

Information in Communicative Planning

Judith E. Innes

What planners do most is talk and interact; it is through communicative practice that they influence public action. This paper contends that communicative planning requires a new concept of information and how it influences action—namely, a concept of communicative rationality, supplementing instrumental rationality. Drawing on the author's research on the role of information in policy processes, and on Habermas's views of communicative action and rationality, the paper makes three main points. First, information in communicative practice *influences by becoming embedded in understandings, practices and institutions*, rather than by being used as evidence. Second, the *process by which the information is produced and agreed on is crucial* and must include substantial debate among key players and a social process to develop shared meaning for the information. Third, *many types of information count, other than "objective" information*. A concluding note urges planning researchers and educators to put more emphasis on this broader concept of information in practice, and warns practitioners that being technically right is never enough to influence action.

Innes is a professor of city and regional planning and Director of the Institute of Urban and Regional Development at the University of California, Berkeley. She is the author of *Knowledge and Public Policy: The Search for Meaningful Indicators* (Transaction, 1990), and editor of *The Land Use Policy Debate in the U.S.* (Plenum, 1985).

Journal of the American Planning Association, Vol. 64, No. 1, Winter 1998. © American Planning Association, Chicago, IL.

What planners do most of the time is talk and interact. Researchers on planning practice have demonstrated that this "talk" is a form of practical, communicative action. That is, dialogue and other forms of communication in themselves change people and situations. Researchers show us not only that communication is central to planning, but also that as researchers and practitioners we must give far more explicit and systematic attention to this basic dimension of practice.¹ Planners are deeply engaged in a web of communicative and interactive activities that influence public and private actions in direct and indirect ways only recently recognized in the planning literature.²

This "communicative" perspective represents a shift from a view widely held over at least the last 30 years, that the planner's job is mainly to deliver unbiased, professional advice and analysis to elected officials and the public, who in turn make decisions. In this view, information is a tool for policy makers to use to make choices. The planner's job is to "speak truth to power" rather than to participate in the messy world of action. The communication method for this truth is considered separable from the truth itself and of little concern; the medium is not the message. Reflecting these views, planning education in the United States has attached great weight to training planners in objective approaches to information, such as quantitative methods and economic analysis. Theorists have honed a concept of rationality as the instrumental use of objective information to produce desired outcomes, and have developed public choice theory, which assumes specifiable rules for decisions by individuals. But if the image of the objective information provider serving instrumentally rational decision makers is no longer accepted as an adequate view of practice, then what, if any, role does information play? What can practitioners in communicative planning practice do to assure that planning is well informed?

Purpose of the Paper

This paper sketches an alternative way to view the role of information in planning—a way that is compatible with the emerging paradigm of

planning as communicative action, and that moves toward a new and more powerful account to guide research, education, and practice. The new model does not dismiss calculation and objective, quantitative analysis as unimportant, nor experts as unnecessary; it does argue that formal information enters into public decisions in ways other than by decision makers consciously employing the information as they weigh alternatives and make choices. Instead, the new model argues that in communicative planning, information becomes gradually embedded in the understandings of the actors in the community, through processes in which participants, including planners, collectively create meanings. These participants, moreover, rely on many types of "information," and not primarily on formal analytic reports or quantitative measures.

As the policy actors, including planners themselves, communicate and agree on new meanings of issues and data, their actions change, often without any moment of conscious decision. The complex interactions and communications of policy making are themselves part of the outcome, as they change the participants and the participants' actions and reactions. Thus, in tracing the effects of information, moments of conscious and instrumentally rational decision by individuals are less significant to understand and document than are the *processes* through which the individuals' understandings change and they begin to change their actions. When we look at these processes, it turns out that the role of information in communicative planning is even more significant than that attributed to it by the rational instrumental model of public choice; it is also far more difficult to isolate and describe.

