

A Mixed-Motive Perspective on the Economics Versus Environment Debate

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The debate over the relationship between economic development and environmental protection has polarized into the opposing perspectives of win-lose (distributive bargaining) or win-win (integrative bargaining) outcomes, reminiscent of the debate that occurred within the negotiations field 15 years ago. The authors argue that such polarization is unnecessary and inaccurate. Conflict between economics and the environment is neither purely win-win nor win-lose, but rather, it is a mixed-motive situation. In presenting this argument, the authors draw from the negotiations and managerial decision-making literature. Furthermore, they consider some strategies for exposing mixed-motive solutions to environmental problems in the future.

In recent years, the debate between competing perspectives on the relationship between economic competitiveness and environmental protection has become highly visible. Splitting into polarized camps, protagonists have sparred over whether this relationship can produce inherently win-lose or win-win outcomes. Win-lose proponents argue that economic growth and environmental protection are largely incompatible; environmental protection must, by its very nature, reduce economic competitiveness (Palmer, Oates, & Portney, 1995; Walley & Whitehead, 1994). Win-win proponents, on the other hand, argue that a fixed-pie framing of the issue is a false dichotomy and suggest that economic

competitiveness can be improved through environmental protection (Gore, 1992; Porter & van der Linde, 1995a, 1995b).

We argue that these contrasting frames of reference are unnecessarily polarized and fundamentally unproductive. We find that this current environmental debate shares parallels to the dispute resolution field of 15 years ago, in which writers argued whether to follow a win-lose (Cohen, 1980; Karrass, 1970) or win-win philosophy (Fisher & Ury, 1981) in negotiations. However, more recent formulations in negotiations argue that both perspectives are incomplete and misguided. Win-lose, or distributive, models inhibit the search for outcomes that are better for both parties. Win-win, or integrative, models often fail to address the inevitable distributive aspect of negotiations. In recent models, rational negotiators employ a mixed-motive framework (Bazerman, 1998; Neale & Bazerman, 1991), in which they create larger gains through integrative bargaining and claim a larger portion of those interests for individual parties through distributive bargaining, subject to concerns for fairness and to the ongoing negotiation relationship (Bazerman & Neale, 1992; Lax & Sebenius, 1986; Raiffa, 1982).

Similarly, we argue that the conflict between economics and the environment is also, at its core, a mixed-motive situation. That is, the relationship between environmental and economic interests is neither purely cooperative nor purely competitive. Although the present debate posits an ideological conflict between intractable positions, we advance a new model, adapted from the negotiations literature, which offers a theoretical and empirical reconciliation of these opposing viewpoints. Whereas the debate between win-win and win-lose has fueled the dichotomy between environmental and economic interests, the mixed-motive perspective creates mutual gain solutions for these two sets of concerns while acknowledging their distributive aspects. We believe this model is more accurate and offers a more productive outlook on resolving this issue by integrating elements of both positions and informing a more productive debate. In such an integration, we see an opportunity to achieve more efficient outcomes, economically and environmentally, through enhanced creativity and flexibility in the search for solutions.

In this article, we present an in-depth discussion of the dichotomy between the win-win and win-lose scenarios and consider the strengths and weaknesses of both positions. Next, we describe the specifics of the mixed-motive model, explaining how this perspective allows a more rational and accurate form of resolving the economics versus the environment debate. We conclude with a discussion of some strategies for facilitating more creative problem solving that will foster mixed-motive solutions.

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THE MISSPECIFIED DEBATE

We believe that neither the win-lose model nor the win-win model is accurate. In this section, we show how each is fundamentally flawed and point to examples that illustrate our view.

THE WIN-LOSE MODEL

Win-lose proponents base their argument on traditional formulae for developing environmental regulation, a comparison of the beneficial outcomes and the costs necessary to secure them. By their very nature, such cost-benefit analyses frame these two considerations in a state of opposition. Environmental benefits can only be gained by imposing an economic cost. Out of this oppositional framing emerges the standard trade-off in the economics versus the environment debate. Increasing stringency of environmental regulation, by its very nature, "must" result in reduced profits for the firm (Palmer et al., 1995, p. 121). This trade-off is a "necessity" for achieving environmental improvements (Walley & Whitehead, 1994, p. 48). In this model of the debate, the existence of a win-win or cost-free solution to environmental problems neither makes sense nor is recognized. By definition, the balance between environmental costs and benefits becomes a zero-sum game. Some empirical data legitimates such a perspective. For example, each year, firms in the United States devote significant resources, net of cost savings, to environmental protection. Given this fact, Walley and Whitehead (1994) charge that any euphoria over the win-win scenario is not just "unrealistic" and "misleading" but is "dangerous" (p. 47). They argue that companies that pursue the win-win goal with untempered idealism are deluding themselves. Rather than chasing such a fantasy, Walley and Whitehead caution a more sober approach: "Ambitious environmental goals have real economic costs. As a society, we may rightly choose those goals despite their costs, but we must do so knowingly. And we must not kid ourselves. Talk is cheap; environmental efforts are not" (pp. 46-47).

But the win-lose perspective reinforces confrontational rather than cooperative approaches by opposing interests in real-world conflicts (such as logging practices in the face of endangered species protection or utility operations under increasingly stringent clean air requirements). Based on win-lose positions, economic and environmental interests fight a distributive battle over concessionary agreements with each side pursuing its goals by demonizing the other. Environmentalists are perceived as insensitively seeking environmental protection at all costs and willing to sacrifice economic development and human economies toward that end. Economic interests are perceived as pursuing economic growth at all costs, willing to forfeit environmental considerations to increase profit. Joint solutions through cooperative decision making are impossible.

