

# Organizations and the Sustainability Mosaic

Crafting Long-Term Ecological and Societal  
Solutions

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NEW PERSPECTIVES IN RESEARCH ON CORPORATE  
SUSTAINABILITY

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## 4. Changing practice on sustainability: understanding and overcoming the organizational and psychological barriers to action

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Sustainable development (or sustainability) suffers from many definitions. For most, that definition starts with the Bruntland definition: 'meeting the needs of present generations without compromising the needs of future generations to meet theirs' (World Commission on Environment and Development, 1987). From there, many turn to the triple bottom line (Elkington, 1998) – the 'three Es' of economy, environment and social equity or the 'three Ps' of people, planet and profits. Others go further to focus on eco-efficiency, corporate social responsibility, transparency and inclusion (Holliday et al., 2002). And still others incorporate considerations for inter-species, inter-racial and inter-generational equity as well as equity between North and South via development that strengthens the capacity of both rich and poor to enhance their welfare while preserving the environment (Farrell and Hart, 1998). Ehrenfeld (2004) sums all this up by saying that sustainability is an issue of human 'flourishing'. In truth, sustainability encompasses all these considerations and more. The definition of sustainable development is still in development, so to speak.

Because of this ambiguity, there are a large number of critiques that challenge the notion of sustainability. Some question the concept on its efficacy for meaningful action relative to topics with more longevity, such as corporate social responsibility (CSR) (Norman and MacDonald, 2003). Others question the extent to which the sustainability agenda could be injurious to corporate survival (Murray, 2005). So ambiguous and contentious is the concept that some have suggested that the term 'sustainable development' should be jettisoned, since it means everything to everyone and therefore nothing at all (Goodman, 2000).

That this term is so contentious and ambiguous is not cause for abandonment. Instead, this represents the extent to which the term evades clarity, embodies complexity and, in the end, requires a change in many of

our underlying cognitive and cultural beliefs (Bazerman and Hoffman, 1999). It requires an alteration in the way we conceive of the purpose of the firm, its connection with the natural environment and the ways in which it serves human communities. In fact, while each of these three issues requires 'an internal change in our intellectual emphasis, loyalties, affections and convictions' (Leopold, 1949, p. 210), it is the interconnections among the three that truly make it such a challenge.

These interconnections are both positive and negative, intertwined in a series of multi-directional feedback loops that require a systemic approach to be resolved (Meadows et al., 2004). Firm activity impacts social communities for the positive when economic growth serves human prosperity. Its impacts are negative when widening income disparities mean that not all people share in that material and economic progress (Crossette, 1998). Firm activity impacts the natural environment negatively through the massive resource extractions and pollution emissions that are utilized to fuel that economic growth. It creates positive outcomes when new technologies or services are developed, which reduce or eliminate that ecosystem strain.

Firm activity aside, the natural environment is directly linked to human well-being. Environmental improvements can improve the food yield of land and sea resources, decrease toxic hazards from pollution and maintain these attributes for generations to come. Conversely, environmental degradation affects the quality of life for human populations, sometimes affecting all (Beck, 1992), but most often affecting the poor or under-represented disproportionately (Bryant, 1995). And vice versa, social responses to environmental problems can have both detrimental and advantageous effects on human populations through impacts on sector employment, productivity and economic activity. These effects can be exacerbated negatively through poorly timed or poorly executed interventions (such as the protection of the spotted owl in the Pacific Northwestern United States) and positively through responses that are inclusive and efficiently designed (such as the Montreal Protocol to eliminate ozone-depleting substances). In all such linkages among the three parts of the sustainability triad – economy, environment and social equity – there is a need to change our conceptions of each part individually, and the whole in its entirety.

In this chapter, we argue that the change in thinking required of the sustainability agenda will never come to fruition within practical domains unless proper attention is given to the sources of individual and social resistance to such change. The implementation of wise management practices cannot be accomplished without a concurrent set of strategies for surmounting these barriers. We will briefly discuss how sustainability has emerged as a phenomenon in the real world, thrusting corporations into

addressing this issue. Next, we will illustrate how contributions from the fields of behavioral decision research and organizational behavior can enrich this shift in corporate practice, offering greater insights into the necessary ingredients for wise sustainability management to make it into practice. We will close with a discussion of strategies for overcoming barriers to action.

## SUSTAINABILITY IN CONCEPT

Over the past 100 years, society has witnessed unprecedented economic growth and human prosperity. Our industrial and intellectual pursuits have created a tripling in global per capita income (World Business Council for Sustainable Development, 1997), an increase in average life expectancy of almost two-thirds (World Resources Institute, 1994), and a populace that is significantly more literate and educated than our predecessors (World Business Council for Sustainable Development, 2002). These advancements have all been enabled by industrial sector developments in medicine, materials, transportation, communication and food production.

