Environmental Dispute Resolution

Lawrence S. Bacow
Massachusetts Institute of Technology
Cambridge, Massachusetts

AND

Michael Wheeler
New England School of Law
Boston, Massachusetts
and Massachusetts Institute of Technology
Cambridge, Massachusetts

Plenum Press • New York and London

6

Two-Party versus Multiparty Negotiation

Introduction

The environmental dispute in the Brown Paper Company Case (described in chapter 4) essentially involved two parties—the EPA and the paper company. By contrast, there were many negotiators (both groups and individuals) in the Grayrocks and South Carolina cases (chapter 3). Environmental problems are often of the multiparty variety.

The number of participants in a negotiation can markedly affect its character. One obvious problem is coordination. The more people there are around the bargaining table, the harder it likely will be to coordinate the negotiation. If each party is to have his or her say, the proceedings will be protracted. The coordination problem is tied to the question of representation. Who participates in the negotiation? Who is authorized to speak for affected constituencies? There may be factions within an organization that have different goals.

The fact that many participants are involved in a dispute necessarily expands the choices open to each negotiator. In a simple two-party case, a party must ultimately decide whether to settle or accept the consequences of nonagreement. By contrast, in multiparty cases, one party may have to weigh the attractiveness of agreement with all the others against possible deals with just a few. As a result, strategies are much more intricate. In some cases, coalitions may form, disband, or realign.

Though multiparty bargaining is more complex, it may also offer richer possibilities for settlement. Having a number of negotiators, each with a particular set of priorities, may enrich opportunities for efficient trades. When groups or individuals have to share costs or benefits, there can be bitter fights over the distribution.

This chapter explores the theoretical and practical implications of multipar-

ty environmental disputes. Two short case studies introduce issues that are further explored by reflecting on cases presented in earlier chapters.

Case Study: The West Side Highway

This case was obtained from the article "Mediation: An Instrument of Citizen Involvement," by Willis B. Goldbeck, president of Public Policy Communications, Washington, D.C. It appeared in 30 *The Arbitration Journal* 241–252, 1975. Information was also obtained from "Mediating Environmental Disputes," by Laura M. Lake, 262 *Ekistics* 164–170, Sept. 1977.

New York City's West Side Highway runs along the Hudson River from 72nd Street down to the tip of Manhattan. When the elevated roadway was built in the late 1920s it represented the most advanced notions of design. By the 1960s, however, it was clear to transportation planners and automobile drivers alike that it had become obsolete. Lanes that were set out for smaller, slower cars could not accommodate the press of modern traffic. The structure itself was disintegrating.

In 1971, the Urban Development Corporation, a state agency with extensive independent authority, released a study of waterfront development in which it concluded that improvement and alteration of the West Side Highway was central to the solution of other problems. In response, Mayor John V. Lindsay formed the West Side Highway Project to develop highway alternatives. The effort was funded by city, state, and federal appropriations, and it won the cooperation of then-Governor Nelson Rockefeller. A steering committee representing 16 city agencies and all the planning boards in affected communities was created to monitor the project's work and to reach a consensus on the best alternative.

The West Side issue came to a head in late 1973 when a truck fell through the highway. Major sections of the road had to be closed, and traffic was routed to adjoining streets and avenues. Traffic along 10th Avenue increased 360%. With the traffic came noise, congestion, increased local air pollution, and cries of protest from area residents.

By the next spring, the project published its draft environmental impact statement describing five possible solutions to the highway problem: (1) reconstruct the road along its present design; (2) maintain the road basically as is, but with some safety modifications; (3) build an "arterial" road along the riverfront; (4) build an "inboard" limited access interstate using 90% federal funds; or (5) build an "outboard" interstate involving massive landfill along the river, again using 90% federal funds.

Of the proposals, only the fifth met the project's own previously developed

criteria. Yet, because of the plan's magnitude and its relation to other controversial projects, it sparked significant opposition. Public hearings failed to develop clear support for any of the alternatives.

With much of the highway shut down and other projects hanging in the balance, the Regional Plan Association initiated mediation in an attempt to break the impasse. The American Arbitration Association, an organization with a long history in settling commercial and other private disputes, provided a mediator, its past president Donald Straus. The Regional Plan Association took responsibility for selecting the participants. Groups that had already been actively involved in the West Side Highway controversy were the first to be included. The RPA then classified these groups according to their constituencies—business, environmental, ethnic, labor, civic, and professional. When a category was underrepresented, the RPA tried to enlist organizations that could, in spite of their previous noninvolvement, advocate the interests of important affected groups.

According to Willis B. Goldbeck, this selection process, though well intended, had gaps:

> There was no labor participation even though the Building and Construction Trades Council of Greater New York was among the first to be invited. The Puerto Rican Community Development Corporation was another invitee which did not participate. No other specific minority organizations were invited. A third gap, identified by those who did participate, was the local special issue community groups. (Goldbeck, 30 *Arb. J.* 241, 243–249)

Five full-day mediation sessions were held during the fall of 1974. The RPA prepared a tentative agenda, and all participants agreed to the objective of the process, though with the caveat that participation did not bind any group to accept the conclusions. According to Laura Lake, thirty-eight representatives of twenty-three organizations sat around the boardroom table of the Rockefeller Foundation at the first session. All participants were allowed to state their positions. The West Side Highway Project staff attended all meetings to provide technical information. Transportation and planning consultants, supported by city and federal grants, assisted participating community planning boards.