From the perspective of the negotiations literature, the win-lose formulation has flaws that are easily identified. For example, it overlooks opportunities to

"expand the pie," creating collective value for all parties in the negotiation by focusing on the satisfaction of underlying interests that may not be in conflict rather than of formal positions that likely are. Three separate sources of evidence dispel the belief that environmental disputes are inherently win-lose. The first source of evidence comes from a number of real-world cases in which parties' interests proved to be not fundamentally opposed in a fixed-sum fashion. A second source of evidence comes from logical analysis, which suggests that in any complex negotiation, it is highly improbable that parties' interests will be completely opposed in a fixed-sum fashion. Finally, looking at a number of current disputes that have a fixed-sum flavor, we can suggest ways to develop a mixed-motive perspective. These sources will be elaborated further in the discussion of the mixed-motive perspective.

THE WIN-WIN MODEL

Win-win proponents argue that the trade-off between economic competitiveness and environmental protection is a false dichotomy. Instead of defining environmental gains in opposition to economic costs through the cost-benefit model, they argue, "The costs of addressing environmental regulations can be minimized, if not eliminated, through innovation that delivers other competitive benefits" to the firm (Porter & van der Linde, 1995a, p. 125). The cost-benefit equation is now reconstructed to include economic gains that offset economic costs. The term *economics* in the economics versus the environment debate is redefined in cooperative rather than competitive terms with environmental benefits. These "innovation offsets," as Porter and van der Linde call them, can lead to "absolute advantages over firms in foreign countries not subject to similar regulations" (Porter & van der Linde, 1995b, p. 98). For example, they argue, "Emissions are a sign of inefficiency and force a firm to perform non-value creating activities such as handling, storage and disposal. . . . Reducing pollution is often coincident with improving the productivity with which resources are used" (Porter & van der Linde, 1995b, p. 105). Supporting this argument, Gore (1992) argues, "Some companies have found that in the process of addressing their environmental problems they have been able to improve productivity and profitability at the same time. . . . An emphasis on environmental responsibility makes good business sense" (p. 342). In the end, win-win proponents argue that the key to realizing such benefits lies in "a new frame of reference for thinking about environmental improvement" (Porter & van der Linde, 1995a, p. 127), one that steps out of the traditional cost-benefit model.

As with the win-lose perspective, the lens of the negotiations literature shows the win-win formulation also to be flawed. It is predicated on the notion that all interests among parties can be mutually satisfied, with no trade-offs or compromises necessary between them. As scores of examples in both the negotiations and the environmental arenas can support, it is virtually impossible to achieve all of one's interests and to have the other party do so as well. Our speculation is that

the term *win-win* is loosely used to refer to (a) reaching any solution at all (as opposed to stalemate in court) (b) feelings of satisfaction, and (c) the act of compromise—none of which are true win-win solutions. In fact, it can be shown that many self-proclaimed win-win solutions are in fact Pareto suboptimal.

A SEARCH FOR BALANCE

In fairness, this depiction of the win-win and win-lose positions has been simplified. In truth, neither side takes an absolutist position. Porter and van der Linde (1995b) “readily admit that innovation cannot always completely offset the cost of compliance” (p. 100), and Walley and Whitehead (1994) concede that win-win situations may exist at times but that they are, in fact, “very rare” (p. 46). For either side, the debate does not focus solely on whether win-win or win-lose situations are theoretically and practically feasible. Both sides allow some latitude on this topic. The real debate concerns the proportion of win-win versus win-lose situations and the proper frame of reference for analyzing them.

It is this latter point, the frame of reference, that is central to the identification and analysis of solutions to the economics versus the environment debate. In seeking these solutions, we challenge the frames used by both sides of the debate. First, the economic models of cost-benefit analysis view the firm as a monolithic entity, one that will respond to external pressures with standard formulaic actions. This model reduces the firm to an efficiency-maximizing unit that shares common and predictable goals with other firms. As such, it systematically overlooks opportunities for individual innovation. Instead, economic solutions focus on regulation in a form that is static and one-dimensional, a device that will inevitably raise costs and restrict competitiveness for the firm.

On the other hand, the case studies on which win-win scenarios are based suffer from the bias of sampling on the dependent variable. By studying firms that have found economic benefit from environmental protection, they have unrealistically extrapolated these results to the rest of the population, assuming away the institutional, social, and cognitive biases that may restrict the attainability of such opportunities (Bazerman & Hoffman, in press). For each confirming story uncovered, disconfirming stories could also be found.

To develop a more complete picture, we propose a level of analysis that includes not only the individual firm but also the social networks in which it resides. As developed by dispute resolution scholars, the win-win and win-lose concepts apply to negotiations between dyads and groups (e.g., three or more persons). It does not apply to one party. Yet, this is the level of analysis to which both win-win and win-lose proponents develop their arguments. Consistent with the viewpoint of the strategy literature, Porter and van der Linde (1995a, 1995b) seek to confine their analyses to the decision dynamics within a single firm. In contrast, consistent with the viewpoint of the economic literature, Palmer et al. (1995) direct their analyses at the costs and benefits of corporate action as represented by the broad social collective. In the end, both sides talk in terms of

whether the adoption of an environmental measure represents a win-win or win-lose for the individual firm. In each case, they fail to incorporate the role of other parties, such as government, environmental nongovernmental organizations, community groups, and shareholders, who negotiate these environmental policy decisions with the firm. This oversight obscures the mixed-motive nature of complex negotiations, in general, and the economics versus the environment debate, in particular. We can strengthen the analysis by thinking about the resolution of the economics versus the environment debate in terms of a joint outcome that integrates the interests of all relevant parties in addition to firm-level outcomes. By including all interests to the outcome of the negotiation (including the natural environment and future generations), we are more likely to reach outcomes that approach the Pareto-efficient frontier, the set of agreements such that no rearrangement of the outcome could benefit one party without any negative effects to any other party (Raiffa, 1982; Tietenberg, 1992). Such outcomes can best be uncovered through the creative integration and exploration of mutual interest gain among the range of interested parties.

