motivations or are mutually exclusive of each other. Furthermore, extant research lacks clarity as to how motivations differ and what contexts lead to particular motivations. Similarly, although researchers acknowledge that alternate motivations are associated with different forms of ecological responsiveness, this relationship has not been fully specified in the literature or identified as relevant. Thus, a significant research opportunity exists to develop a model that identifies distinct conceptual categories of ecological motivations and the corresponding antecedents and outcomes associated with each motivation.

The purpose of this study was to examine why companies "go green" and, in so doing, to refine a model that explains corporate ecological responsiveness by identifying motivations for adopting ecological initiatives and the underlying factors that lead to each motivation. For the purposes of this study, we define corporate ecological responsiveness as a set of corporate initiatives aimed at mitigating a firm's impact on the natural environment. These initiatives can include changes to the firm's products, processes, and policies, such as reducing energy consumption and waste generation, using ecologically sustainable resources, and implementing an environmental management system. Our concept of corporate ecological responsiveness refers not to what a firm *should* do, but to the initiatives that reduce the firm's "ecological

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footprint" (Hart, 1997). Prior literature on organizations and the natural environment provided an initial foundation for our conceptual model of corporate ecological responsiveness.

## BACKGROUND AND A PRELIMINARY MODEL

Prior research on organizations and the natural environment has identified four drivers of corporate ecological response: legislation, stakeholder pressures, economic opportunities, and ethical motives. The importance of legislation in inducing corporate ecological responsiveness has been widely recognized (Lampe et al., 1991; Lawrence & Morell, 1995; Post, 1994; Vredenburg & Westley, 1993). Escalating penalties, fines, and legal costs have punctuated the importance of complying with legislation (Cordano, 1993). Furthermore, firms can avoid expensive capital refits by keeping ahead of legislation (Lampe et al., 1991).

Stakeholders have also been instrumental in inducing corporate ecological responsiveness. Customers, local communities, environmental interest groups, and even the natural environment itself encourage firms to consider ecological impacts in their decision making (Berry & Rondinelli, 1998; Buchholz, 1991; Lawrence & Morell, 1995; Starik, 1995). Managers are able to avert negative public attention and build stakeholder support by being responsive (Cordano, 1993; Dillon & Fischer, 1992). Lawrence and Morell (1995), however, found that shareholders seemed to have little effect on corporate ecological responses.

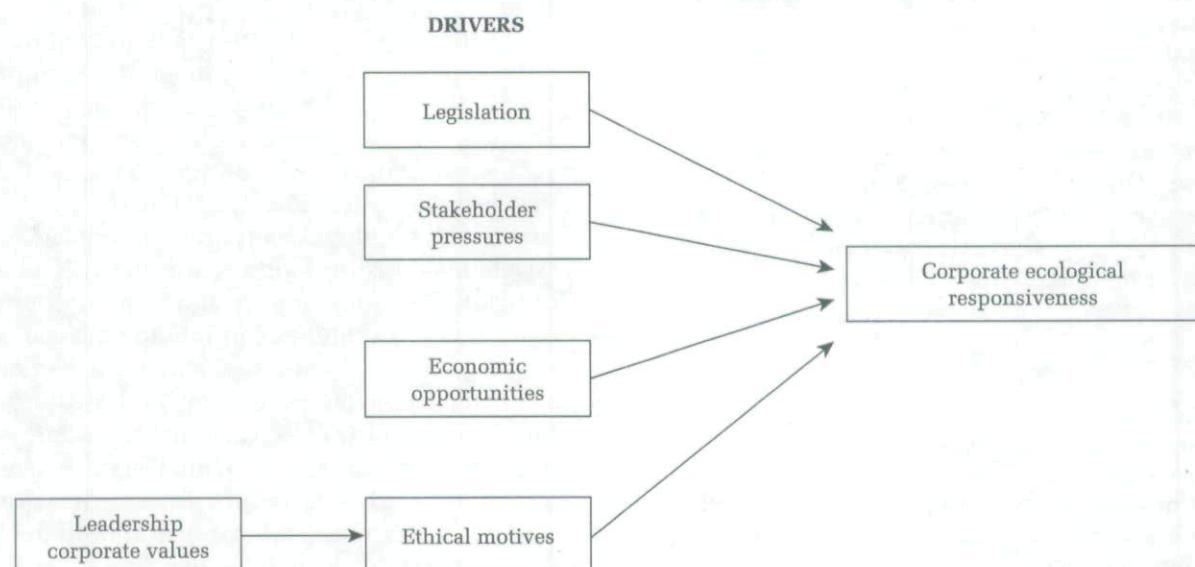
Economic opportunities also drive corporate eco-

logical responsiveness. By intensifying production processes, firms reduce their environmental impacts while simultaneously lowering the costs of inputs and waste disposal (Cordano, 1993; Lampe et al., 1991; Porter & van der Linde, 1995). Revenues can be improved through green marketing, the sale of waste products, and outsourcing a firm's environmental expertise (Cordano, 1993). Rent-earning firm-based resources, such as corporate reputation (Hart, 1995; Russo & Fouts, 1997), learning capabilities (Bonifant, Arnold, & Long, 1995; Hart, 1995), and product quality (Shrivastava, 1995), can be developed through corporate ecological activities.

Ethically motivated firms respond because it is the "right thing to do" (Lampe et al., 1975; Wood, 1991). Top management team members (Andersson & Bateman, 1998; Lawrence & Morell, 1995; Winn, 1995) and company values (Buchholz, 1993) are instrumental in encouraging these firms to evaluate their role in society.

Our preliminary model of the antecedent conditions of corporate ecological responsiveness, derived from the literature reviewed above, is illustrated in Figure 1. The motives outlined in the figure suggest that firms may be ecologically responsive to comply with legislation, to build better stakeholder relationships, to acquire economic wealth and competitive advantage, and to maintain ecological balance. Although this model provides an important starting place, it has two limitations. First, the data that ground this model are inadequate. Few past studies have systematically collected a broad range of data to determine if organi-

**FIGURE 1**  
**A Preliminary Model of Corporate Ecological Responsiveness**



zational motives actually explained corporate ecological responses. These studies' frequent reliance on a few case studies also constrains the generalizability of their findings. Second, the model is not fully specified. The constructs and their underlying relationships require greater precision in order to be predictive. To understand ecologically sustainable organizations, we need to further explore the contexts that precipitate these motivations and their interactions.

## METHODS

The purpose of our research project was to develop a robust model of the motives for corporate ecological responsiveness. To develop theory that is empirically grounded, an inductive methodology is appropriate (Glaser & Strauss, 1967; Yin, 1989). Of the two inductive methodologies, grounded theory and analytic induction, we chose analytic induction because it explicitly accommodates existing theories (Manning, 1982). Using this approach, we went back and forth between data collection and theory generation, beginning with a review of the literature to develop a set of hypotheses. With analytic induction, researchers collect data intended to challenge their emerging hypotheses, in an effort to develop theory (Manning, 1982). The relevant literature is visited, the hypotheses modified, and another set of data collected. Discrepancies between existing theory and the data are reconciled in the subsequent iteration. Closure is achieved when the differences between the collected data and developed theory are small (Denzin, 1989; Frankfort-Nachmias, & Nachmias, 1992; Glaser & Strauss, 1967).

In collecting data for this study, we sought to obtain information both broad and deep enough to ensure a rich accumulation of data from which to draw inferences. To this end, we collected data from multiple sources, including in-depth interviews, participant observations, and archival documents. The first author collected data from 1993 to 1995 from a total of 53 companies in several countries and in multiple industries, to support interindustry and international comparisons. The research also focused on both stated intentions and observable outcomes as a way to increase the reliability of the findings.