Laura Lake observes that the participants initially shared a common interest. "Both the opponents and proponents of the highway realized that continued delay was against their interest, for local detour traffic would continue to be a serious nuisance, and construction costs would continue to rise with inflation" (Lake, 262 *Ekistics*, 164, 168, 1977). (Later, however, some environmentalists appeared to be stalling, waiting for the election of Governor Hugh Carey, who they thought—mistakeningly—would oppose any new highway.)

Mediation also exposed sharp differences in values and opinion among the various groups. In some instances, the differences were over priorities: which

should be preferred—enhancement of environmental quality or stimulation of economic growth? There were also markedly different opinions over the impact of the proposed alternatives. According to Goldbeck:

> Debate was very heavy on the degree to which the various alternatives would increase or lessen traffic on existing streets. This issue was a perfect study of the conflict between technical information and community emotionalism. On one hand, statistics were apparently made to prove that the highway could both increase and decrease local traffic! On the other hand, communities which opposed highway construction evidenced no willingness to change their position no matter what the numbers showed. (Goldbeck, 30 *Arb. J.* 241, 245, 1975)

Positions on other policy issues often depended on the technical assumptions of the parties. New York City, for example, was under pressure to meet federal air quality standards, but plans to comply rested on expectations about the impact of highway alternatives on traffic patterns, and these expectations were subject to debate. The goal of compliance was itself controversial. One participant stated that "clean air doesn't get us anything."

The polarizing issue was whether to do anything more than to repair the West Side Highway. The participants split into two antagonistic factions: one in favor of new building, the other opposed. Goldbeck has stated that the "intransigency" of the groups "forced the mediator to 'lead' the coalition to agree to discuss alternatives of what to build rather than continue what fast became a repetitious and futile debate" (*Id.*, p. 244).

Complex political and economic issues made the mediation all the more difficult. As Goldbeck observes:

> The city had no money to do anything with the highway. The state feared the highway would consume its entire transportation budget, which was both true and politically unacceptable. Federal funds were available on a 90–10 basis if the road became an interstate and 70–30 basis if designated as a primary or secondary urban road. (*Ibid*)

Moreover, under a recent federal law, half a billion dollars in highway funds could be designated for mass transit; the city wanted to use any new mass transit funds for the Second Avenue subway rather than for anything on the West Side.

The issues proved to be too formidable to be solved, at least in this setting. In spite of good intentions and significant technical and financial support, the mediation effort failed to produce agreement. Only years later was the deadlock temporarily broken, and then through conventional political decision making, not broad-based negotiation. In late 1981, President Ronald Reagan presented New York City Mayor Edward Koch with a "check" for half a billion dollars, representing the first installment of federal funds for the massive Westway that is to replace the old highway. Soon after work began, however, opponents revived their lawsuits in hopes of killing the project.

West Side Highway Questions

1. The history of the West Side case, even when summarized, raises a host of negotiating questions. The particular focus of this chapter, however, is on multiparty bargaining. The dispute affected countless parties—Manhattan residents, commuters from outside the city, businesses, unions, government agencies, and so on. Even if there is some sense that a negotiated settlement is desirable, how is it possible to get everyone to the bargaining table? The Regional Plan Association tried to solve this problem by sponsoring mediation among the various organizations that already had been involved in the dispute; it then tried to invite other groups that were underrepresented. What were the weaknesses of this procedure? Can you suggest alternatives?

2. What determines the bargaining power of the various groups and individuals at such a session? Does power have a bearing on who should be invited? For that matter, does it explain why some invitees might decline, as indeed some did?

3. Goldbeck notes that "mediation is an expensive process, and no element of the process represents a greater investment than the time spent by the participants" (*Id.*, p. 248). Not all the parties feel the same constraints. For example, it was no hardship for the transportation director of the Chamber of Commerce to take part; doing so was simply an aspect of his job. But what about people whose employment has nothing to do with the issue or who work for public interest organizations with limited assets? Is it possible for negotiators to operate on equal footing at the bargaining table if there are such disparities beyond it?

4. The Regional Plan Association prepared an agenda for the first session. With 38 participants, the need for some sort of structure seems clear, but an agenda can be a powerful tool for guiding discussion to a particular outcome. Can you imagine any efficient way in which the group could have contributed to drafting the agenda?

5. Access to technical information can raise similar issues: parties who are unable to hire scientific consultants may believe they are in a weaker position than those who can; hence, they may decline to negotiate. Can you think of specific ways in which data gathering and analysis in the West Side case could have been conducted impartially? Given the complexity of traffic impact studies and air quality science, should the technical consultants be mere advisers, or should they be regarded as full participants as well?

6. At the outset, the parties agreed that participation in the mediation did not commit anyone to a consensual resolution. Is this always a wise policy? Why do you suspect it was adopted here?

7. When the participants split into two camps, one in favor of new building, one opposed, the mediator nonetheless *led* them, to use Goldbeck's term, to discuss alternative projects that might be built. Why might a mediator foreclose discussion on an option (not building) preferred by some of the negotiators? What are the risks of this move?

Concluding Note

Additional questions on the West Side case are posed on p. 113 of this chapter. The description of the case, though brief, raises important issues that are examined in other parts of the book. We shall see examples of successful mediation, for example, in chapters 8 and 9.