In the pages that follow, we will present an argument for an intermediary level of analysis, broader than a particular firm but narrower than the entire society. It recommends analysis at the level of negotiating dyads and groups. This allows a more comprehensive framework for addressing the context of the economics versus the environment debate. The firm is, in fact, a collection of individuals who make decisions within a social context that is again composed of other actors. These individuals are subject to clear and identifiable judgment errors in both framing the economics versus the environment debate and finding solutions in cooperation with (or opposition to) other parties with differing interests. Decision-making biases perpetuate either an incomplete logic, on one hand, or an unrealistically optimistic logic on the other. By highlighting these underlying causes of the misspecified debate over economics and environment, we can push the discussion toward a more productive level, one that allows for the creation of new solutions that maximize the net gains to both economic and environmental interests.

INTEGRATIVE, DISTRIBUTIVE, AND MIXED-MOTIVE FRAMEWORKS

Within the negotiations literature, negotiations have been labeled as integrative (win-win), distributive (win-lose), or mixed-motive. This labeling scheme reveals insights into how the issues in this article are framed and form the foundation for our argument in support of the mixed-motive model. We discuss each in turn and build to our conception of the mixed-motive framework.

First, it is generally recognized that negotiation involves, to some degree, a distributive element (Lax & Sebenius, 1986; Raiffa, 1982). However, the win-lose framework is fundamentally distributive and zero-sum. Shown in Figure 1,

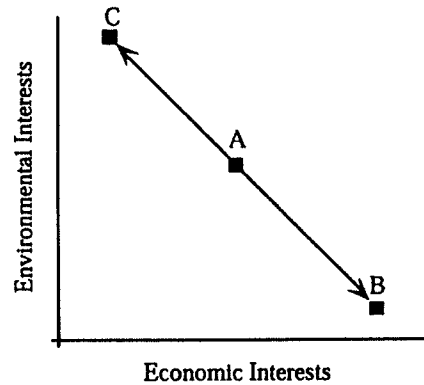


Figure 1: The Win-Lose Negotiation

one party gains only at the expense of another—the pool of resources is considered fixed, and parties negotiate over their allocation (described as “dividing the pie”). The Endangered Species Act (ESA) is an example of legislation that has led parties to focus on a win-lose perspective to negotiation. The ESA appears to pit the interests of economic development against those of environmental protection. To critics, the prospect of giving up jobs and crippling a regional economy to save owls seems absurd; protection of the human economy is paramount. To proponents, such economic sacrifices are unfortunate but necessary to protect the species of flora and fauna listed as threatened or endangered; protection of the natural ecosystem is priceless. This is how ESA debates most often play out. Environmental and development interests establish intractable positions and fight a distributive battle over compromise agreements. For example, the Sierra Club membership voted in 1996 to oppose all logging on all federal land, allowing no room for integrative negotiations. This places the debate in the realm of the win-lose scenario. As species protection is weakened, we move to the southeast (Point B in Figure 1), satisfying economic interests at the expense of environmental interests. As species protection is strengthened, we move to the northwest (Point C in Figure 1), satisfying environmental interests at the expense of economic interests.

However, dispute resolution researchers also recognize that most negotiations involve an integrative element—the pool of resources is not fixed, and parties can work to increase its size (described as “increasing the pie”). Complex

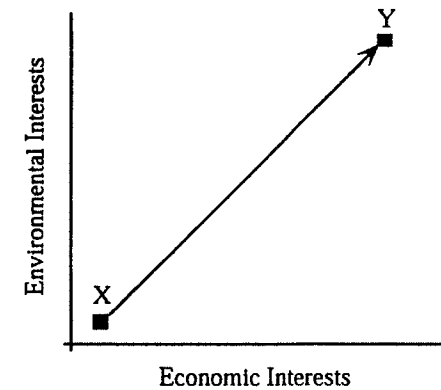


Figure 2: The Win-Win Negotiation

negotiations involve multiple issues, and where the parties differ in the value they place on the issues in negotiation, there exist opportunities for integrative trade-offs. Any negotiation involving more than one issue, with each party valuing issues differently, has integrative potential (Raiffa, 1982). This approach is fundamentally non-zero-sum. For example, Balzers Corporation, a manufacturer of equipment used in the production of optical components, semiconductors, and compact discs faced an environmental compliance problem in 1991. The company used Freon to clean parts before shipment, but the Environmental Protection Agency (EPA) had fined the small company \$17,000 for leaks in their system. As a term of the settlement, the company sought a new cleaning process. It switched to a water-based solution in 1993, eliminating the use of Freon altogether. With no change in customer satisfaction, the company found that the new system cost half of what the old system cost to run, about \$100,000 (McSorley, 1993). Furthermore, the new cleaning system posed no threat to employee safety as did the Freon. In the end, the environment was cleaner and the company's bottom line improved. As shown in Figure 2, both parties can gain by integrating each other's interests into the agreement (moving from Point X to Point Y). Integrative potential exists in nearly all complex negotiations (Pruitt & Rubin, 1986; Raiffa, 1982), although the parties may frequently overlook it. When overlooked, negotiated outcomes are suboptimal, lying below the Pareto-efficient frontier.

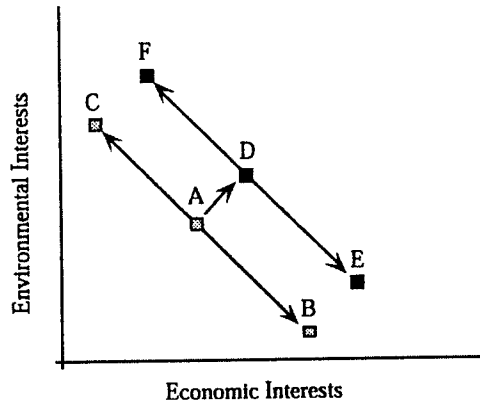


Figure 3: The Mixed-Motive Negotiation

Undoubtedly, the traditional tug-of-war in the economics versus the environment debate will always persist, because there will always be a distributive or confrontational aspect to such agreements and these are the elements that people readily perceive. In general, environmental disputes often possess the distributive aspect of property rights debates and the interests of one party to impose limitations on development or operational activities of the property owner. Even in the example of the Balzers Corporation, the integrative outcome was preceded by years of confrontation between the company and regulators and required an enforcement action to be exposed. But, we argue that opportunities exist to expand the scope of debate, finding solutions that will improve the potential outcome simultaneously for both environmental and economic interests. Graphically presented in Figure 3, we see potential to merge the win-win and win-lose perspectives, to expand the realm of possible outcomes (expand the "pie" from Point A to Point D), and allow each party to argue over whether to move toward Points E or F.