Conventional View of Information in Planning

Much of the academy has had a well-articulated conception of the role of information in policy and planning, which is embodied in the teaching and research of the last thirty years. In this view, experts develop information in response to questions from decision makers or to solve problems that decision makers have identified. The information may include such material as surveys, identification and comparisons of alternative policies in terms of costs and benefits, feasibility studies, predictions, and forecasts; it may include reports and studies based on calculation and scientifically validated knowledge. What both researchers and practitioners have been accustomed to label "information" has usually been quantitative, framed in terms of costs or other easily countable units. The assumption has been that the professional's

job is to produce such analyses, or to select and interpret those done by others, and to present them to decision makers in understandable form, adding nothing beyond a professional opinion about their value and implications. Elected and appointed officials are then to "use" this information to decide on policies, plans, and regulations. At the next stage, these are to be implemented by "using" more formal information. The presumption that planners and other policy professionals are experts at analysis for decision-making has been intrinsic to the legitimacy of their role.³

Research on practice, however, contradicts the expert analyst model. Indeed, the prevalence of that model may obscure the actual dynamic of information for researchers and practitioners intending instrumental applications. A substantial literature on knowledge utilization documents how little, on the whole, formal information and analysis influence decisions.⁴ Practitioners recount many cases when decision makers have ignored the implications of their findings in setting policy. Moreover, even decision makers who found certain information important often cannot say how or why (Innes 1988a; 1988b). On the other hand, the tidy process specified for analysis, with its steps (goal and problem identification, generation of analysis and alternatives, evaluation, choice, and implementation), is simply not a good description of the reality of planning, in which all these steps are so merged as to be indistinguishable. Nor does it appear that the model's neat divisions of labor among professionals and public officials are found in practice. Experts and planners are deeply involved in all the steps in ways that become obvious when we examine their communicative activities. Finally, the notion of value-neutral expertise is no longer widely accepted, either among the lay public or by philosophers of science and social theorists. The public and the decision makers recognize that experts disagree, that they do not necessarily start from the same value premises, and that they present information and arguments selectively. In nothing is this recognition more obvious than in the efforts to site facilities for hazardous waste; typically, the public refuses to accept "expert" assessments of risk as adequate criteria for the decision (Krimsky and Plough 1988; Kennedy 1996).

Planners and planning educators have known most of this for a long time, but we hold on to the scientific model of information use and expertise for lack of a better one, somewhat like the drunk who searches under the lamppost for his keys though he lost them across the street, "because the light is better under the lamppost." As Rein and White (1977) say, we hold on to the rhetoric that decision makers are the ones who make value judgments and that experts

only analyze information, because this is a useful myth that protects both parties. Though well aware of its limitations, neither professionals nor politicians have any incentive to move beyond it. Most importantly, a whole set of institutions have been built around the scientific model, including such practices as cost benefit analysis and/or quantitative modeling. Our teaching programs produce experts trained in calculation, and encourage professional norms that say that those who have such skills are more valuable. Any challenge to the scientific model of information use is met with resistance from both the academicians and the practitioners; too much is constructed around it for it to be given up easily.

If, however, planning is best understood as primarily communicative action rather than analysis prepared for decision makers, as a number of theorists now assert (Dryzek 1990; Sager 1994; Innes 1995a), we must revise the model of instrumentally rational information use. Not only does it neither predict nor explain what goes on in practice; it also provides few practical norms to guide the practitioner. Indeed, the twin assumptions that information is limited to scientific knowledge and that its value lies in its deliberate instrumental use have severely hampered understanding of what is going on in practice. Organizations demand information, and both public and private agencies spend great sums on gathering, organizing, and communicating information.⁵ The newspapers report the results of surveys and studies on policy issues, often with front page headlines. Yet the literature still reveals little about how and under what conditions such information makes a difference. It is hoped that the model of information presented here will provide conceptual tools for seeing more clearly how information shapes public action.

The Research Background

The ideas for the model proposed have emerged from critical review of the literature and from the author's research, over twenty-five years, on the role of information in planning and policy making in a variety of contexts. One area of my research has been the development and use of technical information, particularly quantitative data, in a variety of policy arenas, from social and foreign policy to environmental assessment and local community development planning. In these studies I sought to identify technical information that had become influential, and to explain why. In a more recent set of studies, my colleagues and I have examined collaborative, consensus building processes used in a variety of complex inter-agency and intergovernmental planning tasks (Innes et al. 1994). In these studies, stakeholders have en-

gaged in face-to-face group deliberation, seeking consensually based strategies of action to, for example, design a state or regional growth management program, or protect the water quality in a major estuary. The researchers paid particular attention to the role of technical information in the deliberations. In explaining the communicative model of information, I will use examples from these studies. The goal is to lay the foundation for a new conceptual framework for understanding, studying, and teaching the role of information in planning, and to identify its implications for planning practice and education.