### Sampling

We applied theoretical sampling, the recommended approach to analytic induction, in selecting the case studies (Denzin, 1989). In contrast to statistical sampling, in which a sample is designed

to be representative of a population, in theoretical sampling, cases are selected to highlight theoretical issues and to refute or challenge the theory being tested (Eisenhardt, 1989; Glaser & Strauss, 1967; Pettigrew, 1990). We examined a relatively large number of cases to ensure diversity of practices and contexts and thus increase the potential robustness of the theory induced from the results. We used two parallel selection processes: (1) a formal selection of a series of five sets of case studies (each referred to as a data set), to build substantive theory, and (2) a more focused selection of ten individual case studies, to address specific theoretical questions.

In the first selection process, theoretical differences cut across sets of case studies. To increase reliability, we collected data from multiple firms within a data set that represented the same theoretical dimensions. The data sets included food retailers, subsidiaries of the diversified Britain-based multinational P&O, auto manufacturers, oil companies, and Japan-based companies. We describe the data sets below in the chronological order in which they were sampled.

**Food retailers.** Twelve of the 14 largest food retailers in the United Kingdom were included in this data set. The corporate head offices of all of the food retailers included in this data set were in the United Kingdom, although some had operations outside of the country. We selected individual cases for this data set by approaching all large firms within the industry and soliciting their involvement. We chose this data set for three reasons. First, food retailers were facing a wide range of ecological issues, including the congestion related to in-town hypermarket sites, the use of greenfield sites, the emissions resulting from the distribution of their products, energy management of shop operations, excess packaging associated with products, transit packaging, and carrier bags, life cycle analysis of own-brand products (in which the ecological costs of a good are calculated over the life of the good), "ecolabeling" of their own brands and competitors' brands, and providing recycling bins for local communities. Second, firms were particularly homogeneous in the products they offered, in ecological effects, and organizational structure and size (Simms, 1991). Third, the environmental policies of the sector had not been widely studied, so it provided a domain in which interviewees were less likely to respond with existing rhetoric.

**P&O subsidiaries.** To assess the importance of internal corporate structure and culture in motivating a corporate environmental policy, we then selected a group of firms under the same organizational umbrella: ten subsidiaries and the corporate headquarters of P&O, a large, diversified, Britain-

based multinational. In consultation with the environmental director of P&O, we attempted to select a diverse group of subsidiaries that operated in different industries and exhibited different attitudes towards the natural environment. The P&O companies were firms within the construction, trucking, cruise, distribution, ferries, and property management industries. P&O was chosen for two reasons. First, it was a large diversified company that permitted an analysis across industry sectors, so that the effects of organizational structure and culture could be better isolated. Second, because a clear corporate direction had been established through the P&O Group corporate environmental policy, we could assess the influence of the head office on the environmental practices of its subsidiaries. Preliminary analysis of the P&O data set showed that, although the corporation did influence the subsidiaries' adoption of environmental practices, differences among subsidiaries were better explained by industry influences than by corporate influences.

**Auto manufacturers.** We included five firms that manufactured automobiles in the United Kingdom in this data set. The names of the firms in this industry were extracted from the Excel database, a United Kingdom-based database that provides statistical data for publicly listed firms. We selected individual cases by approaching the seven major U.K. manufacturers in this industry. Six firms agreed to participate, although a mutually acceptable appointment time could not be reached with one manufacturer. Of the five auto manufacturers studied, four were headquartered in the United Kingdom, and one was headquartered in France. We selected auto manufacturers as the third data set in an effort to capture the pertinent sectoral factors that influenced corporate ecological responses, as indicated by data from P&O. Three dimensions appeared pertinent to the emerging theory: the influence of customers and local communities, the direct contact that an organization had with customers, and the types of ecological impacts. Auto manufacturers were considered informative because they hired local community members, did not retail directly to consumers, and had ecological impacts centered on manufacturing processes.

**Oil companies.** This data set included companies that were involved in the extraction or refining of oil in the United Kingdom. We approached seven oil companies selected randomly from the Excel database to participate in this study, and five agreed. We selected oil companies as the fourth data set because food retailers and auto manufacturers were in highly fragmented sectors and experienced relatively little negative environmental

press. The oil industry, in contrast, has a high level of cohesion and interaction among firms, low product differentiation, and a negative ecological image (Adelman, 1987). This sector also differs from the other sectors we studied in that it relies heavily on primary products, rather than on manufacturing and services, which permitted variation in the ecological effects. Also, firms in this sector did not interact with consumers and local communities as directly as firms in the other sectors.

**Japanese companies.** Given the importance of the institutional context in influencing a firm's ecological practices, we chose the final data set to challenge the emerging theory in a different cultural context. We included ten major Japanese firms in this data set, all very large multinationals operating in the following industries: auto manufacturing, oil, steel, chemicals, utilities, and electronics. Japan offered a dramatically different cultural and institutional context from Britain's (Hofstede, 1980), and yet the firms were at similar points of industrialization. We also anticipated that firms in the United Kingdom and Japan experienced similar ecological issues because of their island geographies. Gaining participation from Japanese firms proved to be challenging. Although an effort was made initially to include firms in the auto manufacturing and oil industries, to contrast directly with the U.K. data, such access was not easily secured. Consequently, we used cold calls and chain sampling through personal contacts, which led to participation of a wider range of industries than initially anticipated. Because industry-related factors are important in organizational responses, all of the Japanese firms had at least one match in the United Kingdom.

The theoretical dimensions represented by these data sets reflected differences in some of the contextual variables that emerged during data analysis, in particular, issue salience, field cohesion, and individual concern. The generalizability of our model, therefore, is limited to the degree to which the contextual variables were relevant to the context being evaluated.

**Single case studies.** The firms chosen for this sample were conceptually distinct from those in the above five data sets across several dimensions: size, ownership, industry, and country. This data set included a small firm, a family-owned firm, a diversified German industrial firm, two government-owned utilities, and firms in the electronics, information management, automotive parts, and chemicals industries. In addition to selecting firms for this group of ten for theoretical reasons, we also selected firms for the group opportunistically, to ensure that we accounted for specific biases in the

theoretical sampling (such as bias due to firms' ready agreement to discuss their environmental policies).

Using single case studies permitted us to challenge and understand specific issues that emerged. For example, the data suggested that family-owned businesses are motivated differently from businesses with unrelated shareholders. Consequently, a case study of a family-owned business provided an assessment of whether the theory was influenced by type of organizational ownership. Although analyzing data from a single case study does not build reliability in extending theory, here it helped to confirm whether the issue being considered represented a theoretical difference and warranted further consideration. For these single case studies, there was insufficient evidence to suggest that another data set was required.

## Data Sources

**Interviews.** We based selection of our key informants on their knowledge about the ecologically oriented initiatives of their firms and the underlying reasons for the initiatives. Thus, we identified environmental managers or environmental directors as the primary key informants. In 15 cases, a company did not have an environmental manager. In these firms, we interviewed multiple senior managers. We perceived no systematic bias in the context descriptions, motivational dimensions, or firm initiatives, but we also gathered secondary data for each company to assess the reliability of the key informants.

In total, we conducted 88 interviews, most lasting between one and two hours. The list of interviews is provided in Table 1. We conducted 5 interviews by telephone rather than on site owing to logistical constraints. All but 10 interviews were tape-recorded and then subsequently transcribed for use in the data analysis. We took detailed notes during the interviews that were not recorded. The interviews that were not recorded did not lead to a systematic selection bias because they were distributed randomly across the data sets. All interviews were conducted in English. As required, the interviews with Japanese respondents were conducted with an interpreter provided by the interviewee.