In present day environmental negotiations, parties frequently fail to identify integrative gains because they are preoccupied with distributing gains and losses. The mixed-motive model suggests that wiser trade-offs exist. One important feature of the model is the opportunity to realize gains that make all parties better off (Walton & McKersie, 1965). Integrative agreements that increase the total pool of resources to be distributed in the negotiation hold out the opportunity for all parties to receive more than they would have, had there been no

integrative agreement. To be successful, the parties must simultaneously have an integrative perspective (so as to maximize total group benefits) and a distributive perspective (so as to maximize their individual proportion of the group benefits). By focusing on distribution and integration, negotiations previously perceived as either win-lose or win-win reveal themselves as mixed-motive in nature.

Finally, to be fully cognizant of the complexities of environmental disputes, it is important not to reduce the debate into a singular reality of one perspective over the other. In reality, solutions to environmental disputes require the balancing of interests among a complex array of participants. Although the negotiations model acknowledges that corporate decisions are not developed in a vacuum, it is a diversity of interests that make up the context in which such decisions are made. The range of interests does not bifurcate into simply economic and environmental camps. Economic interests can comprise trade associations, corporations, shareholders, and unions. Environmental interests can include non-governmental organizations and community groups. But even these distinctions can become blurred as shareholders file environmental proxy resolutions before corporate boards and environmental groups form alliances with corporations to find solutions to environmental problems. The overlap between these players' interests forms a complex debate, and this complexity tends to involve greater opportunity for mixed motives among the parties involved. Instead of engaging in an empirical debate concerning the frequency of win-win opportunities, scholars and practitioners would do well to recognize the inherently mixed-motive nature of environmental disputes. Doing so will reveal opportunities that can facilitate the negotiation of more efficient and stable agreements on environmental issues.

A MIXED-MOTIVE PERSPECTIVE OF ENDANGERED SPECIES PROTECTION

Of all conflicts between economic and environmental interests, endangered species protection is the area in which the win-lose perspective appears to most predominate. Yet, contrary to popular perceptions, the implementation of the ESA is an area in which mixed-motive solutions can enhance both environmental and economic interests (Hoffman, Bazerman, & Yaffee, 1997). The ESA was designed to protect endangered or threatened species and to restore them to a secure status in the wild. Once listed, ESA forbids the import, export, or interstate or foreign sale of the species in any form. Furthermore, it becomes illegal to kill, harass, possess, or remove the protected species from the wild (what is termed "taking" a species). Once listed, the U.S. Fish and Wildlife Service also drafts a "recovery plan" to serve as a guide to ensure the species' long-term survival. It is these recovery plans that stall development activities, causing the traditional win-lose type of conflict. At times, species protection can result in serious economic impacts at the local and regional level through (a) delays in the permitting and the ESA petition process, (b) alterations to development

plans to accommodate endangered species protection, and (c) in the most extreme cases, job loss due to development restrictions. It is this last category that is most visible (e.g., the snail darter and the Tellico dam or the spotted owl and Pacific Northwest logging) and provides evidence to support the intractable positions that can pervade environmental debates today.

Yet, these intractable positions often are based on misperceptions and mis-specified arguments. What is initially perceived as win-lose offers opportunities for mixed-motive solutions. For example, Ben Cone, a forester in North Carolina, shifted from a 60-year tradition of sustainable forest management to clear-cutting when he feared he would find the endangered red-cockade woodpecker on his property (Baden, 1995). Anticipating the loss of his forest assets, he chose to liquidate them. By doing so, he destroyed the important ecosystem on which the threatened species survived and the ESA's interests were meant to protect. He also destroyed the base of his income, ending his annual tree harvesting program and truncating his sustainable source of economic profits.

Clearly, this is not the type of solution intended by the ESA. But this kind of image captures national attention and comes to symbolize ESA outcomes. In reality, it was not the act's implementation that caused Cone's actions but, rather, his misperceptions that precipitated a hasty reaction. Only after the story became a touchstone for ESA critics was it revealed that endangered species considerations influenced only 15% of Cone's land. He was free to continue thinning trees on the remaining land. Furthermore, the Fish and Wildlife Service repeatedly offered Cone habitat conservation proposals, insulating him from future ESA responsibilities, but he refused to cooperate, fearing further economic loss. Cone's fear of the complete devaluation of his assets led him toward a radical protective strategy. His firm belief in the win-lose nature of endangered species protection guided his actions.

One way to change such beliefs and perspectives so as to increase the likelihood of more Pareto-efficient agreements is to provide landowners with a voice in negotiating a compliance option, thereby integrating the objectives of species protection and of economic development. Toward this end, the ESA allows the development of habitat conservation plans (HCPs). Generally more feasible for large landowners, HCPs provide private landowners with a permit to "incidentally take" listed species in the course of development activities, provided that the landowner follows certain steps to provide for conservation of that species. HCPs create the opportunity to break the win-lose mentality by creatively developing plans that serve the interests of the endangered species and the proposed development. Many creative private landowners have now used these plans to work with other stakeholders to identify optimal solutions. But as long as the fixed-pie mindset persists, such solutions will be difficult to find. HCPs can become a useful dispute resolution tool to break this impasse.

Habitat conservation planning under Section 10a of the ESA is also a mechanism for inducing face-to-face negotiation between affected interests at the local and regional levels. HCPs have the potential to provide an opportunity for public

and private parties to interact and devise plans that are sensitive to local economies and protect endangered species (Beatley, 1994). By 1995, there were 150 approved HCPs and more than 200 in development (U.S. Fish and Wildlife Service, 1995). HCPs do not eliminate conflict, but they do increase the chances that the resulting outcome will bypass the traditionally win-lose perspective and satisfy the mixed-motive interests of the parties involved.