As already noted, the case also raises the matter of data disputes, the subject of the preceeding chapter. Goldbeck expresses apparent impatience with what he calls "community emotionalism," specific opposition to highway construction in the face of statistical projections that showed that neighborhood traffic actually would be reduced. Is such opposition really irrational, however, when Goldbeck himself acknowledges that "statistics were apparently made to prove that the highway could both increase and decrease local traffic"?

Laura Lake makes the following assessment of the West Side mediation effort:

> While this experiment did not resolve the West Side Highway dispute, it did reveal the potential for compromise within the group, and illustrated how important the ground rules for organizing intervention can be to a positive or negative outcome. Several reasons for the negative outcome of this effort can be identified: participants commented in private that they could not enforce a settlement; they were sure that they would wind up in court and did not want to prejudice judicial proceedings. They also felt that the local community groups were not adequately represented in the mediation group. With hindsight, it is possible to speculate that under different procedural, organizational, and stylistic conditions (which were not available to mediator Straus), a consensus might have been reached on the knowledge generated during the sessions. This would have required a great deal of mutual trust." (Lukes, 262 *Ekistics* 164, 170, 1977)

NEGOTIATION PARTICIPANTS: REPRESENTATION

The following material on multiparty bargaining is from a doctoral thesis by Timothy John Sullivan, *Negotiation-Based Review Processes for Facility Siting*, (Kennedy School of Government, Harvard University, 1979). Although his focus is on the siting of controversial facilities, such as hazardous waste treatment

plants and nuclear power stations, many of Sullivan's observations apply with equal force to environmental disputes generally.

> A development conflict often requires multilateral negotiations. Each participating group has its own set of interests which it seeks to promote. Thus, reducing the number of negotiators becomes much more difficult than in a bilateral negotiation. However, development conflicts will generally see project proponents negotiating with project opponents and regulatory officials setting bounds on developer actions. Although the opponents may include many groups with different interests, often there is only one and many, instead of among many. This situation has parallels in the labor field where one management team negotiates with many different unions. Nevertheless, it presents a complex bargaining problem.
>
> The involvement of governmental regulatory groups as parties in any environmental/developmental conflict usually adds another dimension to the negotiation. Negotiated settlements may require governmental approval, zoning variances, or other special considerations which neither project opponents or proponents can deliver. When regulatory groups have discretionary power, their active participation and support of negotiations can assist the bargainers to reach a settlement. [pp. 129–130]
>
> Those instituting a negotiation-based review process must decide who will participate in the negotiations. . . . The first class of participants includes those who have a formal position to affect the development controversy. Those formal participants will include representatives of licensing and regulatory bureaucracies, representatives of state and local governments, and the developer.
>
> The second class of participants in the negotiation will include individuals and groups affected by the development project but with no official status. This class may include community groups in the neighborhood of the site, regional groups concerned with impacts on the regional environment, and special interest groups whose interests are affected by the project.
>
> Finally, a mediator will participate in the negotiations. [Editors' note: mediation may be the exception, not the rule.] The mediator, unlike the other negotiating parties, does not represent a specific constituency or viewpoint. His goal is to facilitate the bargaining process, help each side to reach an agreement and see that standards of due process are met. . . .
>
> A viable negotiation-based review process must include those individuals who have power over the final development decision. These individuals include the developer who wishes to build the project, representatives of governmental agencies which must review the project, and local officials who may take action to expedite or retard a facility. Finally, at times the negotiators may wish to consult with an expert concerning either environmental, sociological, or economic aspects of the proposed project. [pp. 296–297]
>
> Negotiation may [also] provide a major opportunity for public participation in the review of the project. Projects may generate particular interest

among local community groups who share their neighborhood with a project, regional groups who may receive the benefits of a plant's services and bear the impacts of its operations, and interest groups who have a special concern over a particular technology, facility, or site. [p. 300]

Some groups, not geographically concentrated, may have a special interest in a proposed facility. These interest groups may oppose the project for a variety of reasons. The proposed project's location may affect a particular interest of a group. For example, the planned construction of an interstate highway through Franconia Notch in New Hampshire directly affected the Appalachian Mountain Club's interests in the preservation of the White Mountains and the preservation of the surroundings of its chief hiking center, which was located in the Notch. Other groups may oppose a project for more ideological reasons. Antinuclear groups may oppose nuclear power plants wherever they are planned because they oppose the deployment of this technology. . . . [p. 301]

For negotiations to take place, there must exist a system for recognizing groups as legitimate parties to bargaining and for determining who shall represent the bargaining groups. Choosing formal groups and accepting their representatives is a simple task. . . .

A problem arises over how to recognize non-formal groups and individuals as participants in the negotiations, and how to determine who legitimately represents these groups. Whenever the formal review limits the number of participants in negotiations, some process must determine which groups may negotiate and who shall officially represent them. Since unlimited participation may create cumbersome and unproductive negotiating sessions, our objective of efficiency suggests that we limit participation in some way. The process objective of fairness requires that the mechanism for limiting participation avoid arbitrary actions. The process objective of encouraging public participation requires a screening mechanism which does not impose heavy burdens on those who wish to participate. In the author's view, a qualifying petition offers a natural way of limiting participation and a simple way for groups to designate an individual to represent their interests. Although other methods may provide a practical solution to this problem, we examine only the petition process.