In the latter half of the twentieth century, however, society has begun to question some of the commonly held assumptions of that development. On one front, people have challenged the belief that the environment can be treated as an endless source of resources and a limitless depository for waste. On another, concerns have been raised that all people do not share equally in this economic prosperity, leaving many without access to the opportunities our advancing world has to offer. This questioning has resulted both in the recognition of corporate activity as the source of environmental and social problems, and in a more recent recognition that industry can also be a part of the solution. Out of this recognition, concerns for sustainable development were born.

In our increasingly globalized world, the impact of industrial and commercial activities has become more vivid and severe. For several reasons, the environmental and social problems that society faces cannot be considered, much less resolved, without the inclusion of business as a central factor (Hoffman, 2005). Five of these reasons are noted here.

First, business decisions concerning what material, labor and energy inputs to use and how to manage product and waste outputs ultimately determine environmental and social quality. Therefore, industry is often directly responsible for problems related to sustainability, and is thus most vulnerable to social and political challenges for change. Second, companies are generally the sources of technological evolution within society. As such, companies often best understand the technical trade-offs that innovation

choices may involve. While corporate critics and others may appreciate the impact of systemic change, companies understand the underlying technical and economic aspects of innovation. Third, governments no longer possess the full array of resources and knowledge necessary to dictate solutions to companies. Many within policy circles now agree that companies must become participants in the regulatory process if sustainable and economically efficient solutions are to be found. Fourth, the power of business organizations to determine the structures of social, economic and political activity has grown to such enormous proportions that industry, both individually and through markets, now possesses the most resources needed to create more efficient coordinating mechanisms. Indeed, businesses have been developing solutions to emerging environmental and social problems with a number of products and services, such as: alternative mobility systems, including gas-electric hybrid vehicles, fuel-cell vehicles and car-sharing in urban centers; alternative energy sources including wind energy, fuel cells and micro-turbines; and alternative manufacturing materials, including bio-materials (to replace fossil fuel based fabrics such as nylon, polyester and lycra) and composite woods (to replace large-stock timber). Fifth, as society demands that environmental and social problems be addressed, companies can earn new profits by finding solutions (Hoffman, 2005; Prahalad, 2004).

Clearly, there is a strong logic behind the need for business to play a more active role in supporting the goal of a sustainable society. But to date, the evidence points to a slow diffusion of industry-led ideas and actions. Given that an industry will be profoundly affected by and contribute to the ongoing concerns for sustainability, there is a great need and opportunity for a better understanding of this slow diffusion. We argue that while the visionaries who have generated new ideas for sustainable development offer important and vital insights, they too often seem to assume that, 'If we write about it, they will follow.' Extensive research on the diffusion of innovation makes it clear that this view is naive. We need to understand the barriers that exist to implementation and offer new insights concerning how to put wise insights into practice. Here, organizational theory and behavioral decision research have much to offer.

## TURNING SUSTAINABILITY INSIGHTS INTO PRACTICE

Research in the organizational behavior disciplines focuses on how social and psychological processes influence the perception and development of managerial and market structures, including managerial and market structures

relevant to the natural and human environments. Organizational behavior's interdisciplinary, multi-level focus makes it well suited to addressing the human side of management behaviors. Organizational behavior research offers multiple lenses for viewing the complexities of the intersection of business and sustainability. More importantly, this research sheds light on tactics that can be used to integrate the insights of broader managerial research into practice.

At the individual level, behavioral decision research offers insights into how the social perception and enactment of issues occurs (Cordano and Frieze, 2000) and, therefore, highlights the fundamental mechanisms by which change can be undertaken. Behavioral research posits that individuals attempt to act rationally, but are bounded in their ability to achieve rationality (Simon, 1957; March and Simon, 1958). Armed with four decades of behavioral decision findings, researchers now are able to predict, a priori, how people will make decisions that are inconsistent, inefficient and based on normatively irrelevant information. Individuals rely on simplifying strategies, or cognitive heuristics. While these heuristics are frequently useful shortcuts, they also lead to a wide variety of decision biases (Kahneman and Tversky, 1973, 1979; Bazerman, 2005).

At the collective level, organizational theory views individuals as part of larger systems of organizations and institutions (Hoffman, 1999). It examines the political and economic root causes of environmental and social disruption and develops a systematic approach that shows how organizations, institutions and individuals can both push for and resist reforms (Schnaiberg and Gould, 1994). It attends to the rise of social movements, addressing how change occurs within social systems and why. Central to this stream is a consideration of risks as they relate to the macro-sociological change (Beck, 1992) and the reasons why social structures will resist that change, focusing on the 'social, political and cultural processes' by which issues, problems and solutions are given attention, defined and resolved (Hannigan, 1995, p. 30).