The Embeddedness of Information in Communicative Planning

In the information society, new products are information-based. In great part, they are old products with information embedded in them that turns them into something different. Our water faucets turn themselves on and off. Our microwave ovens decide for themselves when the food is cooked. Our VCRs are set weeks in advance to record specific programs, and they tell us when the tape has run out. Our new TVs block out violent programs. Compact disc players remember our favorite songs and skip those we do not wish to hear. In Japan, the toilets not only flush themselves, but also record information about the toilet's contents and transmit the information, by modem, to one's doctor. These new products not only embed the capacity to make some decisions for us; they become more than what they were. Our toilets become not merely conveniences, but also devices of preventive health care. The TV is no longer just a purveyor of images, but a tool with which to influence our children's behavior.

Analogy can help us understand how information plays a part in communicative planning. Just as manufacturers "informatize" products by adding computer chips, memories, sensors, and programmed instructions, so too communicative action "informatizes" planning, and in the process transforms the participants. Information influences planning and public action by becoming embedded in the thought, practices, and institutions of a community, and thereby influencing actions. *When information is most influential, it is also most invisible.* That is, it influences most when it is part of policy participants' assumptions and their problem definitions, which they rarely examine. Thus, rather than saying that policy makers consciously apply information to make a choice, it is more accurate to say that information frames, or in other words limits the available choices in the first place. It points the way to and defines the nature of the reality that

decision makers confront. Information acts more as a lens than as a bottom-line finding.

Both my research (Innes 1988a; 1988b) and that of Weiss and Gruber (1984) found, for example, that the requirements for producing and reporting quantitative data, along with practices of public discussion of the data and its policy implications, have produced changes in human rights policy, in school policy about discrimination, and in environmental policy. The changes occurred despite the fact that no policy maker in our studies could articulate how he or she was directly convinced by any particular fact or finding to take one or another action. The influence was much more indirect: the information influenced not so much the decisions, as the institutions and practices through which policies came into being; and not so much the explicit opinions, as the mindsets and assumptions of the policy actors. It took effect because it became part of the private symbolic meaning system in which each of these actors functioned, and thus tapped into emotional and personal motivations that helped to drive both individual and joint action in a way that cold "scientific" data never does.⁶

The Process of Developing Human Rights Policy

The case of human rights policy in the United States illustrates how this process works (de Neufville 1986). In the mid-1970s, Congress passed a law requiring the executive branch to prepare a public document quantifying human rights conditions in countries to which the United States gives aid. Congress did not want to aid countries with poor human rights records simply to serve the President's foreign policy purposes. In 1980, I was called in by the Carter administration to help the State Department design a section for these documents, Country Reports, on social and economic rights. In the process, I learned a good deal about how the reports were prepared and used. When Ronald Reagan was elected, his administration tried to severely limit the content of these reports, and Reagan tried to appoint an Assistant Secretary for Human Rights who did not believe that foreign policy should be linked to human rights. Not only was Reagan unable to get that appointment ratified in the Senate, but his administration was unable to turn back the use of the human rights principles established under Carter. The process of human rights reporting, in itself, had by that time produced pervasive institutional change.

The reports themselves, large compendia of information on all countries of the world, were not often used by policy makers when making decisions. That is to say, they did not turn to page 70, cite some data, and argue that, therefore, aid should not be given; nor

did their staff persuade them to take a position based on information they had learned from the document. The *process*, however, of preparing the reports and the fact that they had public visibility did change both the views and the actions of many of the important participants in the complex mix that produces public policy.