A. Limiting participation. Several considerations support attempts to limit the number of negotiation participants. If only a small number of individuals bargain, negotiation sessions may prove productive. Large numbers of bargainers may make the negotiation process unwieldy and difficult to manage. Negotiation sessions are unlikely to accomplish much when the number of bargainers is large. Additionally, in negotiations over environmental/developmental conflicts, many people will participate voluntarily. When the number of negotiators is large, the bargainers may feel that the groups will not miss their contributions, and that they have only a small effect on the final outcome.

In bargaining over development issues, many of the benefits of negotiation may arise only from an atmosphere of trust and understanding which

develops through personal contacts between the disputants. Trust will not likely develop in a large group. Further, if participants can easily join and withdraw from negotiations, a climate of trust is unlikely to develop. People cannot constantly adjust to new faces.

If individuals are free to participate, the negotiations may attract "meeting gadflies." Personal and social rewards are one of the reasons people volunteer time and effort to community causes. Unfortunately, these rewards which make voluntary actions less onerous, may attract some people who make a career of attending meetings and speaking in public. . . .

B. Recognizing groups by petition. The legislation authorizing a negotiation/referendum review process could require the circulation of a qualifying petition. Those groups who meet the required number of signatures should be automatically recognized as legitimate participants in the negotiation process. The number of signatures may be set to limit the number of participants.

Legislators will face a tradeoff between negotiation advantages gained through the consolidation of interests and the barrier to participation which a high qualifying minimum represents. A low qualifying standard will facilitate participation, but in the extreme, it may produce an unwieldy number of participants. A low standard will enable many groups to generate the needed number of qualifying signatures internally, thus reducing the need of groups to reach out to others. The number of signatures needed to qualify should thus increase with the population of the state or town.

A petition process possesses several major advantages which support its use to qualify negotiation participants. Circulating a petition is a political activity, and this accentuates the fact that the review of development projects is not simply a technical matter. . . .

Petitions need not cost much money to circulate. Petitions generate only printing, paper, and certification costs. The major burden a petition imposes is the burden of circulation. Gaining the required signatures requires that those advocating a position spend time and effort to persuade others to endorse their views, but this requires no direct financial outlay. This may open the project review process to concerned groups that lack financial resources. . . .

C. Choosing representatives of nonformal groups by petition. The determination of legitimate representatives of competing interests may pose severe problems for anyone attempting to mediate a developmental dispute. Determining representatives of groups without organization structures can create great difficulties. If a mediator chooses representatives from informal groups, then his choice may affect the balance of power within the group. This choice may create leaders where none existed, and create conflicts within the group. These decisions are best left to the individual groups for resolution.

The circulation of the qualifying petition in the name of a representative individual and perhaps one alternate may offer a simple way for

designating representatives. People, in signing a petition, could designate an individual to represent their group interest. The petition is an established way of consolidating support behind a candidate or issues, and current practice uses petitions to qualify candidates and issues for ballot consideration. [pp. 301–307]

Questions on Sullivan's Proposal

1. Sullivan's proposed use of petitions to certify informal groups contemplates a formal negotiation process that is under special legislation to foster facility siting. Can the proposal be extended to environmental disputes generally? In the West Side Highway case, would it have made any difference if neighborhood and environmental groups had been designated in this way, instead of by invitiation of the Regional Plan Association?

2. When petitions are used in other contexts, signatures may be rather casual acts: A person who signs a candidate's nomination papers is not bound to vote for her or him in the election. Is it not necessary, however, that signers to Sullivan's petitions agree to be bound by their representatives' actions? (If not, then one disgruntled person could seek to overturn a negotiated agreement by means of a lawsuit.) Yet, in the earlier stages of conflict, when information is contradictory and incomplete and the issues are not fully formed, is it fair or realistic to ask people to bind themselves to the actions and decisions of a representative who himself may be little known?

3. Even if it is possible to designate representatives through petition, what relative status should they have at the bargaining table? Specifically, should the representative of a small community group have a vote that counts as much as the delegate from an environmental group with tens of thousands of members? Is it relevant that most of those members live nowhere near the proposed project? Do we need to be concerned about votes at all?

Case Study: The Snoqualmie Dam Dispute

This case study is adapted from a portion of "Mediating Environmental Disputes" by Laura M. Lake, (262 *Ekistics* 164, September 1977) and from a doctoral dissertation by Timothy John Sullivan, Negotiation-Based Review Processes for Facility Siting, (Harvard Univeristy, 1979).

The Snoqualmie River Valley is located in the western part of Washington State, just 30 miles from Seattle. Before 1959 the river had overflowed peri-

odically, but without causing extreme damage. That year, however, a severe spring flood swept away crops and topsoil from lower valley farms and destroyed many homes and businesses in the town of North Bend. The country, backed by riverside residents, asked the United States Army Corps of Engineers to study the problem. The corps proposed building a dam. Environmentalists were opposed, fearing not just the loss of a free-flowing river, but possible suburban sprawl on the floodplain.

Before building a dam, the corps must by law obtain approval from the governor of the state in which it will be built. Washington's Governor Daniel Evans twice vetoed the proposed dam, in 1970 and 1973, but he acknowledged that there was a legitimate need for flood control. Gerald McCormick and Jane McCarthy of the University of Washington's Environmental Mediation Project had already had preliminary meetings with dam proponents and opponents. At McCormick and McCarthy's behest, Evans formally appointed them to mediate the dispute.