We kept initial interviews broad in scope in an effort to expose a wide range of motivations and guiding themes. We started each interview by asking what the firm had done with respect to the natural environment and then asked the respondent to trace the history of each initiative he or she mentioned and to tell us why the initiative was adopted. To build internal validity, we probed in-

consistencies further (Eisenhardt, 1989). In addition, respondents were asked about the companies' relationships with stakeholders and about other key aspects of firm strategy, structure, and operations. As the research project progressed and the theory was refined, interview questions became more focused, as we tried to ascribe more detail to the emerging patterns. After the main part of each interview was completed, if time permitted we asked respondents to comment directly on specific aspects of the emerging theory. The specific aspect of the theory probed depended on the interviewees' circumstances. For example, if, according to an interviewee, it appeared that her or his firm was motivated by legitimization, we asked if legitimization, ecological responsibility, or competitiveness best described the firm's motivations. In addition, we asked the interviewees to comment on the relevance of the contextual variables. These data provided greater face validity to the emerging model and, because we asked such questions later in the interviews, the integrity of the core data was preserved.

**Participant observations.** Early in the study, the first author observed training seminars at two large U.K. firms, P&O and Thames Water, and took extensive notes. In these seminars, the environmental managers discussed corporate environmental policies with senior managers. As these observations were made at the beginning of the research process, they served to highlight some of the issues and concerns raised by organization members who were not convinced of the value of ecologically responsive initiatives. Hence, they identified some of the factors that motivated or stalled the adoption of ecologically responsive practices. Although these observations were not coded, they were instrumental in shaping initial conceptualizations of an advanced model of corporate ecological responsiveness. Approximately 60 hours were spent observing in these seminars, and approximately 500 pages of single-spaced transcribed notes were compiled from the participant observation activities.

**Archival documents.** We used data from published sources, a newspaper search of the Reuters and Data Star databases, company accounts, annual reports, and corporate environmental reports to provide a background for the interviews. A case study of each firm, constructed prior to the interview, included archival information on the firm's ecologically responsive activities, financial performance, and ecological impacts. This information served to confirm the reliability of the interviewees' responses and permitted more directed and detailed probing in the interviews. For example, if a food retailer reported that it was the first to re-

**TABLE 1**  
**List of Interviews**

Company	Number of Interviewees
Food retailers	
Asda Group plc	3
Budgens Stores Ltd.	1
Co-operative Retail Society	1
Co-operative Wholesale Society Ltd.	2
Gateway Foods	1
Iceland Frozen Foods	1
Institute of Grocery Distribution <sup>a</sup>	1
J. Sainsbury plc	1
Kwik Save Group plc	1
Marks & Spencer plc	1
Safeway	1
Tesco Stores Ltd.	1
Wm. Low & Co. plc	2
Total number of interviews with food retailers	17
P&O companies	
Bovis Construction Ltd.	1
Bovis Homes Ltd.	1
Containerbase (Manchester) Ltd.	1
P&O European Containers	1
P&O Cruises (UK) Ltd.	3
P&O Distribution Ltd.	2
P&O European Ferries	1
P&O Group	1
P&O Properties Ltd.	1
P&O Tankers Ltd.	1
Princess Cruises	1
Total number of interviews with P&O companies	14
Auto manufacturers	
IBC Vehicles Ltd.	2
Jaguar Ltd.	1
Peugeot Talbot Motor Co. plc	3
Rover Group Ltd.	1
Vauxhall Motors Ltd.	2
Total number of interviews with auto manufacturers	9
Oil companies	
British Petroleum	3
Conoco Ltd.	1
Esso Petroleum Company Ltd.	1
Gulf Oil (UK) Ltd.	1
Total Oil Great Britain Ltd.	2
Total number of interviews with oil companies	8
Japanese organizations	
Asahi Chemical	2
Idemitsu	1
Japan Audit and Certification Organization for Environment (JACO) <sup>a</sup>	1
Keidanren <sup>a</sup>	1
MITI <sup>a</sup>	1
Nippon Oil Corporation	4

**TABLE 1**  
**(continued)**

Company	Number of Interviewees
Nippon Steel	2
Nissan Motor	2
Petroleum Association of Japan <sup>a</sup>	2
Pioneer Electronics	3
Sophia University <sup>a</sup>	1
Sumitomo Corporation	1
Tokyo Electric Power Company (TEPCO)	2
Toshiba Corporation	3
Ube Industries Ltd.	2
Total number of interviews with Japanese organizations	28
Single case studies	
Albright & Wilson Ltd.	1
British Telecommunications plc	1
Burmah Castrol	1
Hewlett Packard	2
IBM United Kingdom Ltd.	1
Lucas Industries	1
Seimens AG	1
Thames Water	1
Warburton Ltd.	2
Rank Xerox Ltd.	1
Total number of interviews with single case studies	12

<sup>a</sup> Indicates a supplementary interview.

place chlorofluorocarbons (CFCs) in its refrigerants with hydrochlorofluorocarbons (HCFCs), then we asked the respondent if the claim was true, the reasons for the replacement, the reasons for its leadership position, and the reasons for reporting it. This process of probing highlighted the relationships among an innovation's context, rationale, and process. We did not code the archival documents because the objective was to investigate motivations and not outcomes. Because little archival information was available on our selected Japanese companies, we supplemented the company interviews with eight interviews of knowledgeable representatives of relevant Japanese institutions, including the Ministry of Trade and Industry (MITI), the Keidanren (a multi-industry organization), an industry association, a university, and the Japanese Auditing Organization.

## Data Analysis

**Identifying motivations and their key differentiating dimensions.** Our goal was to isolate a meaningful set of motivations so that implications could be drawn for future theory testing. It was important,

therefore, to identify a set of constructs that were theoretically meaningful, internally consistent, robust, and distinct. However, an ecological response could reflect multiple motivations, and any one motivation could be expressed in several ways. For example, a food retailer that performs a life cycle analysis of its own-brand products could say that it had several motivations: "It was the right thing to do," "This is the direction of the future," or "It could differentiate us among our competitors." It was critical, then, for our analyses to apply insights developed in other research streams. It was also important to discriminate between the constructs so that they could be tested empirically later. What are assumed to be distinct differences in constructs often converge and blur as theories evolve (Wright, 1985), and the emphasis of this project on integrating theory required careful consideration of the critical differences between the constructs.

To derive valid constructs, we conducted two types of analyses: identifying motivations by comparing actions with expressed motivations, and identifying the relevant dimensions of the motivations that help discriminate among them. First, we chronicled the ecological responses of each firm and then listed the corresponding motivations. From these lists, we generated a table that listed all possible initiatives by their corresponding motivations. This table was completed for each firm. If a firm engaged in a substantial number of initiatives that were unique to a single motivation, we labeled it as having a dominant orientation (competitiveness, legitimization, or ecological responsibility). Most firms could be associated with a dominant motivation. In the early rounds of data analysis, we used categories that were more descriptive than analytical (for instance, legislation, stakeholder pressures, profits) and developed theoretically tighter categories as data collection and analysis proceeded.

We also coded the interview transcripts for other variables that could help define the motivations. We coded variables that included cost reduction, increasing market share, reaction to competitors, reaction to consumers, building resources, survival, legislation, avoiding penalties, license to operate, managing risks, doing the right thing, and avoiding personal risk. We summarized the codes for each firm, and a distinct pattern of differences between the firms with dominant motivations began to emerge. We ultimately labeled these motivations "competitiveness," "legitimation," and "ecological responsibility." Attributes of ends, means, constituent focus, decision analysis, decision rule, and strategic posture served to discriminate among the motivations.

The model emerged from the multiple iterations

of data collection and literature review. In general, an iteration involved collecting data from archival sources and interviews, coding interview data, developing or refining emerging ideas, researching existing theory, and selecting more data for the next round of data collection. Early stages of data collection pointed us to prior research in sustainable development, corporate social responsibility, institutional theory, strategic management theory, stakeholder management theory, resource dependence theory, and the resource-based view of the firm. As the data collection progressed, the existing relevant theory became more apparent, and we probed deeper into specific theories. In total, we completed five iterations of the data sets.