A MIXED-MOTIVE PERSPECTIVE IN OTHER SETTINGS

Allowing flexibility and creativity in satisfying economic and environmental interests simultaneously is the key to approaching the efficient frontier of environmental protection. Such creativity is not restricted to such clearly polarized issues as endangered species protection. Consider the expenditures that oil companies make on environmental protection. For example, Texaco plans to invest \$1.5 billion per year over a 5-year period for environmental compliance (Walley & Whitehead, 1994). Overall, U.S. industry spends nearly \$150 billion, or 2%, of gross domestic product on environmental regulatory programs (Portney, 1998). Clearly, environmental costs represent an economic drain and appear to represent a clear win-lose trade-off. But, is the issue so stark? Do all such environmental expenditures present no economic benefit? The Unocal Corporation developed an innovative way to reduce its costs for complying with the hydrocarbon and nitrogen oxide standards in the Los Angeles basin. By collaborating rather than competing with the state of California and the general public, Unocal was able to press toward a Pareto-efficient solution. Rather than following prescribed standards for reducing facility emissions at their Los Angeles refinery, the company achieved mandated emissions reductions at a reduced cost through a creative program initiated in 1990 for scrapping older, higher polluting vehicles. The company removed nearly 13 million pounds of pollution per year from the air of the Los Angeles basin by buying pre-1971 cars at \$600 a piece and scrapping them. By measuring the tailpipe emissions of each vehicle and extrapolating the amount of miles the vehicle would have been driven, the company realized a level of emissions reductions that would have cost 10 times as much and taken 10 times as long had they made the reductions at the company's Los Angeles refinery (Stegemeier, 1995). Although this example exhibits components of a win-win outcome, it also possesses a distributive element as well. On an absolute basis, the company was still required to expend resources to minimize pollution that it may have preferred to spend on other objectives. The mixed-motive outcome is predicated on a baseline distributive element that compliance costs will be necessary and on the integrative element that the company was free to creatively decide on how to allocate them.

The Texaco and Unocal stories are not uncommon in the economics versus the environment debate. Initiatives by petrochemical giants, such as Dow, DuPont, and 3M, often are cited as examples of win-win outcomes (Porter & van der Linde, 1995a, 1995b). Yet in each case, there exists a distributive or win-lose

element. That is, even after a mutually beneficial trade is created, environmentalists will always have a preferred outcome in mind that would further sacrifice economics for the environment, and development interests will have a preferred outcome in mind that would further sacrifice the environment for the economy. Nevertheless, we prefer to have them conduct this battle along the efficient frontier.

Consider Amoco's Yorktown project in 1990. Amoco entered into a partnership with the EPA to study pollution reduction possibilities at its refinery in Yorktown, Virginia. The results of the project found that Amoco could achieve the same level of emission reductions as required by the Clean Air Act Amendments of 1990 (CAAA), but at only one quarter of the cost (\$10 million versus \$40 million), if they were allowed greater regulatory flexibility to choose where the money should be spent (Solomon, 1993). This end result called attention to elements of both distributive, the need to comply with the standards of the CAAA, and integrative bargaining, the opportunities for achieving greater economic efficiency in achieving those standards through flexible rule-making. By blending both elements, the outcome could allow concurrent gains for both environmental and economic interests. Amoco's environmental vice president argues, "If you give this company a mark on the wall and tell them to go for it, I have no doubt as to their capability to achieve it" (Hoffman, 1997, p. 189). A former refinery manager agrees:

When we push for more flexible options, I'm taking a lot on faith. I have to believe that we have engineers who know our processes a lot better than some 25-year-old [EPA] engineer in Cincinnati or at Research Triangle Park. (Hoffman, 1997, p. 189)

The results shown by these examples could only become visible through a mixed-motive perspective of the economics versus the environment debate. In each case, the pursuit of more efficient solutions leads the interested parties away from a distinctly win-lose or win-win scenario. By entering into an integrative negotiation, solutions could be found that expanded the realm of possible outcomes. The manager stands to gain by approaching environmental issues with an eye toward their inherently integrative and distributive aspects. Ultimately, this mixed-motive perspective can lead to rational searches for optimal outcomes that maximize both environmental and economic gains to an extent that is practicable. But our next question then is, How do we shift our perspectives to make these outcomes more visible and easy to identify?

STRATEGIES FOR FINDING OPTIMAL SOLUTIONS IN A MIXED-MOTIVE WORLD

We now address strategies for identifying and implementing effective solutions in a mixed-motive context through the three stages of dispute resolution,

The Prenegotiation Phase

Determining the Parties to the Conflict

Bringing the Parties to the Table

- Pre-settlement settlement
- Instill the belief that settlement is possible
- Single negotiated text
- Increase costs of settlement delay

The Negotiation Phase

- Obtain added resources
- Trade issues
- Provide non-specific compensation
- Cut costs
- Create bridging solutions

The Postnegotiation Phase

- Post-settlement settlement

Figure 4: Strategies for Identifying and Implementing Solutions in a Mixed-Motive Context

shown in Figure 4: prenegotiation phase, negotiation phase, and postnegotiation phase. Traditional prescriptive treatments of negotiation focus primarily on Phase 2, with specific suggestions as to how to optimally integrate parties' interests (e.g., Pruitt & Rubin, 1985), and a handful of articles have considered the postsettlement phase (Bazerman, Russ, & Yakura, 1987; Raiffa, 1985). However, in environmental conflicts, perhaps the biggest challenges arise in Phase 1, around determining the relevant parties to a conflict and bringing them to the table.