Working under a 6-week deadline imposed by the governor, the mediators identified 10 people who they felt had credibility with the conflicting groups and who represented a range of views on the project. These people did not represent their organizations; rather, they represented general constituencies. The mediation sessions helped the participants to overcome long-held stereotypes about one another. According to Laura Lake:

> These sessions began to educate and socialize the participants: the environmentalists learned that the farmers had no desire to sell their land to developers; the townspeople realized that continued development would ruin the quality of rural life they valued; and the environmentalists learned that even while they were resisting the dam, real estate development was occurring, despite flood hazards. (262 *Ekistics* 162, 167, 1977)

Timothy Sullivan notes:

> Dam proponents established that flooding caused them economic hardship by destroying their crops, and that continued flooding would not provide an acceptable solution. They made dam opponents believe that they would be held politically responsible for any damages from a future flood. They stressed that a flood would destroy the regional credibility of environmentalists and lead to the construction of a dam without any amenities or land-use restrictions.

The mediators satisfied the governor's 6-week deadline by reporting substantial progress: the participants had endorsed a general statement that acknowledged the need for some kind of flood protection and some form of land-use control. The governor gave the mediators two more months in which to come to final agreement. At one point, talks had to be suspended while the environmental groups caucussed to develop a unified position, but mediation was resumed in

time to reach a tentative agreement by the deadline. Final details were approved several months later.

The agreement provided for: (1) a dam on the north fork of the Snoqualmie instead of the middle fork; (2) a series of levies and set-backs along the middle fork; (3) land-use and zoning restrictions on the downstream farmland; and (4) other measures, including the creation of river basin planning council and the purchase of development rights and floodway easements.

Questions on Snoqualmie

1. As in the West Side case, the participants in the mediation were invited. Given the smaller scale of the dispute, might it have been more appropriate simply to open the mediation to all who wished to participate. If that proved too unwieldy, then could Sullivan's petition method be used? What bearing does the fact that the dispute had been stewing for more than a decade have on this selection issue?

2. Note that this was not an issue that divided everyone into two distinct groups, those favoring or those opposing the dam. Ten participants were needed, after all, to represent the range of views. How might coalitions have developed and changed in these circumstances? To consider this question, assume that representatives of the following constituencies were involved: farmers who were interested simply in protecting their operations, farmers who also were interested in enhancing the value of their land for possible future sale, residents who welcomed the prospect of future growth, area residents who wished to preserve the area's semirural qualities, environmentalists opposed to suburban sprawl, and canoeists and kayakers who wished to preserve open water. What alliances would you expect to be formed among such groups? What factors encourage or inhibit the formation of coalitions? Feel free to add to the suggested list of subgroups as you consider the problem.

Snoqualmie Epiloque

Timothy Sullivan (1979, 93–94) has written the following analysis of the Snoqualmie case.

> In this negotiation, several circumstances aided the mediators' efforts. The existing community infrastructure enabled the mediators to select people with sufficient influence and power to represent the conflicting groups. The commitment of Governor Evans to negotiation and his powers of office gave the bargaining efforts a special legitimacy. Governor Evans created interim deadlines to enforce progress.

Those fearing future flood damage were particularly successful in convincing the environmentalists that the citizens of Washington would hold them responsible for any flood damages. They argued that this would undermine the credibility of environmentalists throughout the state. This gave strong incentive to the environmentalists to negotiate.

Although the original conflict arose over the single issue of dam construction, the communication required in bargaining helped change the shape of the conflict. The negotiation changed from a yes/no dam issue into a search for environmentally acceptable flood control measures. Both dam proponents and opponents moved beyond their original misconceptions of the other side and dealt with each other's real needs and concerns.

The geography of the Snoqualmie River allowed the creation of an imaginative alternative which proved critical in reaching a settlement. The three-branch nature of the river proved critical in permitting dam opponents to maintain their early public stand against a Middle Fork dam yet still meet the farmers' needs. In the final compromise position, the North Fork dam will provide flood control to all farmers below the point where the three branches merge. Set-back levees along the Middle fork will provide a measure of flood protection to Middle valley residents yet still permit the Middle Fork to remain a free flowing river. These levees allowed dam opponents to retain their public stand against a Middle Fork dam while agreeing to a flood control project.

Although this solution will probably cost more than the original proposal, the Army Corps accepted it. This willingness to pay for a more expensive proposal permitted a widened set of alternatives, and changed the confljct from a binary decision to a question of design. This transformation provided an issue over which each disputant could make concessions and realize gains.

Multiparty Negotiation and Coalitions

Multiparty negotiations are fundamentally different from two-party negotiations in that they present participants with an overlapping network of possible agreements. A farmer negotiating with a greenbelt organization over the possible purchase of his land may either come to agreement or not. His bottom line or resistance point is often defined by the consequences of not agreeing. Farmers will compare the final offer they receive from the greenbelt group with what they expect they can get from someone else. If the bid is better overall, the farmer will take it; if not, the farmer will not settle.

In the case of multiparty (that is, more than two) bargaining, however, lack of consensus among all the parties does not preclude agreement between some of them. Certain situations may require unanimity, but many do not. For example, a factory that is being sued by its neighbors for nuisance may settle with those

whose demands are low or whose cases are strong but go to trial with the rest of the plaintiffs. In settling one case, of course, it must consider the impact on other claims.

Because of possible competition and cooperation among subgroups, multiparty negotiation is much more complex than two-party bargaining. The complexity is manifested in bargaining strength and strategy.