Given that the theory emerged over multiple iterations of data collection, we were concerned that the theory might have evolved so significantly that it no longer described early data. Using the final codes of the differentiating dimensions, we recoded all of the data with the assistance of the electronic software QSR NUD\*IST. This software permitted us to view all of the text with the same code simultaneously so the large amount of data was more easily handled. Summaries were generated for each differentiating dimension and contrasted with the motivation or motivations assigned to a firm. This reanalysis confirmed the validity of three motivations and their key differentiating dimensions, although we made minor adjustments to the labels used. For example, in the initial analysis, we labeled the motivation "competitiveness" as "profit orientation," but we later felt that the latter inaccurately highlighted the importance of financial returns.

To examine the validity of the differentiating dimensions, we asked an independent rater to code the data pertaining to food retailers. This data set was selected because it was the largest and had a balanced representation of all of the firm motivations. The rater was given the differentiating dimensions and asked to assign a dominant motivation to each firm. The rater coded each of the interview transcripts from the food retailers, produced summary sheets of the differentiating dimensions, and independently assigned a dominant motivation. The rater and the first author agreed on 10 of the 12 firms. For those on which the rater and first author disagreed, the differences were easily reconciled because of the low internal validity in the interviewees' responses and archival documents. Given the high degree of agreement, the expectation that the 41 remaining firms would exhibit the same properties, and the time intensity of this task, we did not replicate this exercise for the remaining firms.

**Developing contextual variables.** In addition to considering motivations, to develop a model of ecological responsiveness we had to understand the context in which these motivations would arise. For example, we could gain greater insights about the legitimization motivation by determining when it was more pervasive. Thus, we also analyzed the interview transcripts to code the different internal and external conditions that influence the propensity of a firm to adopt a specific motivation. We also drew insights about the external context from archival documents concerning industry characteristics, Britain/Japan comparisons, information pertaining to P&O, and so forth. We summarized the codes for each firm and, in the process of developing motivations, a valid set of contextual conditions emerged that could be related to the dominant motivations: issue salience, field cohesion, and ecological responsibility.

### MOTIVATIONS FOR CORPORATE ECOLOGICAL RESPONSIVENESS

As noted, the data analysis suggested three basic motivations for ecological responsiveness: competitiveness, legitimization, and ecological responsibility. Exemplary data supporting the motivations and an indication of their pervasiveness are provided in Table 2. The salient dimensions that discriminate among the motivations are provided in Table 3. The initiatives and benefits associated with each motivation are provided in Table 4.

#### Competitiveness

We define the term "competitiveness" here as the potential for ecological responsiveness to improve long-term profitability. According to respondents, ecological responses that improved competitiveness included energy and waste management, source reductions resulting in a higher output for the same inputs (process intensification), ecolabeling and green marketing, and the development of "ecoproducts."

In terms of salient characteristics, interviewees from firms motivated by competitiveness expected that their ecological responsiveness led to sustained advantage and hence improved their long-term profitability. A respondent from a Japanese firm reported this: "Firms compete on price and quality and are now competing more on the environmental issues, as well. Competitive advantage can be gained through environmental responsibility." Many of these initiatives were relatively simple housekeeping measures that required minor changes to processes but improved operational efficiency, which increased com-

petitiveness through lower costs. For example, many firms turned off lights in the evening and carefully monitored air conditioning. Other firms sold or recycled waste in an effort to generate revenue. Consistent with the resource-based view, firms attempted to develop ecologically related resources and capabilities to build long-term profit potential (Hart, 1995), such as improved reputation, process efficiencies, and product reliability. These resources and capabilities were developed through green marketing, source reductions and process intensification, and new capital equipment. Some respondents also indicated that it was easier to hire quality employees if a firm had a better reputation. Competitively motivated firms engaged in more visible activities to improve their corporate environmental reputations. These activities served to enhance the firms' competitive advantage.

Competitiveness, in contrast to other motivations, resulted in greater attention paid to the cost-benefit analyses of ecological responses. For example, the following sentiment was expressed by one respondent and echoed by several others: "Once you have the investment, then maybe the benefit versus the payment costs may be of economic value over the long term." Respondents often focused on the "numbers" of ecological responsiveness, expressing concerns epitomized by phrases like "costs," "accurate science," "customers will not pay," and "the company share price." Another distinguishing characteristic of these firms was that they chose the options that they believed secured the highest returns, independent of their ecological consequences. These firms often excluded environmental impact assessments from their decision making. Only after a decision was made was the relative ecological impact recognized. For example, an oil company installed pipelines to transport oil throughout the United Kingdom. This option has, arguably, less ecological impact than its alternatives, but the decision to lay pipeline rather than use freighters was motivated by the cost savings resulting from the large volume of oil transported, not the ecological consequences. Under the motivation of competitiveness, social initiatives are adopted only if they serve to enhance a firm's financial performance.

Firms motivated by competitiveness actively innovated ecologically benign processes and products to enhance their market positions. Nehrt (1996) showed that the first paper pulp companies to employ environmental technologies realized higher profits. Similarly, in this study, one Japanese chemical firm was developing a new process that allowed more efficient recycling of paper. Another Japanese firm reduced the level of benzene (a toxic substance) in its petroleum products because

**TABLE 2**  
**Motivations for Ecological Responsiveness**

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Motivation	Exemplary Quotes	Number of Firms Showing Strong Evidence
Competitiveness	<p>It was seen as good business management to turn a waste product into something which has value. Environmental initiatives are seen as both an environmental opportunity and a business opportunity.</p> <p>There are a number of firms which are thinking about how to establish an ecobusiness. . . . The expense for environmental conservation is becoming so big that there are plenty of business opportunities.</p> <p>Jealousy, competitiveness, call it what you like. That is what drives the organization. It is greed and competition.</p> <p>And I suppose if we're brutally honest about it, if environmental issues have volume, put money in the till, then it will become a primary consideration.</p> <p>We did environmental management because of our concern for citizenship. Yet, in the end, this can be related to money.</p> <p>Environment is going to be some kind of business strategy.</p>	<p>3 food retailers 1 P&amp;O company 2 Japanese companies 1 other</p>
Legitimation	<p>The worst scenario is that we do something stupid and then we pay for it in the way of fines, penalties, and lousy reputation.</p> <p>At the end of the day, we are talking about insurance.</p> <p>We wanted improve the image . . . and make it easier for us to operate.</p> <p>The business issues are forced home through stakeholders, which include customers, employees, shareholders, peer competitors, suppliers, and increasingly more, the local community.</p> <p>We are trying to gain legitimacy or credibility with stakeholders and also with competitors.</p> <p>We will do what we need to do legally.</p>	<p>1 food retailer 5 auto manufacturers 4 oil companies 7 P&amp;O companies 2 Japanese companies 5 others</p>
Social responsibility	<p>It's something that we can do, costs nothing to do it, and it's the right thing to do from our standpoint, the right thing to do from the consumer's standpoint.</p> <p>Overall, when I show you our policy, the thing that we talk about in our policy is being committed to working with government to find the best reward for what is best for the environment. I don't mean what is best for our industry or for [us] but what is best for society.</p> <p>It's about being a good environmental citizen, about being responsible. There's nothing wrong with doing good.</p> <p>Proving that we are aware of what we should be doing . . . irrespective of the financial situation of the business.</p> <p>We are talking about managing a better company. . . . The "better" is that in the true sense there is the moral better. We want to be because we can afford to be.</p> <p>We've always recognized that the feel-good factor is important and this is just one of the ways in which this is built up.</p>	<p>3 food retailers 1 P&amp;O company</p>

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**TABLE 3**  
**Key Dimensions Differentiating Motivations<sup>a</sup>**