THE PRENEGOTIATION PHASE

Determining the parties to the conflict. A developer is proposing to build a commercial/housing complex in a location that affects a wetland. The land is government owned. A local citizens group from a nearby town opposes the construction, not for ecological reasons, but because they feel that their quality of life will deteriorate with the added traffic that construction will bring. Another

group, who lives in a different U.S. region, is also opposed. They do not stand to suffer immediate impact as the local citizens; rather, they are opposed for ecological reasons. They view themselves as the guardians of natural resources. Still another group, management at a local industry, is highly supportive of the construction for economic reasons: Development means economic growth and jobs. Last week, another party, Business-Persons for Green, came out in support of the project. It was suspected that the developers hired the group. It seems that everyday a new group, with idiosyncratic views and preferences, emerges on the scene. Is there a straightforward solution here? As is often the case, each party is backed by scientists and economists who offer different data and conclusions regarding the validity of environmental and economic concerns. The solution will have to be found through a negotiated settlement. But government officials are perplexed as more parties claim to have a stake in the project. The question is which parties have a legitimate right to be at the table? Conversely, are there parties who are not presently taking a seat who should be represented?

The complexity of adding and subtracting parties to and from the bargaining table is highlighted in our mixed-motive framework. Specifically, adding a third player to a two-party conflict (e.g., developer-environmentalist) can alter dramatically the likelihood of settlement as well as the nature of negotiated settlement. The classic win-lose bargaining approach, in which parties' interests are directly opposed, cannot readily address the multiparty negotiation case unless it is assumed that additional parties are merely clones of the key parties, thus preserving perfect opposition. In this sense, the inclusion of more than one party makes possible the presence of nonlinear opposition, or mixed-motives. Similarly, the win-win perspective cannot easily accommodate the inclusion of additional parties at the bargaining table, due to an increased set of interests that may contain distributive elements.

In traditional prescriptive approaches, there is hardly any question of who should be at the table. Economic stakeholding is the key determinant. For example, classic analyses of coalition formation illustrate how economic interests can exclude or include parties (Murnighan, 1991). However, the wetland housing example points to two different types of stakeholders relevant in environmental disputes: (a) those who have real conflicting interests and (b) those who have ideological differences. Campbell (1969) drew a distinction between realistic group conflict (struggles over scarce resources) and ideological or symbolic conflict (struggles over values that one does not experience consequences). The economic approach stands in sharp contrast to the resolution of social issues, such as the environment, because everyone can be a stakeholder based on ideological interests. The number and mix of parties to the negotiation has serious implications for the likelihood and quality of the negotiated settlement. For example, assuming that parties to a conflict will use conflict-reducing methods, such as voting, majority rule, and agendas (Bazerman, Mannix, & Thompson, 1988), the addition of even one more party to an already complex negotiation can seriously affect the likelihood and quality of settlement. Furthermore,

parties may want to "load the table" with pseudoplayers so as to gain advantage, although this desire has to be weighed against the fact that coalition members must share or divide resources. Optimal coalition size is one that is just large enough to win (Murnighan, 1991).

In determining which parties should be at the bargaining table, there are three central issues: (a) which parties have a material stake in the outcome, (b) which parties have voting or decision rights, and (c) which parties should have voice (e.g., their views should be presented and heard). Our view is that the negotiation should be inclusive of parties in terms of allowing voice or expression (Tyler & Lind, 1992), but err on the side of exclusion when determining voting or decision privileges. Voting and decision privileges should be reserved for parties that have a demonstrable stake in the outcome. In its efforts to commence oil production in the environmentally sensitive Orient region of the Ecuadorian Amazon, Conoco decided not to proceed without full endorsement from all interested parties. Ultimately, radical elements of the environmental movement refused to agree to the initiative, and Conoco withdrew. Regardless of the possibilities for a Pareto-efficient solution, a mixed-motive solution was impossible due to the veto power granted to all parties. In contrast, the EPA has embarked on a program to include a variety of diverse stakeholders in its rule-making procedures. Under the "cluster-rule" format, the EPA has begun developing integrated regulations through an open process involving meetings with environmental groups, industry representatives, and other interested parties. By bringing these interested parties to the table early in the process, the agency believes the approach will provide greater protection of human health and the environment, reduce compliance costs by allowing industry to develop more effective compliance strategies, and reduce opposition to regulations once offered for public comment. However, these parties will not be given veto power.

Bringing the parties to the table. Once it has been established who the parties to the negotiation are, the next question is how to bring them to the table and begin the process of settlement. As one experienced negotiator noted, "In many cases, persuading parties in a conflict to commit to a negotiated settlement is even more complicated, time-consuming, and difficult than reaching agreement once negotiations have begun" (Saunders, 1985, p. 249). If done properly, the prenegotiation phase can increase commitment to reaching a negotiated settlement, stimulate a problem-solving orientation, and cause the parties to more closely rank the importance of issues (Druckman, 1968). This sounds straightforward enough, but sacredness issues often complicate the prenegotiation dynamics surrounding environmental disputes.

If one party considers a particular issue sacred, it may be unwilling to engage in meaningful dialogue for fear of "selling out." This apprehension will be particularly great when there is an outside constituency applying pressure on the negotiators. How then can individuals overcome pseudosacred barriers (Thompson & Gonzalez, 1997) to mixed-motive negotiation of environmental

issues? Can parties be encouraged to participate in a productive prenegotiation phase, ultimately setting the stage for a negotiated settlement? The use of presettlement settlement (what we call PreSS) offers a potential solution (Raiffa, 1985). PreSS is a form of prenegotiation that results in the parties reaching a preliminary agreement on some baseline(s) for distributing resources (Gillespie & Bazerman, 1998). For example, suppose there are strong political pressures to develop 1,000 acres of woodland, but environmental groups are opposed. During a prenegotiation phase, as a precondition for beginning negotiations, developers could guarantee environmentalists that at least 300 acres will be reserved for a wildlife habitat. With such a guarantee, developers would be assured that some sort of development program could proceed. By offering concessions to both sides and by exposing multiple interests, this process avoids the trap of creating a distributive negotiation at the outset by setting a limit for only one party on only one issue.