At both the individual and organizational level of analysis, behavioral research has much to contribute toward the resolution of contemporary problems of practical relevance. The next section will discuss specific ways in which behavioral scholarship can help practitioners in policy, business and non-profit communities put sustainable development into practice.

### **Cognitive Biases that Perpetuate Unsustainable Practices**

A great deal of research has examined the patterns of thinking that lead to suboptimal outcomes. In this section, we will highlight one cognitive

limitation, the mythical fixed pie, and end the section with an overview of how other decision biases prevent us from adopting wise innovations.

We begin with the story of Ben Cone, a forester in North Carolina. When he feared that the presence of endangered red-cockaded woodpeckers on his property would make him a target of the US Fish and Wildlife Service, Cone shifted from a 60-year tradition of sustainable forest management to massive clear-cutting of trees (Baden, 1995). Clearly, this is not the type of solution intended by the Endangered Species Act (ESA), which protected the woodpecker. Why did Cone destroy his forest? He assumed that any outcome desired by the government or environmentalists would be bad for him – an assumption referred to as the mythical fixed pie of negotiation, which is the belief that negotiators are fighting over a finite pool of resources (Bazerman, 1983). The most common reason negotiators fail to find optimal outcomes is that they do not look for trade-offs that can enlarge the pool of resources to be distributed.

It is important to note that it was not the ESA's implementation that caused Mr. Cone's hasty and drastic actions, but rather his misperceptions of it. After the story became a touchstone for ESA critics, it was revealed that endangered species considerations influenced only 15 percent of Cone's land. He was free to continue thinning trees on the remaining land as he had done for years. Furthermore, the US Fish and Wildlife Service repeatedly offered Cone proposals that would have insulated him from future ESA responsibilities. He refused to cooperate, however, believing that whatever the government and environmentalists desired must be bad for his business. Cone's fear of the complete economic loss of his assets led him toward a radical protective strategy (Bazerman et al., 2001). His belief in the win-lose nature of endangered species protection guided his unfortunate actions. It is tempting to assume that if we were in Ben Cone's position, we would reach more sophisticated conclusions. Yet, prior to the work of Walton and McKersie (1965), many brilliant negotiation scholars committed errors similar to Cone's. And we surmise that similar beliefs by many protagonists in disputes related to sustainable development continue to result in similar dysfunctional results.

### **The mythical fixed pie and sustainability**

To this date, competing perspectives on the relationship between economic competitiveness on the one hand and environmental protection and social equity on the other remain part of an active, highly visible debate. Splitting into polarized camps, protagonists argue whether this relationship is inherently 'win-lose' or 'win-win'. Win-lose proponents argue that environmental protection (Walley and Whitehead 1994; Palmer et al., 1995) and social responsibility (Meckling and Jensen, 1983; *The Economist*, 2005)

reduce economic competitiveness. Win-win proponents argue that this framing of the issue is a false dichotomy and that economic competitiveness improves through sustainability initiatives (Porter and van der Linde, 1995a, 1995b; Holliday et al., 2002). These bright thinkers argue for one incomplete process or the other, overlooking the symbiotic nature of these alternatives.

The present debate has hardened into an ideological conflict between intractable positions. Pro-sustainability advocates have begun asking whether existing models of corporate practice must be redefined (Post et al., 2002), while pro-business advocates have asked in reply whether 'social responsibility will harm business' (Murray, 2005, p. A2). Critics of the sustainability agenda opine that those advocating for corporate action on social and environmental issues are really promoting an agenda that will bring those very corporations to collapse; that the advocates for action possess a 'basic failure to understand why capitalism works' (*The Economist*, 2001, p. 70). As such, the challenge to sustainability advocates within the corporate regime becomes one of inconsistent values and objectives; a contest between the tenets of capitalism and the tenets of sustainability. The two are presented as orthogonal; they cannot be simultaneously achieved. In the end, the debate is framed as a win-lose debate in which social and economic objectives cannot be simultaneously met (*The Economist*, 2005).

Once this tension is framed in such terms, advocates of one agenda are immediately suspect by those who represent the other agenda – most vividly displayed by the recent criticism of companies that have acknowledged climate change and adopted voluntary greenhouse gas reduction goals. Termed 'Kyoto capitalists' or the 'carbon cartel', they are charged with unscrupulously seeking financial gain from the climate change issue by embracing a 'cynical approach to regulation', an effort to reap financial benefits while the 'costs can be foisted on the backs of others' (*Wall Street Journal*, 2004, p. A16). In response, these companies see those resisting climate action as ill-informed, selfish or destructive to the stability of the economy and ecology. As long as this win-lose mindset prevails, creative and wise outcomes will be obscured.