Key Differentiating Dimensions	Competitiveness	Legitimacy	Social Responsibility
Ends	Profitability Environmental initiatives must be commercially viable . . . We would have more difficulty as managers in [this subsidiary] to sell some ideas purely on feel-good grounds.	Firm survival Environmental management will be institutionalized in the good companies and the others will disappear.	Corporate morale There is a feel-good factor in everything surely. There has to be.
Means	Competitive advantage  It is a question of providing something that the consumer really wants which has the knock-on effect of increasing market share.	Compliance with norms and regulations  If we don't comply, we will invariably go out of business particularly if our petrol license is withdrawn.	Social good  The commercial issue has been in part ignored. We don't believe that there are short-term quick fixes with regard to any of the issues that are serious issues.
Constituent focus	Customers, investors  Our number one motivator in anything we do is that we want to be a consumer-responsive company.	Government, local community, stakeholders  Really, it comes down to looking at the stakeholders in total. This means looking at our customers, at our employees, at our shareholders. They expect industry to be better.	Society  We will eventually run out of resources and grind to a halt. It is not just a greenies' concern, it is society's concern.
Decision analysis	Cost-benefit analysis They have to identify the relative benefits to us. Foremost it has to be a financial benefit.	Costs and risks of noncompliance It was environmental risk management.	Ecological values So the halon is gone. It cost us but . . . our computer people can walk around and say we don't have halon protection.
Decision rule	Maximize I am told by Corporate to seek leadership. . . It is the company culture that we are committing to be the best in everything, including environment.	Satisfice To be brutally honest, it would be the expectant of impending legislation. The movement of the legislative goalpost which will usually take us to a decision like that.	Idealize Because of the evolution process, we try not to be pressured into changes but to sit down and independently evaluate whether a real issue exists and should anything and can anything be done.
Strategic posture	Innovative It is not a question of a large wallet to buy something that will make it all better. It usually requires years of research to find something that will make it all better.	Isomorphic/imitative Industry does not want to be seen as the first across the pulpit for issues which are indeterminate. There is too much risk in terms of the ways in which the issue is interpreted.	Independent We pride ourselves in thinking that we have done a more thorough and well-thought-out job [than our competitors].

<sup>a</sup> Cells identify the aspect of each differentiating dimension pertinent to the focal motivation and give exemplary quotes from interviewees.

it discovered another use for the benzene. Several respondents indicated that if environmental science was more definitive in assessing the ecological impacts of alternative activities and if consumers were more demanding, then they would more likely show greater ecological responsiveness.

### Legitimation

A motive of legitimation refers to the desire of a firm to improve the appropriateness of its actions within an established set of regulations, norms, values, or beliefs (Suchman, 1995). Examples of

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TABLE 4

## Initiatives and Benefits Associated with the Motivations for Ecological Responsiveness

Motivation	Ecologically Responsive Initiatives	Anticipated Benefits
Competitiveness	Housekeeping measures such as energy and waste management, source reductions resulting in the same output for the same level of output, ecolabeling and green marketing, the development of ecoproducts, and the adoption of environmental management systems (EMS), such as BS 7750 and the Eco-Management & Audit Scheme (EMAS).	Higher profits, process intensification, larger market share, lower costs, differentiation, higher share price, rent-earning resources and capabilities.
Legitimation	Complying with legislation, instating an environmental committee or environmental manager to oversee a firm's ecological impacts and advise senior management, developing networks or committees with local community representation, conducting environmental audits, establishing an emergency response system, and aligning the firm's image with environmental advocates.	Long-term sustainability, survival, license to operate, avoiding fines and penalties, lessening risks, employee satisfaction.
Social responsibility	Redevelopment of local community areas to greenfield sites, the provision of a less profitable green product line, donations to environmental interest groups and other local community groups, use of recycled paper, replacement of retail items or office products with more ecologically benign items, and recycling of office wastes.	Feel-good factors, employee morale, individual satisfaction.

legitimation as shown by the data included complying with legislation, establishing an environmental committee or environmental manager position to oversee a firm's ecological impacts and advise senior management, developing networks or committees with local community representation, conducting environmental audits, establishing an emergency response system, and aligning the firm with environmental advocates.

As outlined in Table 3, several salient characteristics differentiated this motivation from the other two motivations. Threats to a firm's legitimacy were believed to undermine a firm's license to operate or its long-term survival. As one respondent said, "We don't want to disappear if we can help it. . . . Firms which don't have a policy will end up going out of business because they won't be accepted by society." Respondents such as these emphasized concerns such as "long-term sustainability," "survival," and "license to operate." These observations support the theoretical relationship between organizational legitimacy and organizational survival (Meyer & Rowan, 1977; Zucker, 1987).

The data suggested that legitimation was directed toward complying with institutional norms and regulations. A word frequently used by respondents was "compliance." Respondents focused not on proactive efforts but on reactions to external

constraints made to avoid sanctions, as predicted by Hart (1997) and Wood (1991). Often the corporate environmental policies of these firms were aimed at keeping up with environmental regulations. Respondents indicated that specific stakeholders, such as the local community, customers, and the government, articulated norms. Institutional pressures, viewed as an "iron cage" (DiMaggio & Powell, 1983), evoke images of passive compliance, with minimal latitude for negotiation or discretion—an image that fits the observations and concerns expressed by these respondents.

Firms motivated by legitimation were focused on the stakeholders most influential in prescribing or articulating legitimacy concerns. The Japanese firms, for example, focused their attention on the priorities articulated by the Keidanren, the MITI, and their industry associations. Customers and shareholders imposed few direct requirements. British firms, in contrast, were sensitive to local community concerns and the perceptions of shareholders. Hence, British firms aimed to avoid bad publicity associated with their ecological effects. One respondent identified the purpose of compliance initiatives by saying, "I know our [environmental] policy is just a piece of paper. It is just for making stakeholders nice and warm and cuddly."

The decision analysis of these managers aimed to reduce the costs and risks of noncompliance. Dis-

cussions focused not on what would occur if the firm met the conditions of stakeholders but, rather, on what would happen if they did not. Hence, many respondents identified concerns about "sanctions," "fines and penalties," "bad publicity," "punitive damages," "avoiding clean-ups," "discontented employees and work force," and "risks." These concerns were also reflected in the firms' initiatives in that they reduced risks rather than publicized their ecological responsiveness.

In accordance with efforts to avoid negative effects, these respondents also aimed to "satisfice"—to *meet* standards rather than *exceed* them. Since their goal was to minimize risks and costs, firms sought to ensure that their ecological responses met the norms. Furthermore, the dominant approach of these firms was to imitate their peers. As firms operating in close proximity were usually subject to the same regulations and social norms, they often operated with similar standards in a socially cohesive environment. For example, all the oil companies decided to postpone efforts to recover volatile organic compounds. These firms adopted a more passive and imitative stance, not only to minimize the risk of moving first into novel production processes and strategies, but also to enhance their legitimacy by imitating successful competitors, as predicted by Abrahamson and Rosenkopf (1993). One respondent explained, "We generally do not lead when it comes to environmental issues . . . there is quite a bit of risk associated with being first, along with a lot of money, time, and grief." Consistent with institutional theory (DiMaggio & Powell, 1983), firms exhibited mimetic isomorphism in complying with institutional norms and pressures and were motivated to comply in order to establish their legitimacy and to avoid sanctions for noncompliance.

### Ecological Responsibility

We viewed ecological responsibility as a motivation that stems from the concern that a firm has for its social obligations and values. Within the data, initiatives motivated by ecological responsibility included the redevelopment of previously used land to green areas, the provision of a less profitable green product line, donations to environmental interest groups and other local community groups, the use of recycled paper, the replacement of retail items or office products with ones more ecologically benign, and the recycling of office wastes.