Why would the two parties agree to a PreSS? For developers, the PreSS would be advantageous in bringing environmentalists to the negotiating table and undercutting claims of sacredness. If developers rejected the PreSS, the impasse could last for months or years, thereby harming existing investment arrangements. For environmentalists, the PreSS would provide a firm baseline for the subsequent negotiations: No matter what, no more than 700 acres would be developed. In response to complaints from environmental constituencies about entering into negotiations, their representatives could point to the guarantees that already have been secured with the PreSS. If environmentalists rejected the PreSS, a prodevelopment political impetus could be generated that results in development of all 1,000 acres. Using a prenegotiation phase to reach a PreSS reduces the risk faced by both sides.

The fear of a slippery slope also makes it difficult to bring parties to the negotiating table (Thompson & Gonzalez, 1997). One (or both) of the sides fears that if it gives ground on one issue, it will eventually give ground on all issues. "If a person or party could receive assurance that a concession in one area would not start an avalanche of capitulation, it might be possible to develop more creative and mutually beneficial negotiated agreements" (Thompson & Gonzalez, 1997, p. 34). PreSS offers a mechanism for providing that assurance. By creating a kind of "sticky slope" (Thompson & Gonzalez, 1997), PreSS offers one technique for overcoming pseudosacred barriers to mixed-motive negotiation of environmental issues.

Another problem in bringing parties to the table lies in their desire for a negotiated settlement. In traditional prescriptive treatments of negotiation, such as labor and management disputes, both parties are motivated to settle (e.g., both parties are hurt by a long strike). In contrast, in environmental disputes, one party may seek to maintain the status quo (preserve a wetland), and therefore, it behooves this party to delay a negotiated settlement. In any given dispute, developers or environmentalists may have the advantage by stalling talks. However, we generally believe that avoidance of negotiation is a suboptimal method for

resolving mixed-motive conflicts in the long run, no matter whether the status quo benefits environmentalists or developers. Standoffs are a breeding ground for distrust and represent an unnecessary waste of resources. More important, they obscure and inhibit the possibilities for developing integrative agreements.

Although the PreSS is one tactic for overcoming the obstacles to getting parties to the table, we suggest the following additional three mechanisms. According to Ross (1995), negotiators are more likely to engage in dispute resolution and reach a settlement if they believe the conflict can be resolved. Whereas this may sound like a simple tautology, consider Ross's experiment. In the context of a real negotiation, participants were presented with a particularly vexing negotiation situation, in which only one person to a two-party conflict could acquire desired resources (Ross, 1995). Half of the dyads were told that "all other parties had been able to come to a mutually agreeable settlement"; the other half were not told this. The objective facts in the two conflict situations were otherwise identical. However, those who believed agreement was feasible were more likely to reach settlement. Thus, one mechanism for getting parties to the table is to instill the belief that settlement is possible. To do this, one can point to relevant precedents. Rationally, when negotiators realize that there is a positive bargaining zone given historical experience, settlement is not only possible but rational.

A second mechanism for getting parties to the table is to use the single-negotiating text method (Fisher & Ury, 1981; Raiffa, 1982). Although this method occurs within the context of negotiations, its political attractiveness makes it effective in bringing parties to the negotiating table. In the single negotiating text method, a neutral third party drafts a proposal and then solicits comments and criticisms from the negotiating parties. This neutral could be a mutually agreed upon, nonparticipant mediator or an actor commonly perceived as sharing an unbiased and fair blend of each party's interests. The Nature Conservancy often is cited by business interests as an objective and reasonable environmental group for partnerships (Green Business Letter, 1997). At this early stage, the parties are expected to refrain from outright acceptance or rejection of the proposal. After receiving feedback, the third party goes to work on finding creative ways to incorporate the suggestions of the negotiating parties. Eventually, a revised, and presumably improved, second draft is presented to the parties. Depending on the situation, the feedback and revision process may take several iterations, but when the third party has made all the improvements it considers feasible, the negotiating parties will be asked to make a discrete acceptance or rejection decision on the latest proposal. The single negotiating text method has the advantage of not forcing parties to make concessions. Concessionary behavior can be viewed as selling out by constituents and as a sign of weakness by opponents. With a single negotiating text, the neutral is responsible for proposing concessions, which the parties can then either accept or reject. This can make the negotiations more politically palatable, thus helping to bring parties to the table. And to the extent that the third party can simultaneously propose mutual concessions

from the parties, the chance of their being accepted increases substantially. The single-text method also can be productive because it makes the neutral party responsible for thinking integratively and seeking out Pareto improvements.

A third mechanism for getting parties to the table is to increase the costs of the settlement delay or the value of an early settlement. In short, the payoffs are changed. The government is the actor most capable of altering the payoff structure each party faces, but it faces limitations and complications in this regard. For example, the government could increase the fines levied against companies who are not in compliance with environmental regulations, but this is not always easy to do politically. Also, there is no direct way the government can increase the costs imposed on environmental groups for settlement delay. Increasing the value of early settlement often requires additional revenues that are not readily available. Despite these limitations, alteration of the payoff structure offers a potentially powerful method for bringing parties to the table.

THE NEGOTIATION PHASE

Once the parties are in agreement as to who has a right to be at the table, how can they begin a productive exchange? There are several techniques for achieving integrative agreements: obtaining added resources, trading issues, providing nonspecific compensation, cost cutting, and bridging (Pruitt, 1983). The technique of obtaining added resources is particularly useful when the parties do not have mutually exclusive interests and the dispute is centered on fungible resources. The government is probably the actor most likely to supply the needed resources. If developers and environmentalists are impassioned over the issue of implementation costs, it may be socially beneficial for the government to resolve the dispute by subsidizing the implementation or by reducing the downside. For example, to gain rancher's endorsement of a plan to reintroduce endangered wolves to the Yellowstone National Park, a special fund was created to compensate for any lost livestock due to wolf predation (Hampton, 1997). By reducing the downside, a compromise was reached.