The negotiations literature teaches us that the contrasting win-lose or win-win frames of reference are not only unnecessarily polarized, but also fundamentally incomplete (Thompson, 2004). And it offers an alternative model that integrates elements of both positions for a more productive outlook on the issue. Conflict between economics and sustainability is a mixed-motive situation (Walton and McKersie, 1965); in other words, the balancing of environmental, human and economic interests is neither purely cooperative nor purely competitive. Within this mixed-motive perspective, we argue that protagonists on all sides of the debate miss too many

opportunities to transform the contentious debate into an efficient set of solutions. That is, it would be healthier for protagonists to move beyond win-lose and argue over a more optimal set of possible solutions.

When win-win sustainability advocates argue that environmentalism or social responsibility is good business, pro-business win-lose advocates can too easily point to poor environmental regulations or misguided CSR initiatives that harm profitability. And when pro-business advocates in the win-lose camp argue their case, those in the win-win camp counter with singular examples of sustainability initiatives creating new profitability. The key to resolving this circular and contentious debate is the recognition that sustainable development is sometimes profit-compatible and sometimes not. When parties acknowledge this simple fact, it becomes easier to analyze specific initiatives more carefully and convince corporations to adopt measures that are mutually beneficial. This thinking moves us beyond the simple question, 'Does it pay to be green?' (King and Lenox, 2001; Margolis and Walsh, 2001) or 'Does it pay to be sustainable?' Instead, it asks us to consider 'How and when does it pay to be sustainable?' for specific companies in specific circumstances (Howard-Grenville and Hoffman, 2003).

#### **Other cognitive biases**

Thus far in this section, we have focused on one bias, the mythical fixed pie, and specified what it tells us about how to encourage parties to move beyond their limiting mindsets and adopt sustainability friendly ideas. But many other biases are also socially and environmentally dysfunctional. Positive illusions (the tendency of people to see themselves, their future and the world in a better condition than what is reality), self-serving interpretations of fairness (the tendency of people to make egocentric judgments of what is fair), and overconfidence (the tendency of people to be overconfident in their estimation abilities and not acknowledge the true uncertainties in those assessments) are other culprits that explain destructive behaviors (Hoffman et al., 1999).

Similarly, we know that people and organizations tend to overly discount the future. As a result, individuals (and organizations) too often forego upfront capital expenditures that would offer huge annual returns. Perhaps one of the most obvious examples of the harmful impact of overly high discount rates with regards to the future is the global fishing crisis. Worldwide, 11 of the 17 largest fishing basins have been depleted in recent decades. With the aid of high-tech equipment and government subsidies, fishermen have depleted the oceans of once-plentiful species. This emerging catastrophe has economic, environmental and social implications. Subsidies for the global fishing fleet have helped produce enough boats, hooks and nets

to catch twice the number of available fish. Quite simply, too many boats are chasing too few fish, leading to fisheries collapse, destroyed capacity to feed human populations and severe economic loss through both lost revenue and misplaced government resources. In the extreme, international skirmishes over borders and poaching have emerged, further exacerbating the level of human suffering. Disputes over fishing rights have turned violent in recent years: Canadian fishermen blockaded a US ferry and shot at a Spanish ship; Russians shot at Japanese fishermen; Iceland forced a Danish boat from its waters; Australian forces have seized Indonesian boats; and the Portuguese Navy fired on a Spanish boat.

Economic, social and environmental disruption such as this – for example, the depletion of freshwater supplies, environmental pollution and the exhaustion of natural resources – will become increasingly common as the world continues to exhaust global ecosystems (Millennium Ecosystem Assessment, 2005). This will have tremendous implications for both the natural environment from which materials are drawn and the human populations that rely on those materials for both sustenance and economic income.

Given these woes, why do governments continue to subsidize fish over-harvesting? The psychological tendency to overly discount the future is largely to blame. The immediate need for maintaining domestic fishing fleets blinds policy-makers (and fishermen) to the pending collapse that their very actions are creating. Political scientists, sociologists, social psychologists and decision researchers have offered unique insights into the management of social dilemmas. Yet policy-makers have failed to apply these insights to the management of fishery crises around the world. The diffusion of wise practices must include strategies for confronting these cognitive obstacles.

### **Organizational Biases that Perpetuate Unsustainable Practices**

The adoption of wise innovation is limited not just by cognitive obstacles, but also by the ways in which organizations have evolved based on market pressures and adaptive organizational responses. In this section, we focus on one such organizational limitation, the over-reliance on regulatory standards. By regulations, we refer to any form of coercive influence, both those established by governments as well as other forms of regulatory bodies (such as trade associations, standard-setting bodies and others). We conclude the section with an overview of how other organizational properties keep us from adopting wise innovations.