A salient feature of this motivation was a concern for the social good. The ethical aspects of ecological responsibility, rather than the pragmatic, were em-

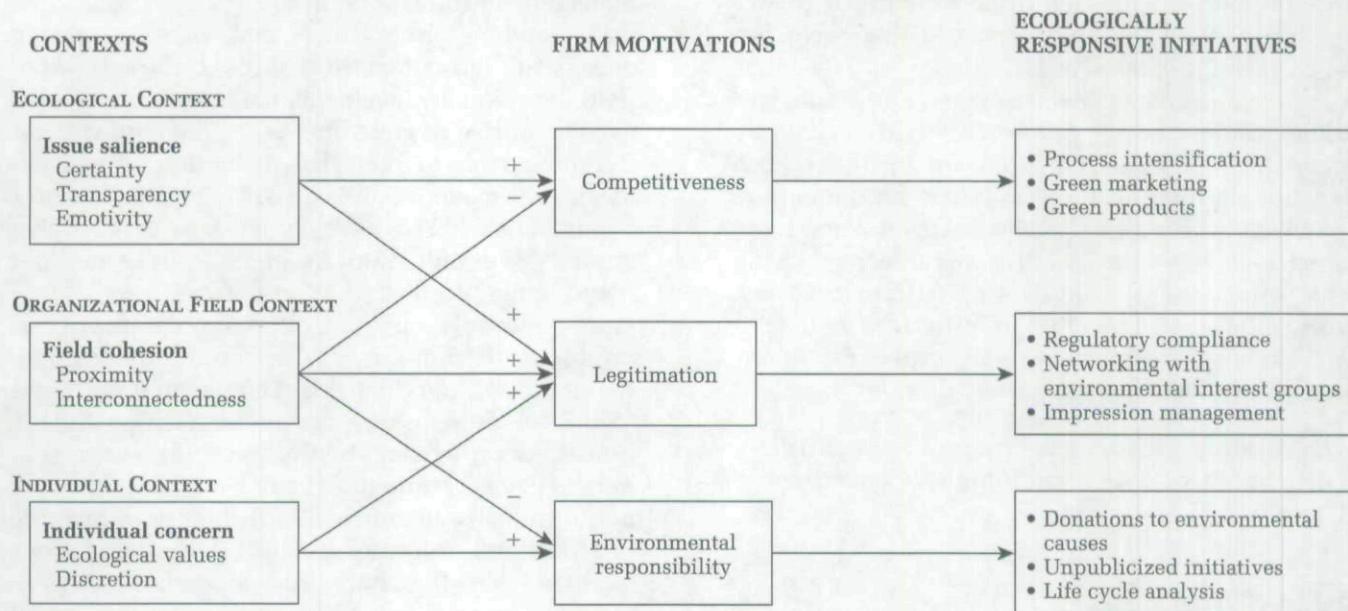
phasized, which clearly differentiated this motivation from the other two. Firms acted out of a sense of obligation, responsibility, or philanthropy rather than out of self-interest (Bucholz, 1991; L'Etang, 1995). When asked why they undertook particular ecological responses, interviewees from ecologically responsible firms often indicated that it was the "right thing to do," supporting the findings of Lampe and colleagues (1991). Respondents claimed to derive "feel-good factors" from the initiatives. Hence, satisfaction and high employee morale were short-term benefits from their ecological responses.

Firms motivated by ecological responsibility often pointed to a single individual who had championed their ecological responses. The decision process was often based on the values of powerful individuals or on the organization's values rather than a widely applied decision rule. This finding is consistent with studies by Lawrence and Morell (1995) and Winn (1995), which showed that firms' top managements were responsible for the firms' environmental management leadership. In addition, the ecologically responsible firms idealized, rather than rationalized, the best course of action. As one respondent indicated, "It's something that we can do, costs nothing to do, and it's the right thing to do from our standpoint, and the right thing to do from the consumer's standpoint." As a result of individual leadership and a desire to uncover the most ecologically benign solutions, firms motivated by ecological responsibility often chose independent and innovative courses of action, rather than mimicking other firms whose motive was legitimization. In essence, these firms were looking to do the "right thing." As one respondent said, "If I do something I want to do it wholeheartedly and I'll want to believe in what I am doing." The decision was based on ethical criteria; whether it was financially optimal was irrelevant. Respondents expressed such views as "We feel some responsibility to the environment," or "We must back up our environmental strategy with genuine concern for the environment."

### A MODEL OF CORPORATE ECOLOGICAL RESPONSIVENESS: DEVELOPING TESTABLE PROPOSITIONS

In addition to identifying the motivations for corporate ecological responsiveness, the study also revealed the contexts of these motivations. Three contextual dimensions influenced the dominant motivations of firms: issue salience, field cohesion, and individual concern. A model depicting the relationships between the motivations and their contexts is provided in Figure 2. Each variable and its

**FIGURE 2**  
**An Advanced Model of Corporate Ecological Responsiveness**



anticipated relationships with the motivations are described in detail below, and they are summarized as propositions to help guide future work.

### Issue Salience

We define issue salience as the extent to which a specific ecological issue has meaning for organizational constituents. Certainty, transparency, and emotivity determine an issue's salience. Certainty is the degree to which the impact of the issue on the natural environment can be measured. For example, the disposal of nontoxic waste was quite certain because respondents had good understanding of the ecological impacts of such disposal (for instance, aesthetic degradation and potential leaching of toxins into water supplies). Global warming, on the other hand, was far less certain because its ecological impacts were harder to determine (*Oil & Gas Journal*, 1997; Parsons & Singer, 1995). Transparent issues are those that are easily attributable to a polluting firm. Whereas a culprit making noise was often transparent, an emitter of volatile organic compounds was often not. Emotive issues are those that elicit an emotional response from organizational constituents. Almost all ecological issues are somewhat emotive, but they vary in their degree of emotivity. For example, oil and chemical spills grabbed significant public interest when pictures of ducks bathed in oil and fish floating ashore appeared in the media, yet the frequent minor spills

that happened daily at gas stations did not engage the same degree of public attention.

Data from documents and interviews showed that issue salience was reflected in the following adjectives: "proven," "standardized," "quantifiable," "tangible," "easily costed," "measurable," and "based on sound science." Issues with low salience were referred to as "soft" and "indeterminate." For issues of low salience, respondents had relatively little knowledge, and they often said that the science around the issue made the decision regarding its handling difficult. Issues of high salience elicited ecological responses usually motivated by legitimization or competitiveness. A firm's legitimacy could be threatened by the issue's salience because constituents could easily see the impact of the firm's activities on the environment. For example, food retailers in Britain were concerned about the use of recyclable shopping bags, stray shopping carts, and recycling bins in the parking lots because of the salience of these issues. Similarly, several heavy polluters, such as oil companies and steel companies, indicated that they had carefully landscaped their sites in order to deflect negative public attention.

Respondents indicated that salient issues were also viewed as having a potentially significant impact on firm profitability because government agencies were more likely to impose fines or penalties on activities, and customers were more likely to be aware of negative ecological effects and less sup-

portive of firm activities. If issues were not salient, organizational constituents were less likely to impose pressures. Although firms were given greater flexibility in responding to issues that were not salient, the potential cost savings or revenues earned were not as high as when the issue was salient. Salient issues were more highly valued by consumers, and input costs were lower because they did not reflect ecological impacts. Competitive advantage was not likely to be realized when issue salience was low unless a firm was able to make the issue salient to its suppliers or customers. Thus, issue salience also resulted in initiatives motivated by competitiveness. These relationships can be expressed in the following proposition:

*Proposition 1. Issue salience will be positively associated with legitimization and competitiveness.*

### Field Cohesion

We define field cohesion as the intensity and density of formal and informal network ties between constituents in an organizational field. An organizational field consists of "those organizations that, in the aggregate, constitute a recognized area of institutional life: key suppliers, resources and product customers, regulatory agencies, and other organizations that produce similar services or products" (DiMaggio & Powell, 1991: 64–65). Fields are built around a network of interorganizational relationships. The intensity of the relationships is facilitated by proximity, both social and geographic, and through the interconnectedness of constituents in the field (Oliver, 1991). The data indicated that the frequency of interactions and resource dependencies increased interconnectedness within the field, as organizational members transferred their understanding of the organizational environment, including the natural environment, to each other. Proximity further facilitated these transfers. As DiMaggio and Powell (1983) predicted, shared understandings resulted in the mimicking of each other's actions.