With the technique of trading interests, each party makes concessions on interests of low priority in exchange for receiving concessions on interests of high priority; the opposing party does likewise. For example, a California developer had proposed building a retail mall on land containing wetland habitat for the Sebastopol meadowfoam, a protected plant. After consultation with the Army Corps of Engineers and the U.S. Fish and Wildlife Service, the developer agreed to establish a new Sebastopol meadowfoam colony on an off-site area (U.S. General Accounting Office, 1994). This allowed the developer to win on the interest it considered highest priority: gaining the right to develop the specific piece of real estate in question. Also, this agreement allowed environmentalists to win on the interest they valued most: maintaining a thriving colony of the Sebastopol meadowfoam.

With the technique of providing nonspecific compensation, one party gets what it seeks while the other party is compensated on an unrelated issue. The previous example involving the Sebastopol meadowfoam also contained an element of nonspecific compensation because the developer further agreed to acquire and protect additional habitat containing an existing population of species (U.S. General Accounting Office, 1994). Thus, in exchange for authorization to build the mall, the developer provided environmentalists with a form of compensation not specifically related to the Sebastopol meadowfoam.

With the technique of cost cutting, one party gets what it seeks, whereas the implementation costs for the other party are reduced or eliminated. For example, the 3M Corporation, through its Pollution Prevention Pays program, has reduced pollution and energy use by 50% since 1975, producing a savings conservatively estimated at about \$530 million (Ember, 1991). E. I. DuPont de Nemours announced a \$500 million capital improvement plan at three North and South Carolina chemical plants that would reduce air emissions by 60% while increasing production by 20% (Engineering News Record, 1991). These programs allowed 3M and DuPont to cut their compliance costs, while environmental groups got the pollution reduction they sought.

With the technique of bridging, neither party maintains its original position; instead, the parties search for a new and creative alternative that may have been previously hidden. For example, River Plaza, an outlet mall along the banks of the Kansas River in Lawrence, Kansas, originally was slated for construction in a bald eagle nesting area. Through a negotiated settlement, the city established permanently protected easement areas on both sides of the river to protect some of the best remaining habitat, planted new trees to replace those being lost, and enforced a no-entry zone along the outside walkway of the mall during the period when eagles are most present. Subsequently, architects built one-way viewing windows facing the river that attracted customers to the mall (Sierra Club Legal Defense Fund, 1995). In this case, neither side received unilateral control over the riverbanks, but the creative bridging solution allowed them to achieve their essential objectives.

Ultimately, it is the articulation of interests in an open and creative atmosphere that is essential to discovering optimal solutions to the economics versus the environment debate. Wade-Benzoni, Tenbrunsel, and Bazerman (1996) found evidence suggesting that communication in social dilemmas may enhance cooperation by reducing the amount of egocentrism in the interpretations of fairness. Discussion allows parties to share their interests and beliefs, including perceptions of fairness. Once individuals learn what others believe to be fair, they may adjust their perceptions of fairness to a less biased position. Hearing other parties articulate a logic for distribution patterns that is different than one's own egocentrically determined patterns may lead parties to reevaluate their own assessment of what would be fair. This will reduce egocentric interpretations of fairness and will increase the probability that parties will come to a consensus on a solution.

THE POSTNEGOTIATION PHASE

Once a negotiated settlement is reached, does it necessarily lie on the Pareto-efficient frontier? Not always. Raiffa (1985) argues that "There may be another carefully crafted settlement that both (parties) might prefer to the settlement they actually achieved" (p. 9). In devising the concept of the postsettlement settlement (PSS), Raiffa offers a promising approach for improving previously agreed-upon solutions. The basic idea is that after negotiators have reached a mutually acceptable agreement, they can later negotiate an agreement that is better for both sides. However, as long as the desire is to win rather than to improve the existing agreement, less information is shared than necessary for finding a more optimal settlement.

Use of PSS is particularly well suited for application to environmental negotiation. First, these disputes tend to be very contentious. The economic and political stakes are very high, and few issues have greater symbolic importance than environmental protection. These considerations cause each side to invest substantial resources resisting even minor concessions. The result is agreements that are marked more by distributive compromises than by integrative problem solving. PSS would permit subsequent improvements in compromising environmental measures that neither side originally found very satisfactory. Neutral parties can offer to help develop an alternative settlement that would replace the original only if all parties agree to the change. Thus, after the partisans are done trying to kill each other, those with neutral interests can search for a wiser resolution that yields Pareto improvements.

Second, PSS is particularly well suited for application to environmental negotiation because such disputes tend to involve a great deal of scientific uncertainty. Engineers and scientists often have a difficult time accurately forecasting what effects will be caused by adopting or failing to adopt particular environmental measures. This increases the difficulty of reaching integrative agreements, particularly when one side believes the other is hiding information about likely effects. PSS would allow parties to negotiate Pareto improvements to their original agreement after there are increases in the body of scientific understanding about a particular natural phenomenon or about clean-up technologies.

CONCLUSION

The conflict between economics and the environment is neither inherently win-win nor win-lose. Elements of both exist simultaneously and therefore render conflict a mixed-motive enterprise. The objective of any environmental expenditure should be to maximize the environmental gain while minimizing the economic cost. Any way in which the ratio of these factors can be increased represents a step toward a Pareto-efficient solution to environmental problems. Efficient solutions to environmental problems can only be found through a

balanced perspective that considers both the integrative and distributive aspects inherent in all such negotiations. The win-lose orientation creates barriers to Pareto-efficient trades that exist. The win-win orientation fails to recognize that conflicts are often unavoidable in resolving environmental issues. Instead, environmental and economic interests would best serve their objectives through a joint search for integrative solutions that maximize the realm of opportunities for all parties before entering into the distributive aspects of the dispute. At its core, the debate over the extent to which economics and environment overlap is a mixed-motive situation in which the balancing of environmental and economic interests is neither purely cooperative nor purely competitive. This balanced frame of reference allows the best perspective for discovering economically efficient solutions to environmental problems.

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