While regulations for sustainable behavior are not fully developed, regulations are the most apparent source of pressure for organizational action on sustainability in the United States and elsewhere (including, we argue,

ineffective and counter-productive action as well). While recent regulatory innovations have been based on cooperative or voluntary formats, regulatory pressure is still largely seen as coercive in nature, forcing compliance by threat of penalty or sanction. But regulatory standards are also symbolic, uncertain, contested and constitutive. Courts frequently measure compliance against ‘industry standards’, ‘business necessity’ and ‘the limits of current technology’. Without overlooking the coercive aspects of standards (Scott, 1995), we must also consider how they are supported by contending logics of cognitive values and beliefs (Powell, 1996). Edelman (1990), for example, shows how abstract coercive legal mandates are typically enacted in organizational practices via mechanisms of translation and adaptation based on these supporting cognitive institutions.

### **Regulatory standards and sustainability**

Consider that present regulations and standards for enforcement around the world are largely founded on a ‘command-and-control’ format, which perpetuates an adversarial relationship between industry and the enforcing body. These enforcing bodies can be local, state, national or international governments as well as international standard-setting bodies such as ISO, the United Nations or the World Bank. This adversarial relationship supports the belief that regulators and industry decision-makers cannot find solutions that offer mutual gain. Unfortunately, any solutions to sustainable development will have to consider the ‘inherent’ trade-offs among regulators, industry and activist communities.

Some have begun to argue that existing standard and enforcement programs may be the biggest challenge faced by sustainability proponents today. While they can force behaviors that are easily monitored by oversight agencies, they perpetuate perceptions about the relationship between economics and sustainability that may be contrary to the goals of both. They are based on institutions that perpetuate the view that the three interests of the triple bottom line are mutually exclusive. While government standards have historically produced results consistent with broad environmental and social objectives (Easterbrook, 1995), many now view this paradigm as out of date and overly restrictive of corporate initiatives beyond strict compliance (Schmitt, 1994). But to change them will require alterations in multiple levels of systemic policy structures, individual and collective organizational cultures, and the cognitive biases of individual managers.

Tenbrunsel et al. (1997) argue that strict standards lock organizations into a focus on compliance rather than the attainment of the overall societal goals and interests they are intended to promote. They suggest that decision-makers may evaluate suboptimal choices (economic, social or environmental) that better adhere to a standard than optimal choices that

are tangential to, or violate, the standard. Once standards are written, program managers within government and corporations become constrained by a compliance mindset and by bureaucratic procedures that attenuate the search for creative solutions to complex problems. Standards direct attention and embody a theory of cause, effect and solution that is often received as accepted wisdom. Across a broad spectrum of disassociated industries, a given rule structure dictates which actions are appropriate, by what measure, to what extent and through which means. It often ignores the technological and logistical issues associated with overlapping regulatory programs, as well as the multi-media and multi-objective impacts of a particular rule of policy (Raffle and Mitchell, 1993).

This stifling of multi-level solution development is particularly problematic for a sustainability agenda which is, by definition, multi-level in nature. Standards can explicitly restrict optimal solutions. Tenbrunsel et al. (1997) for example, suggest a motivational explanation for the 'misdirected attention' effect: namely that standard-based systems can change the incentive systems for individuals and promote self-interested behaviors that are at odds with wider societal interests (Tenbrunsel et al., 1997). Suboptimal outcomes are the product of both unintentional and intentional actions on the part of a decision-maker, within a context that frames incentives and defines options. Unintentional actions may result from individuals 'just following the rules', creativity not being rewarded, a 'use it or lose it' rationale, intrinsic motivation being replaced with extrinsic motivation, or a 'no law against it' mentality. Intentional actions include trying to 'beat the system'.

As we noted earlier, standards are supported by contending logics and project-symbolic activity. To alter the meaning behind regulatory standards and the tensions that exist between such mandates and organizational processes (Edelman, 1990; Mezas, 1995), we must change both the overt (regulative) and the taken-for-granted (cognitive) institutions upon which they are based (Scott, 1995). In essence, a standard is an artifact of the wider regulatory cultures, structures and traditions from which it originates. But existing cognitive aspects of such standards are anchored in the constellation of beliefs, organizational routines, policies and practices that have accumulated over decades of organizational and programmatic routines. They have defined both the nature of the problem and the form of the solution. This insight has critical implications as we move forward and consider regulations that address issues of sustainability.

In particular, the introduction of the social elements of the triple bottom line into political and economic systems may pose a serious cognitive challenge, significantly more daunting than the integration of environmental values over the past 40 years. The underlying institutions that support regulations and standards on this front may be (actually or perceptually) diver-

gent from the presently accepted measures and objectives of economic growth and business strategy (Hoffman, 2000). Where environmental problems are highly visible and clearly threatening to almost everyone, not just a small percentage of the population, the social equity components of sustainable development are less visible and inherently about distributing resources from those who presently have to those who are presently without. This will invite resistance.