Negative images of the industry's ecological impacts and the activities of industry associations helped develop field cohesion (Goes & Park, 1997; Pennings & Harianto, 1992). Fields labeled as "dirty," such as the oil, chemicals, mining, and forestry industries, were under intense scrutiny. As a result, field members colluded either through formal arrangements, such as industry associations, or through informally monitoring each other's ecological responses. Industry associations further promoted field cohesion by transferring information

about "best practices," lobbying government to adjust legislation and regulations, and collectively managing an industry's image.

Respondents from firms that were connected closely to their competitors through these types of field cohesion arrangements made comments such as "We all live in glass houses," "The tendency for the industry is to keep that in the family and not make an issue of it," "We all suffered from Exxon's big mistake," "We have to work with the peer group," "We can't afford to get out in front and lose the support of others," "The networks are tightly knit . . . we rely on each other for the supply of products, distribution . . . if we go out on our own we could be put in a blackmail situation," and "Some of these issues are better tackled by the industry as a whole." Institutional pressures from industry peers made it difficult to deviate from the norm. Industry members had difficulty innovating products and processes because these innovations ratcheted up the standards for others. Consequently, these firms mimicked the initiatives of their peers. These firms were motivated strongly by concerns of legitimacy.

The data revealed that field cohesion influenced firms' motivations. The connectedness of employees, owners, and local residents increased the frequency and intensity of interactions, placing the firms operating within that field under greater scrutiny and resulting in concerns about their legitimacy. Respondents commented on the need to have a "good neighbor policy." An interviewee from a cooperative indicated this: "We have consumers locally owning us and being very much involved. The local ownership and control gets messages coming up from the grassroots." An oil company manager indicated, "The closer you get to the market place, the more you must be careful about what you disclose." A respondent from an auto manufacturer said that the firm adopted an emissions control system because "the public is close to the factory which would be affected by our emissions so that concerns us." Continuing, he said, "If we have harmful emissions, people will publicize it and it will be a problem just like if there is a spillage." Japanese companies, in particular, emphasized the importance of cohesion in influencing their operations, as reflected in this comment: "Japan is more homogenous. People act in the same direction in a concerted way. Local guidance is with local agreement with industry and the community."

Firms in fields with high cohesion were less likely to be motivated by competitiveness. Given the heavy overt and covert pressures to conform within cohesive fields, it became difficult for firms

to be unique. Competitive moves were often replicated within the field. Innovations diffused among firms rapidly, eliminating potential benefits associated with them. Firms exceeding industry expectations were persecuted by industry peers.

Firms were less likely to be motivated by pursuing higher levels of ecological responsibility in a cohesive field. Field cohesion implied that firms shared the same understanding of acceptable organizational practices. Superior performance was discouraged because it made other field members "look bad," and it ratcheted up standards for other field members, raising operating costs. Managers had less discretion, given the pressures to conform to standard industry practice or prescriptions imposed by the local community. Further, organizational members were more aware of socially responsible practices, given that the appropriate actions were well defined. Hence, exemplary practices required by ecological responsibility were not likely considered. These relationships are expressed in Proposition 2:

*Proposition 2. Field cohesion will be positively associated with legitimization and negatively associated with competitiveness and ecological responsibility.*

### Individual Concern

Individual concern for the natural environment is the degree to which organizational members value the environment and the degree of discretion they possess to act on their environmental values. Firms are comprised of individuals who have "bounded rationality," cognitive biases, and personal values that direct their actions (Cyert & March, 1963; Hambrick & Mason, 1984; March & Simon, 1958). Values are enduring, emotionally charged abstractions that are important to individuals (Rokeach, 1973). Personal values can influence a firm's ecological responses in three important ways. First, organizations are bombarded with numerous signals, only some of which are relevant to them (Daft & Weick, 1984). Values help decision makers to discriminate between those that are important and those that are not (Dutton, 1997; Ferrell & Gresham, 1985; Meyer, 1982). Second, environmental values will induce some organizational members to champion ecological responses (Andersson & Bateman, 1998; Hage & Dewar, 1973; Lawrence & Morell, 1995). Third, a firm's top management team and other powerful organizational members are more receptive to changes in the organizational agenda, products, and processes if these fit with their own personal values (Andersson

& Bateman, 1998; Dutton & Ashford, 1993; Stead & Stead, 1992).

Individual concern for the environment on the parts of organizational members or owners led to the motivation of ecological responsibility. For example, one food retailer in this study was engaged in life cycle analysis of own-brand goods, although rewards to the firm's legitimacy or competitiveness were not expected. When asked why they engaged in this costly analysis, the environmental director responded as follows: "Our chairman was very adamant that we were going to become much more ecologically aware. He said 'We ought to be more green because we want to do good.'" Socially responsible actions reflect permanent and omnipresent concerns and must be judged by individuals (Miles, 1987). Individual concern also led to a legitimization motivation if the concerns of the individual were congruent with those of constituents within society. These relationships lead to the final proposition:

*Proposition 3. Individual concern will be positively associated with ecological responsibility and legitimization.*

### IMPLICATIONS AND CONCLUSION

#### Profiles for Ecological Responsiveness

The purpose of this study was to understand why firms are ecologically responsive by identifying firm motivations and their contexts. Although our intention was not to evaluate corporations' ecological responsiveness, the study provided an opportunity to suggest conditions that may lead to unusually high responsiveness. This extension of the model, which is not part of the empirical process, is based on two assumptions. First, motivations can be mixed. In developing our model of corporate ecological responsiveness, we wished to distinguish between alternate motivations, and we therefore focused on firms with dominant motivations. But a number of firms were characterized by mixed motivations. Thus, as we considered the normative implications of the model, we assumed that both dominant and mixed motivations were viable and might lead to high responsiveness. Second, we assumed that the notion of equifinality could be applied to the ecological setting. Katz and Kahn suggested that "a system can reach the same final state [for instance, the same level of organizational effectiveness] from differing initial conditions and by a variety of paths" (1978: 30). In essence, a "feasible set of equally effective, internally consistent patterns" (Van de Ven & Drazin, 1985: 335) or equifinality (Gresov & Drazin, 1997) may exist. Thus,

rather than specifying a single best ecological response, or the optimal response for a given context, we attempted to identify consistent configurational patterns.

In discussing equifinality, Gresov and Drazin (1997) suggested four distinct types. Drawing on their classifications, we assumed that ecological responsiveness exemplifies configurational equifinality. This condition is characterized by incompatible functional demands on an organization and an unconstrained range of responses. Applied to this study, these conditions imply that a corporation's ecological agenda often competes with other functional agendas for resources. Further, the multiple contextual conditions and motivations permit a wide range of possible initiatives or organizational responses. We expect, therefore, that multiple configurational profiles may lead to ecological responsiveness. More specifically, we posit three profiles that lead to high responsiveness because of the coherence or consistency of the pattern: the caring profile, the competitive profile, and the concerned profile.

In the caring profile, the influence of individual concern on ecological responsibility is moderated by issue salience. Whenever concerns for the natural environment are based on a compelling social belief that is embodied in a charismatic and powerful manager, a firm will be ecologically responsive. The impact of individual concern is strengthened as issue salience increases, however, resulting in enhanced ecological responsiveness. The ability of an individual to influence organizational change is heightened as ecological responsiveness is recognized as valid. In essence, issue salience provides a legitimizing context for the individual's introduction of change. Because the change remains largely a championing effort, the individual can imprint the endeavors with his or her values and direct the firm toward ecological responsiveness. For example, individuals were observed taking a particularly salient issue, such as the use of recycled paper or the removal of halons from fire extinguishers, and inducing a response in spite of the added costs of responding to the issue.