Problem 1

In problem 2 in chapter 2, we considered a simple two-party negotiation between a farmer and a conservation group. The farmer was entertaining a developer's offer of $300 thousand for his land. Because of the special beauty of the property, the conservation group was ready to pay as much as $400 thousand for it. We saw that any figure within this bargaining range would leave both the farmer and the group better off than if they made no deal. Left open, though, is how the buyer and seller will split the $100,000 "surplus." Social convention sometimes suggests splitting the difference, but there is no point of equilibrium.

Consider this problem again, but with an important variant. A second developer has appeared, but this one is ready to pay $400,000 for the land. For the sake of simplicity, assume that the sole objective of the farmer is to get as much as possible; the farmer does not care in the least what happens to the farm. The prospective purchasers are each interested in getting the land as cheaply as possible.

1. Who has the bargaining power in this situation?

2. As competing bidders, the developer and the greenbelt organization may seem like strange bedfellows, but is there anything that they can do to prevent the farmer from exploiting the situation? If you represented the conservationists, can you imagine an attractive proposition you could make to the developer that would leave you with the land in your name and totally under your control and that would cost you no more than $400 thousand in all? Can you imagine a deal in which you fail to get the land, but do not come up empty-handed?

3. Now, once again, who has the bargaining power?

4. If you represented the conservationists here, and you knew the priorities and resistance points of the other two parties, how would you prefer for the negotiations to proceed? Would you, for example, want a three-way meeting, or would you like to meet with one of the parties first; if the latter, which one?

5. If negotiations with the farmer have pushed you close to your resistance

point, how does that affect the attractiveness of a side deal with the developer? How do you evaluate one against the other?

6. Assuming still that you represent the conservationists, how is your bargaining strength affected if instead of one competing bidder there are 2, 5, or 10?

Problem 2

The preceeding problem, though multiparty, is still relatively simple in that it is zero-sum; that is, there is a possible $100 thousand surplus to be divided among three parties. Frequently, of course, the fact of coalition may introduce nonzero-sum elements. Economies of scale may mean that three companies who discharge waste into a river may control waste more cheaply if they work jointly than if they act independently and duplicate one another's investment.

The following problem is a variation on an abstract exercise devised by Howard Raiffa of the Harvard Business School and described in his book *Negotiation Analysis* (Cambridge: Harvard University Press, 1982, pp. 262–269). His book includes a lengthy consideration of coalition strategy in general and this exercise in particular. For our purposes, assume that A, B, and C are three companies under legal compulsion to control their waste discharge into a river they all abut. They are not under any obligation to work together, but a rigorous study has shown that it is clearly advantageous for them to do so. The most savings will be realized if they act as a trio, but even if any one of the three stayed out, the other two could cut costs by banding together. Table 3 shows the savings (in thousands of dollars) that are possible through various coalitions. Each company's goal is simple to maximize its own savings.

For example, A might explore working just with C. Together they could save $84 thousand, but they still have to decide how to divide it. If C insisted on a 50–50 split, A could threaten to make a deal with B.

Professor Raiffa has his students do this exercise in class. He creates trios in

Table 3. Coalition Problem

Coalition	Savings
A (alone)	0
B (alone)	0
C (alone)	0
A & B	118
A & C	84
B & C	50
A & B & C	121

which each student represents a company. People have 30 minutes to come to an agreement. Under his rules, there can be no prior communication until all three meet. Two players may arrange for a private meeting, and the third must not interrupt for at least 2 minutes. Please consider the following questions.

1. What strategies does this situation invite? How, if at all, would your strategy be different if you represented A, B, or C?

2. If you were an arbitrator in this matter, what result would you order? One resolution, for example, is to require all three to participate and to divide the $121,000 savings equally, that is, give each $40,333. Is that fair? Is fairness defined by the bargaining structure—that is, the savings that are obtained by various coalitions—or is it necessary to look at other factors such as the size of the companies, the degree to which they currently pollute, and the cost they will incur if they go it alone?

3. How is your analysis of this situation affected if we build in more realistic considerations? Let us imagine, for example, that the projected cost savings, albeit carefully calculated, are not infallible. What if, as is likely, that each company has a fairly good idea of the savings that it is likely to realize through the various coalitions but is less clear about the precise advantages perceived by the others? Does the introduction of other nonquantifiable factors, such as public relations, help or hinder consensus?

Problems of Cost Sharing

Introduction

Many environmental conflicts involve problems not of sharing benefits—as in the preceding problem—but of allocating costs. In some respects, this one is merely the obverse of the other: parties will jockey to form coalitions to minimize their costs instead of maximizing their benefits. In certain cost allocation situations, however, it may be possible to design a process in which the party who happens to draw the short straw receives some sort of compensation from his or her more fortunate cohorts.

The following excerpt is from Howard Raiffa's *Negotiation Analysis*, (Cambridge: Harvard University Press, 1982, pp. 311–313). Though highly simplified, it is inspired by a new Massachusetts law on hazardous waste treatment facility siting. The law is examined in detail in chapter 12, but Raiffa's abstracted example helps illuminate the complex bargaining relationships among various communities that may have to host a treatment plant. All agree that such a plant is essential, but none want to see it built in their backyards. The risks of illegal

dumping of toxic wastes are currently shared by all. The negative impact of hosting a treatment facility would be felt principally by one community, whereas the benefits would be realized by all the others.