For example, one of the objectives of sustainability is the distribution of environmental costs and benefits fairly among people in all economic and cultural classes. This is underlain by the pragmatic concern that poverty resulting from inequitable resource distribution leads to the degradation of the ecosystem and could lead to destabilized economic and political regimes (Farrell and Hart, 1998). Regulations that seek to offset these concerns could be at serious odds with the individualistic, self-interested, profit-seeking, resource-utilizing beliefs that underlie the present capitalistic system (Allenby, 1998). Regulations designed to tackle social equity issues may continue to face the kinds of ideological opposition that frames the tension as a win-lose debate.

#### **Other organizational biases**

Regulatory standards are not the only source of environmentally and socially detrimental behavior that has become established within organizations over time. Multitudes of accompanying organizational arrangements can shield managers from perceiving opportunities to satisfy environmental and social interests to the betterment of the organization and society. Organizational silos keep multiple elements of organizations from seeing and implementing wise strategies that cut across the organization. Such silos are often based on political divisions and protective departmental interests that shield organizations from identifying the potential economic benefits of sustainability initiatives. Segmented responsibilities within these multiple departments can also separate economic cause from effect, thereby leaving opportunities on the table (Lovins and Lovins, 1997).

Capital budgets keep plant managers from making wise long-term decisions regarding total lifespan costing of plant equipment. Capital planning is supported by economic metrics that perpetuate behaviors that damage the environment or ignore social consequences. For example, the gross domestic product (GDP), the foremost indicator of a nation's economic progress, measures all financial transactions of products and services in the country, but does not acknowledge or value a distinction between those transactions that add to a country's environmental or social well-being and those that actually diminish it (Redefining Progress, 1996). Other metrics, such as return on investment, net present value and return on equity, are

built upon beliefs and assumptions that overlook measures that include environmental and social concerns. Financial markets often encourage short-term goals, undervalue environmental resources, disregard human impacts and discount the future in favor of accounting and reporting systems that do not reflect true environmental and social risks and opportunities (Schmidheiny, 1996). Economic return on investment must support the debt load expected by lending institutions and corporate investors. These pressures will lead companies to harvest resources at rates that exceed maximum sustainable yield, thereby diminishing the stability of the ecosystem as well as the natural capital asset base upon which future generations must depend for their livelihood. The short-term payback periods of financial markets take precedent over the long-term time horizons of ecological and social systems.

Coordinating mechanisms within the organization, such as established reward and incentives systems, often mask the opportunities available through change. Where a company may claim to hold sustainability as important in its mission statements, misaligned reward systems can lead individual managers toward fulfilling immediate personal goals that diverge from the broader, long-range goals of the sustainable organization (Kerr, 1995). Rewards exist on the systemic level as well. Architects and engineers are compensated with a percentage of the cost of the building or equipment that is specified at construction, not over its lifetime. There are few incentives to seek out and include the input of those who will live, work and play within or around the built structure. Further, these professionals are often penalized for eliminating equipment that may be costly at the beginning of the project, but cheaper over the long term. This has led the US government to misallocate about \$1 trillion to air-conditioning equipment that would not have been necessary had the buildings been optimally designed to produce the same or better comfort at lower cost (Houghton et al., 1992).

At the deepest level, certain unquestioned assumptions are implanted in managers in their earliest education at business schools and then perpetuated through managerial structures. These assumptions include: the notion that the firm is socially and physically autonomous; the idea that profit motive is the singular objective of the firm; the omission of natural capital from market accounting systems; the perception of the natural environment as a limitless source of resources and a limitless sink for wastes; and the unquestioned necessity of economic growth (Capra, 1982; Daly, 1991; Daly and Cobb, 1994; Gladwin et al., 1995). These assumptions support actions that are detrimental to the stability of environmental and social systems surrounding the organization.