Three important changes occurred as a result of the legislative requirement to prepare these reports. First, the capacity of the State Department to find out and interpret data about human rights increased enormously. The department had to train foreign service officers to collect the information in host countries, and the officers had to develop contacts with human rights groups, such as Amnesty International. The professional foreign service officers then not only developed what was to become a high-quality compendium of information that gave credibility and objectivity to many claims about the conditions in a particular country,⁷ but they also developed skills and knowledge of their own that then colored their actions in any policy arena where they worked.

Second, the requirement to collect and publish human rights data both empowered existing advocates for human rights policy and created new advocates. As foreign service officers learned about human rights abuses, they realized that this set of issues was more important than they had thought. Moreover, they began to see how human rights policy was linked to the economic and political issues they ordinarily addressed. They even began to form such interpretations of events as attributing the United States government's embarrassment over the fall of the Shah of Iran, in part, to the State Department's failure to take into account how unpopular his human rights record had made him. Thus, the foreign service officers, simply through inquiring about and discussing the "facts" about human rights (and often debating at length the definition of rights and abuses and the quality of the data), came to advocate a higher priority for human rights issues in foreign policy. A poll ordered by the incoming Reagan administration found that the great majority of ambassadors had come to believe human rights policy was essential to U.S. foreign policy—despite the fact that collecting the data not only was a lot of work for their staffs, but also sometimes made their diplomatic task more difficult.

The requirement to produce human rights information not only changed the views of many foreign service officers, but also gave more legitimacy and visibility to groups such as Helsinki Watch and Amnesty International, which already were experts on human rights statistics. They came to Congress to testify about the quality of the reports; they then became

players who helped define the reports' content; and, ultimately, they played more of a role in policy development. What these knowledgeable groups said came to matter, because they could challenge the accuracy of the reports and embarrass the State Department. Conversely, their support lent credibility and legitimacy to the reports, which the State Department valued.

The most important consequence from the report requirement was that all the organizational and political attention bestowed on developing and interpreting these data began to change how "the institutions think" (Taylor 1984; Douglas 1986). That is, as the information was developed and discussed, and as the participants became more interested in it, the *terms of discourse* within and outside the agency began to change. Increasingly, someone from the Human Rights Bureau was included in the eleven o'clock press briefing at which the State Department announced its policies and its reactions to events. The media demanded human rights slants on the news, and State Department staff wanted to be sure they did not make human rights gaffes.

The Process of the California Environmental Impact Assessment

A similar story can be told about the effects of the requirements in California for preparing and publicly discussing a detailed environmental impact assessment for each major development proposal (Innes 1988b). This requirement for information created new data sources that are widely used, caused agencies to hire environmental experts, and meant that some regular agency staff had to become more knowledgeable about environmental issues. Those professionals, in turn, became advocates and spokespersons for environmentally responsible policies in their own agencies. At the same time, public interest organizations with expertise on environmental matters were given special attention in public hearings and routinely quoted in the newspapers in connection with reviewing these reports. Such groups thus became powerful, because if they could show that the environmental reports were inadequate methodologically or contained inaccurate information, they could sue, which would stop or delay development projects.

Finally, twenty years of the state conducting environmental impact reporting has made it normal and expected for Californians to consider the environmental dimensions of all projects, even if the possible consequences are minor. They do not always decide for the more pro-environment perspective, but it is the case that environmental issues have become much more sa-

lient in decisions. The most important effect occurs long before the impact analysis is even complete, in the course of preparing the report, or in even in anticipating the report. Developers agree, in these early stages, to modify their proposals because of negative effects that have been discovered (Landis and Pendall 1994), to avoid public controversies and lengthy delays.

These results have occurred although the California Environmental Quality Act requires nothing more of public officials than measuring and *considering* the effects. It does not say that where there will be a significant negative effect a project cannot be built; it says only that the decision-making body must have a good reason to build in spite of the effects. Like the Country Reports, the environmental impact statement is merely a compendium of information, a set of background data, and not an answer to a policy question. It is, however, integrated into a long-term planning activity for which the decision about whether to build a project is just the final step. The environmental reporting requirement creates the conditions under which this "decision" crystalizes. The *process* of producing information shapes perceptions that become part of the assumptions and given knowledge—and those frame the choices.