To keep things understandable, Raiffa makes some assumptions that actually are contrary to the Massachusetts procedure. For simplicity's sake, he also imagines a state with just five towns.

Negotiating Cost Allocation

> Suppose a facility could be located in one of five towns: Aspen, Baileyville, Camille, Donneybrook, and Eaglestown. Contrary to reality, let's assume that each town is monolithic in its views and each is represented by a negotiator (A, B, C, D, and E, respectively) who has full power to commit his or her town. While each town wants the facility to be built (somewhere else) let's assume at first that the state has agreed to build and maintain the facility in any one of the five towns, but that they have to decide jointly just where it is to be built. If they can't decide, it will not be built.
>
> The five representatives bicker among themselves and can't reach agreement. Someone proposes using a randomized procedure to determine the location of the facility, [and] all towns have an equally likely chance to be chosen. They all agree to this randomization procedure, and the unlucky "winner" is representative C. He can't, after the fact, suggest that he's having second thoughts about the procedure; but because he represents a rich town he is able to bargain with B, the penurious town of Baileyville, to accept the facility—for a price. B bargains hard and agrees to C's request, with a compensation sweetener of $100,000. D is furious. Why should the people of Camille get out of their obligation just because they're rich? Why should poor Baileyville always get stuck with dredge work of the society? "Hold on," says B, "Who are you helping? My town is not only poor, but you won't allow us to improve our position. That's double jeopardy. That one-hundred thousand will finance a long-needed library and shelter for abused unfortunates."
>
> Society is schizophrenic about the morality of certain financial transactions. The rich are not allowed to buy themselves exemptions from the military draft; in a college dormitory people would think poorly of an affluent student if he were to financially entice a scholarship student to swap dormitory rooms that were assigned by random numbers. But it's permissible for workers to receive premium wages for hazardous jobs.
>
> Assume now that the five representatives have agreed to use a random drawing, but the drawing has not yet been conducted. A knows that B would assume the obligation for $100,000, but since Aspen can only afford to pay $50,000 in order to shift the obligation to some other town, A forms a deal with E who thinks similarly. If the randomization designates A or E they each agree to pay $50,000 to B to assume this obligation. D has second

thoughts. "I don't like giving or taking compensation for this obligation, but if this is going to be the accepted norm, then I would be willing to do it for $80,000," announces D.

"That's wonderful," responds C. "Let's each get up $20,000 to give to D."

But B intervenes: "Baileyville can't afford $20,000; but we'd be willing to lower our price for accepting the facility to $75,000."

Finally E comes up with a suggestion. She presents two numbers that describe her feelings as a representative of Eaglestown: (1) the amount of compensation that Eaglestown would be willing to *give* to another town that accepted the facility (rather than not have the facility built at all); and (2) the amount of compensation Eaglestown would *need* in order to accept the facility (rather than not have the facility built at all). She declares that Eaglestown would be willing to give $50,000 but would need $150,000 for acceptance.

"Let's see if I understand those two numbers," interjects C. "You see the benefits of the facility without any of the inconveniences as worth $50,000. But the inconveniences are sufficiently high that you need $150,000 to accept the facility, if the other alternative were no facility in any of our five towns. Is that it?"

"Yes, that's it."

The parties agree to call the first number CWG ("compensation willing to give") and the second number CNA ("compensation needed for acceptance"). Each agrees to write down their CWG and CNA and to let a reputable adjudicator, Mr. X., resolve their conflict based on the ten numbers. [Table 4 displays CWG and CNA values.] The adjudicator, Mr. X., observes that the facility cannot be built in Aspen, since Aspen needs $200,000 and the other towns are only willing to give $150,000 collectively. Baileyville needs only $50,000, and the others are willing to give Baileyville $190,000. The facility cannot be built in Camille; it can in Donnybrook and (just barely) in Eaglestown.

TABLE 4. COMPENSATION PROBLEM

	Willing-to-give/Needed-to-accept Facility	
Town	Compensation willing to give ($'000)	Compensation needed to accept ($'000)
A	50	200
B	10	50
C	60	3000
D	30	80
E	50	150

Study Questions

1. If you are Mr. X., the adjudicator, where would you site the facility and what compensation would you require of the other towns? Should the designated town merely get the minimum compensation that it demanded or should it get the total that the other four were willing to provide? Should compensation be divided four ways, or should it be proportional to the amounts that the towns said that they would be willing to give? What other cost-sharing schemes can you imagine—and defend?

2. Should the adjudicator believe that the values submitted by the representatives are honest? Would a town be more likely to misstate the amount it would require to serve as a site or misstate the amount it would be willing to pay another town for doing this duty? What is the effect on truth telling if the towns do not know how the adjudicator plans to use the values?

3. What if the rules are changed so that the facility will be built in the town that has the lowest CNA, and further, that it will receive as compensation the amount of the second lowest announced CNA. Raiffa states that this should induce the towns to reveal their true figures, but why? Is this still true if some of the towns can collude before making their statements?

Conclusion

Raiffa observes that the bargaining situation is made far more complex when we realize that each town is not monolithic: Citizens may have different views of what CNA and CWG their town should select; there may be several different sites within each town. The fact that development costs likely will vary from town to town and from site to site adds another complication. The state may agree to supplement the compensation. Court challenges to the site selection procedure may be pending. Many of these considerations are addressed in chapter 12 in the section on the Massachusetts Harzardous Waste Facility Siting Act.