Within organizations, the changes needed to help employees overcome these biases happen slowly and invite resistance. Resistance can come in the

form of habitual routines that perpetuate behaviors that employees may know are damaging the environment. Often the perpetuation of habit stems from an individual's realization that changing an established habit will involve some form of short-term costs in the form of resources, effort or discomfort. While inefficient or inconsistent with long-term objectives, these established routines can become familiar, comfortable and reliably predictable (Clark, 1985). Habitual routines often grow out of taken-for-granted engineering or managerial practice. Fear of the unknown can also drive both organizational inertia and the continued reliance on basic underlying assumptions. Both external and internal change can be upsetting for organizational constituents, particularly when the outcome or consequences of change cannot be predicted. Of course, in the real world, outcomes or consequences can never be predicted. Resource limitations can restrict the ability of an organization to overcome sunk costs of plant, equipment and personnel. Sunk costs can become psychological roadblocks that prevent managers from adequately addressing demands for change. Short-term costs predominate, thus biasing the manager to over-discount the future. Finally, threats to established power bases can cause resistance to organizational change. Organizational culture establishes a structure of power that will bias the perceptions of those whom the existing system benefits. Any attempts to restructure the system will likely undermine these power structures and invite organizational confusion, interdepartmental rivalry or organizational resistance (Mintzberg, 1979). Self-preservation may override concerns for environmental, social or economic objectives in managerial decision-making.

In summary, organizational arrangements and cultural beliefs tend to perpetuate unsustainable behavior. Individuals within organizations deviate from rational and sustainable behavior through the individual biases discussed in the last section, coupled with the organizational-level biases discussed in this section. Overcoming these obstacles will require alterations in the organization that integrate environmental and social concerns into the organization's basic underlying beliefs, recasting them in ways that are mutually beneficial to the objectives of the organization and the sustainability of human and natural systems on which it depends.

#### **OVERCOMING COGNITIVE AND ORGANIZATIONAL BARRIERS: THE ENDANGERED SPECIES ACT AND HABITAT CONSERVATION PLANS**

We would like to close this chapter with an example that illustrates a way to overcome the biases we have discussed. It centers on the Endangered Species



Act (ESA), the most controversial of US environmental laws and one that seemingly pits corporate interests against those of environmental protection, with local, regional and national communities impacted by the outcome. The mission of the ESA is to create a mechanism for the US government to designate any animal or plant species as 'endangered' or 'threatened' and prohibit its 'take' (for example, any harm to a member of the species or its habitat). Once listed, recovery plans are drafted to serve as a guide to ensure the species' long-term survival. The standard frame that ESA debates have taken is win-lose. The mythical fixed pie leads to prototypical conflicts in which neither side of the debate trusts or engages the other.

To critics, the idea of giving up jobs and crippling a regional economy to save individual species sounds absurd. Protection of the human economy is paramount. To proponents, such economic sacrifices are unfortunate but necessary to protect the 1516 species of flora and fauna listed as threatened or endangered. Protection of natural ecosystems is priceless. This is how ESA debates most often play out. Economic and development interests form intractable positions and fight a win-lose battle over concessionary agreements. But this polarization is unnecessary and, in fact, counter-productive to wise outcomes that seek to resolve interests on multiple sides of the debate. The mythical fixed pie bias coupled with perverse incentives and rewards lead participants to conceal or destroy evidence of listed species on private lands; in the words of one landowner, to 'shoot, shovel, and shut up' (Crismon, 1998). It yields outcomes that are suboptimal for all three parts of the triple bottom line: economic, environmental and equitable.

By most accounts, the listing of the spotted owl represents the most controversial 'train-wreck' of ESA implementation. This Pacific Northwest controversy epitomizes the tensions in which cognitive and organizational barriers can lead to suboptimal outcomes. Each side of the debate viewed beating the other as the path to achieving its goals. Environmentalists wanted a better environment and were willing to sacrifice economic development toward that end. Development interests wanted economic growth and considered it unacceptable to forfeit jobs or economic prosperity in the name of species protection. In the end, protection of the spotted owl removed large tracts of federal lands from logging, leading to a decrease in the supply of raw timber, elimination of mill capacity, job loss and price increases. Local and regional economies were impacted.

But, it did not need to play out this way. While the spotted owl controversy represents a costly effort to protect an endangered species, it is also an example of a mistake, one that could have been avoided had the corporations, agencies and interest groups dealt with the underlying issues early in a proactive fashion (Yaffee, 1994). But the mythical fixed pie perspective prevented the parties from engaging with each other early. Because a

response was delayed through mistrust and confrontation, costs increased. As plants and animals become scarce, the costs of protecting them rise exponentially. We are better off investing small amounts of resources to proactively avoid such catastrophes as the spotted owl controversy, rather than face the impasses so evident in recent years. The costs of sustainability are now, and the benefits accrue to future generations.

But solutions exist to this ESA dilemma. In an attempt to move beyond these supporting beliefs and the perverse behaviors they provoke, Congress amended the ESA in 1982 and introduced Habitat Conservation Plans (HCPs) as a mechanism to encourage creative solutions that balance conservation, community and economic imperatives. HCPs provide the opportunity to enlarge the pie by giving private landowners a permit to violate the specifics of the ESA through 'incidental taking' of listed species in the course of lawful development activities, provided that the landowner follows certain steps to provide for conservation of that species. Those steps, as laid out in the HCP, must be developed in cooperative engagement with all impacted parties to the debate. This promotes transparency and inclusiveness as a democratic process brings economic, environmental and social issues to the table. HCPs can overcome the win-lose mentality by creatively developing plans that satisfy endangered species protection, community concerns and economic interests. They break the existing mold of coercive command-and-control regulation and form creative public-private partnerships that loosen regulatory strangleholds, enhance long-term regulatory predictability and species protection, improve conservation science and technology and include impacted human populations.