In the competitive profile, the interaction between individual concern and low field cohesion promotes a mixed motive of ecological responsibility and competitiveness, and this mixed motive results in potentially high responsiveness. As individual concerns are translated into initiatives motivated by ecological responsibility, a firm is additionally motivated by competitive advantage. When field cohesion is low, competitors do not recognize the firm's ecological responsiveness as a competitive threat. Competitors do not respond to

the initiatives, nor are they inclined to mimic the firm, given the institutional context. The firm can then develop a strategic niche in which it distinguishes itself as a green alternative. This combined interest in competitiveness and ecological responsibility often leads to innovations that would not otherwise be realized. Innovations result in more ecologically benign products or processes for which there are efficiency or marketing gains, or products or processes that are superior in other ways. For example, a Japanese oil company developed the technology to remove benzene from gasoline, resulting in an ecologically friendlier formulation of gasoline and the opportunity to use the benzene for other purposes.

In the concerned profile, the interaction of field cohesion and issue salience induces a more intense legitimization motivation. In this profile, the field is cohesive and, as ecological concerns are recognized, all field members respond. This occurs because of potentially delegitimizing effects associated with the firms' products and/or processes. All members within the field respond aggressively and collectively by sharing information and innovating processes. Issue salience magnifies the effect of field cohesion as field members are drawn together to protect the legitimacy of an industry. In essence, the field must be responsive to ensure survival of its members. This profile is illustrated through the reactions of chemical and forestry companies. The saliency of the ecological issues within those industries is instrumental in precipitating the actions of the respective industry associations, which ultimately leads to an industrywide response. If firms within those industries fail to respond, the profits of all industry members and the livelihood of some specific companies could be threatened.

The manager who wants to achieve any one of the configurational profiles can either select the appropriate contexts or change the existing contexts (Drazin & Van de Ven, 1985). Selecting the appropriate contexts assumes that the manager responds only to salient issues, chooses to operate within cohesive fields, and hires managers who exhibit ecological concern. Alternatively, the manager can magnify the influence of the existing contexts. For example, training staff about the ecological effects of organizational activities can heighten individual concern. Improved research into the ecological impacts of issues, such as the effects on human and plant life of global warming, will increase issue salience. Field cohesion may be increased through more active involvement by industry associations to encourage collaborative research efforts and voluntary disclosure of ecological impacts.

## Contributions to Research in Organizations and the Natural Environment

Gladwin (1993) and Shrivastava (1994) issued pleas for the greening of organizational studies. This study furthers that goal by connecting the domains and discourses of organizational theorists with those of researchers examining organizations and the natural environment (ONE). In particular, our study speaks indirectly to the tension between ecocentric and anthropocentric approaches to organizational studies, which is a critical dialogue in research on organizations and the natural environment. Anthropocentrism, the dominant paradigm, is marked by the centrality of human interests (Gladwin, Kennelly, & Krause, 1995; Purser, Park, & Montuori, 1995; Shrivastava, 1994). The natural environment is used, abused, nurtured, and developed only if it supports those interests.

Within ecocentrism, nature has centrality, and all biophysical systems, including humans, are integrated parts of nature (Gladwin et al., 1995; Purser et al., 1995; Shrivastava, 1994). Human actions can be evaluated only in relation to the natural environment. The motivations for ecological responsiveness exhibit elements of these perspectives. Organizational self-interest fuels competitiveness and legitimization. Ecological responsiveness is fragmented, so that each environmental issue is evaluated incrementally and often independently of each other issue. A firm motivated by ecological responsibility, in contrast, fosters a more holistic approach to ecological responsiveness. Organizations evaluate their long-term relationships with the natural environment, not to promote organizational interests, but to promote social interest. Although this shift in focus does not fully exemplify an ecocentric perspective, the seeds of ecocentric values are at least planted. Although our data show that few firms are motivated by ecological responsibility, its presence suggests that ecocentric discourse grounded in research on organizations and the natural environment is relevant to management audiences.

Our model also highlights the importance of different levels of analysis in shaping organizational responses. Starik and Rands (1995) suggested that different levels of analysis are required to assess the potential for an organization to be ecologically sustainable. In particular, they suggested that organizations have relationships with individuals, other organizations, political-economic entities, socio-cultural entities, and with nature. Identifying and managing these interfaces is critical to achieving sustainability. Our results show that a firm's responsiveness is directly related to the ecolog-

ical, interorganizational, and individual levels of analysis.

Our model points not only to the importance of integrating different levels of analysis but also to the importance of integrating theoretical perspectives. To fully understand corporate ecological responsiveness, the application of ideas rooted in institutional theory, economic theory, and individual values is required. Although each of the motivations is described by their distinctiveness, their power to affect corporate ecological responsiveness is strengthened through their interactions. Research in organizations and the natural environment requires multidisciplinary analysis. As our research shows, applying only a single paradigm to corporate ecological responsiveness paints an incomplete picture. Applications of organization theory within work on organizations and natural environment necessitate and facilitate the bridging of theories that are often treated independently.

## Limitations and Future Directions

The limitations of this research provide anchors for future research. First, this research was inductive in design. Our goal was to build substantive generalizable theory in an underresearched area. The strength of this design is that it exposes new insights and new relationships. The weakness is that it does not permit a researcher to make valid speculations about the relative efficacy of the motivations. The data here indicated that firms were motivated largely by concerns for legitimacy, less by competitiveness, and even less by ecological responsibility. However, these findings could not be tested because the constructs and their relationships were induced from this data set. Future research could test the efficacy and prevalence of these contexts and motivations and their relationship to ecological responsiveness.

Second, this research is generalizable only to the extent that the theoretical dimensions are captured in this study. Although we controlled for some industry, country, and company effects, we did not include firms in environmental industries, such as wind or photovoltaic energy producers. We also limited our study primarily to two countries, the United Kingdom and Japan, because of our interest in investigating specific concerns pertaining to the context, such as field cohesion, issue salience, and individual concern. However, the United Kingdom and Japan are very different across other cultural dimensions that were not investigated in this research. For example, Hofstede (1980) found that the United Kingdom was considerably more individualistic, had lower uncertainty avoidance, had lower

"power distance," and was less masculine than Japan. We did not explore the interactions of these cultural dimensions with the motivations of corporate environmental responses, but they could be instrumental in furthering the richness of our proposed model. Furthermore, if we had chosen other cultural contexts, such as those of Brazil or Indonesia, richer insights might have been generated. We also did not investigate effects of differences in the institutional ownership of corporations on corporate ecological responsiveness, which is particularly salient to research involving Japanese firms. It is also possible that our reliance on supplemental interviews inappropriately heightened the importance of the role of institutional organizations. Future research could test whether other dimensions of the contexts we uncovered are relevant to this framework.

Third, in this research we attempted to uncover a firm's motivations after the firm had made its decision to act. In spite of our efforts to validate the accounts offered by participants, this research is subject to the biases associated with accounts that acquire greater efficacy over time (Van de Ven, 1988). However, if we had researched firm motivations while decisions were being made, we would have had to reduce the number of case studies and thereby compromise data validity and reliability. At the outset of this project, we decided that a more robust theory could be developed by using the methodology employed here, rather than conducting a study during decision making. It would be useful for future research to apply the model developed here to decisions as they are being made, in order to assess the model's predictability.

This research is an attempt to advance understanding of why firms are ecologically responsive. A rich model of corporate ecological responsiveness requires consideration of the underlying motivations. In this project, we attempted to inform the literature on organizations and the natural environment by developing theory that helps to explain and predict corporate ecological responsiveness.

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