Cross-References

Cases

The principal cases presented earlier in the book—Grayrocks Dam, South Carolina Hazardous Waste, Brown Paper, and Holston River—all contain elements that allow us to test and apply ideas about multiparty bargaining developed

in this chapter. Before you consider the following questions, take time to review these cases, particularly to identify the parties and their interests.

Study Questions

1. At first glance, the Brown Paper case (chapter 4) seems to be a pure two-party dispute between the company and the EPA; yet, there surely were other interested groups and individuals. For example, the state environmental agency had responsibility for air quality standards, and it was initially involved. Why do you suppose it dropped out? Who was aided by its nonparticipation—the company or the EPA?

2. The Brown Paper case was multiparty in another sense. Recall that at the close of negotiations, when the EPA appeared to have reached agreement with the company, the EPA's enforcement division insisted on more stringent terms and ultimately got them. The agency thus was not monolithic; there was negotiation going on within it. Catalog the ways in which intramural negotiation, that is, negotiation among groups and individual within one organization, may differ from negotiation among separate entities. (Note that in the Snoqualmie dispute, mediation had to be suspended while the environmentalists caucused to develop a unified position. Is this identical to the internal negotiation that occurred in Brown Paper?)

3. Notably absent in the Brown Paper negotiation were any environmental or citizen groups. The EPA and the company did not have to respond to any demands by others to be included at the bargaining table. Nevertheless, we saw in the West Side Highway case an attempt to invite groups to the mediation even though they had not yet been involved. Did the EPA and the company take any risk in not likewise searching out other interested parties? How would participation of groups like the Appalachian Mountain Club or the Sierra Club have affected the bargaining power of the original parties? What would have been the proper role of such groups in the negotiation?

4. The Holston River (chapter 5) case was a two-party dispute, though only in a limited sense. The EPA recognized that any waste discharge arrangement it made with Tennessee Eastman would directly affect the standards that would apply to four other companies that were polluting the river. The terms of a permit issued to Eastman would establish a precedent of sorts for the others. Moreover, if the river is seen as having a certain capacity for carrying pollutants, then the portion of that capacity assigned to one company establishes an upper limit on what can be assigned to others. With this in mind, consider the coalition possibilities in the Holston River case. What incentives might exist for any

of the other companies to try to side with Eastman? What might be the disincentives? The EPA choose to go after Eastman—the biggest polluter but also the most influential and technically sophisticated company—first. What could be said for a strategy in which the EPA met with all the companies collectively? Why do you suppose this strategy was not adopted?

5. The South Carolina hazardous waste problem (chapter 3) was clearly multiparty, and it provides an interesting parallel to the West Side Highway and Snoqualmie cases in this chapter. In all three, individuals or groups were invited to negotiate. What criteria should be applied in such a selection process? Some people have contended, for example, that hazardous waste treatment is a highly technical matter; hence, those involved in setting important policy should have particular expertise? Do you agree that technical credentials are relevant? Who should be responsible for making the selection? What recourse, if any, should a party have if he or she is not invited? Is the invitation method equally appropriate for all environmental disputes or is the scale of the conflict a relevant factor? Does it matter whether the dispute is site specific, as in the case of the proposed dam in Snoqualmie, or is about general policy, as in South Carolina?

6. The Grayrocks Dam case was another multiparty conflict; farmers, environmentalists, a power company, even state governments were among those involved. Both the farmers and the environmentalists were worried that water consumption of the proposed dam would hurt their interests. Is the fact that they shared a common concern sufficient to explain why they cooperated? Can you imagine circumstances such that, in spite of this common concern, the two groups would view each other as opponents?

7. When a dispute is of interstate magnitude, problems of coordination can be substantial obstacles to resolution. How did the parties overcome this obstacle and facilitate meetings that led to settlement? Are face-to-face meetings necessary, or could such a negotiation be conducted in other ways. What is lost when parties have to rely on mail and telephone communication? Is anything gained? Closed circuit and cable technologies are increasingly available. Do they solve the logistical problem when parties are hundreds of miles apart? Should we welcome the day when people come not to the bargaining table, but to the bargaining video monitor?

Reading References

There are many multibargaining issues that, though beyond the scope of this book, are important. For example, Howard Raiffa deals at length with problems of fair division and cost allocation in his book *Negotiation Analysis*

(Cambridge: Harvard University Press, 1982). He also illustrates strategies of voting when many parties have to choose among alternatives; voting one's true preferences is not necessarily the best route to one's goals.

The Logic of Collective Action by Mancur Olson, Jr. (Cambridge: Harvard University Press, 1965) remains a classic examination of the ways in which a group's actions may conflict with the priorities of its constituents. Olson deals at length with the question of representation, large- versus small-group behavior, and the lobbying power of special interest groups—issues that are all pertinent to environmental disputes. Thomas Schelling's *Micromotives and Macrobehavior.* (New York: W. W. Norton, 1977), is an important complement to the Olson book. Particularly relevant here is Schelling's illumination of problems of coordination that come about not so much from logistical obstacles but from diverging individual and collective incentives.

Finally, Timothy John Sullivan's doctoral dissertation *Negotiation-Based Review Processes for Facility Siting* (Kennedy School of Government, Harvard University, 1979), draws revealing parallels between multiparty bargaining in labor and other fields and environmental disputes. His dissertation is a forthcoming book from Plenum Publishing Company.