But in spite of the opportunities that voluntary programs such as HCPs present, barriers to change still exist. Key economic and environmental stakeholders have historically been slow to adopt this shift in regulatory relations (Troast et al., 2002). In the first ten years of the HCPs' existence (from 1982 to 1991), only 12 HCP plans were approved by the federal government (US Fish and Wildlife Service, 1999). By viewing HCPs through the lens of behavioral scholarship, we can assess how to overcome these barriers (Troast et al., 2002).

There are many reasons for this institutional resistance. We will list four here:

- Resource constraints. The responsible federal agencies have been understaffed and constrained by limited resources (such as for site visits, scientific review, program development).
- Fear of the unknown. Most companies affected by the ESA know little about the HCP process, and many prefer the 'devil they know' in command-and-control regulations to the 'devil they don't know'.

- Threats to political interests and a fixed pie perspective. Poised for battle with commercial interests, environmental activists have condemned HCPs as overly permissive and fundamentally flawed in their long-term design (Sabel et al., 1999); industry interests view them as yet another costly web of government bureaucracy.
- Habitual distrust. All parties possess a degree of historic, ingrained distrust for others in this negotiation process.

To overcome some of this resistance, the Department of Interior introduced the 'No Surprises' policy in 1991, reassuring private landowners that the government would stand by the terms of any HCP negotiated. This policy stimulated interest in companies to engage stakeholders in resolving species protection issues more fully and led to more adoption of HCPs. By the end of 1997, there were 243 HCP agreements in 16 states, covering 6.2 million acres of land.

But while the shift from command-and-control implementation of the ESA to the negotiated implementation of HCPs brought about many creative new efforts, the number of HCPs remains much smaller than the number of conflicts in which an HCP could be used as a tool to generate a better solution for landowners, the community and the environment. Ongoing organizational and cognitive barriers explain this contradiction. First, despite the potential of HCPs to enlarge the pie and create value for landowners and environmental interests, many parties continued to view their conflicts as win-lose and zero-sum, adopting the view that 'If it's good for the other side, it can't be good for me.' In addition, the branch of government that created the HCP legislation did not give the government employees in charge of implementation the budget or the skills needed to implement HCPs effectively. The government employees charged with negotiating HCPs were overworked and were not trained to negotiate against wealthy landowners who could heavily finance their negotiations. Finally, the political tendency of the administration of George W. Bush to focus on economic over social and environmental interests in its policy-making allowed economic interests simply to conquer alternative interests, rather than seeking wise agreements with them. Collectively, HCPs represent an excellent prototype of a sustainable development innovation that was limited by cognitive, organizational and political factors (see Troast et al., 2002 for a more detailed analysis).

We will face many similar challenges in the future, in which we can pit social and environmental interests against the short-term economic interests of a special interest group or a specific company, or we can start overcoming barriers to developing sustainable solutions earlier in the process. For example, in Puget Sound, killer whales (or orcas) are close to being

listed under the Endangered Species Act. If they are listed, there will be a significant impact on waterborne travel – shipping, ferries, fishing companies as well as the communities that rely on them. Stakeholders should come together now to understand the migration and living patterns of these animals so as to protect them proactively and avoid listing. Or, more likely, the parties can fight a political battle over their listing, where we either suffer the loss of the species or incur significant economic losses.

## CONCLUSION

The field of management research has made great strides in the past quarter-century, building a body of research and literature that can help us understand and improve the environmental and social impact of corporate activity. Yet much can be done to bring this research into the realm of practice and change corporate behavior for the better. Tremendous opportunities for making wise changes lie ahead of us; low-hanging fruit still remains.

To bring about wise changes, we must confront the barriers to individual and organizational implementation. As an issue of practical action, sustainability has become much more complex and requires a more sophisticated view to be managed effectively. This is an area to which organizational research can contribute. Organizational research attends to the psychological and organizational sources of unsustainable behavior and helps us identify solutions through alterations in systemic control structures and individual interests and biases (Winn and Angell, 2000). Research on decision-making and organizational theory has implications for managers who now recognize that, to improve global conditions of the environment and people, we need to understand how to change the behavior of individuals and organizations. In addition, policy-makers need to understand how to incorporate business thinking into policy development to foster the most effective and efficient response from business.

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