Producing and Agreeing on Information: A Crucial Process

These examples demonstrate that the nature of the process by which the information is produced is essential to embedding it in understandings and institutions. Information produced according to the conventional model, by presumably neutral experts who work outside and apart from the political and bureaucratic process through which policy gets made, does not become embedded in the institutions or the players' understandings. It will become what we (Gruber 1994; Innes et al. 1994) have called "intellectual capital," or shared knowledge, only if there is plenty of talk about the meaning of the information, its accuracy, and its implications. Information does not influence unless it represents a socially constructed and shared understanding created in the community of policy actors. If, however, the meaning does emerge through such a social process, the information changes the actors and their actions, often without their applying it expressly to a specific decision.

The Process of Developing the Unemployment Measure

An example of such change is the case of unemployment rates in the United States. These have pos-

sibly been the most consistently influential and respected of social indicators in United States national policy. When the rates go up, not only do the public and the business and labor communities pay attention, but the President and the Council of Economic Advisors must respond. The public believes these figures have meaning and that when the rates are high, their government should act. My study of the history of the development of the unemployment indicator and its application to policy (de Neufville 1975) found that it gradually became the way of measuring unemployment accepted by labor, industry, and the public during the 1940's. That followed twenty years of dispute over what to define as unemployment, and what method to use to calculate it. The process of arguing over methods and data took place in the newspapers, among academics, and between academics and the federal agencies responsible for producing the information and calculating the rates. The Bureau of Labor Statistics and the Census Bureau had established elaborate processes for the development and refining of the indicator. These procedures included user groups from labor, industry, and the academy, and diverse technical advisory committees that reviewed and evaluated the work of the agency statisticians and debated issues of definition and application. In many instances, their discussions resulted in changes to the indicator, its presentation, or its interpretation.

Moreover, the process of debating the methods of measurement was closely associated with a debate over what federal policy should be with regard to unemployment. Did government even have a responsibility to take actions about unemployment, such as providing benefits to the unemployed or changing economic or fiscal policy? The key political players were unwilling to agree on an official indicator until they had some idea what its policy implications were. The discussion of the indicator's design gave them a focus through which to explore those implications. They designed the indicator to match the policies they enacted during the nineteen thirties, including a system of unemployment insurance and government programs to provide at least minimal work for the unemployed. Policy makers worked out policy ideas as they debated the design and content of the measure (should it, for example, include everyone without work or only those who had lost jobs?), which allowed discussion of controversial issues in a way less politically charged than it would otherwise have been.

This process was an open one, bringing key stakeholders and experts together in frank discussion, and one that got much public attention. By the time it was completed, for many players the unemployment rate

had become largely identical with the concept of unemployment. In accepting the indicator as the official measure, they had agreed that a policy was needed, and had largely agreed, implicitly, on what that would be. The indicator became part of the President's Annual Economic Report and was used to support many proposed presidential policies on the economy. Later, when President Kennedy's opponents tried to abolish the indicator, viewing it as a tool for him to justify interventionist policies, the many players with something at stake in economic policy, including industry, labor, and the academic experts, rallied round and fended off the political challenge. They did so because they had come to use the indicator as part of their predictive models, and had integrated it into legislation. It had become part of institutionalized practices, and part of their ways of understanding the economy. It had become more powerful, being embedded into their thinking and institutions.

Consensus Building

The importance of process for ensuring the influence of information was also clear in our studies of stakeholder-based consensus building around growth and environmental issues in California (Innes et al. 1994). Technical information was often crucial in helping people reach agreement, but the experts did not simply hand policy makers the facts or give their professional opinions. The experts were at the table, participating directly in the discussions among the players of what could be relied on as true and what its policy implications were. In fact, the experts negotiated among themselves; moreover, the lay participants confronted them with contrary evidence and themselves assessed the relevance of the scientific research to the policy issue. The experts sometimes changed their views, not about the findings, but about their implications. They sometimes recognized that they should do other types of analyses to respond to the group concerns. Thus information was discussed and validated *within* the consensus building process, and that information then mattered to the group.

The San Francisco Estuary Project, for example, entailed a five-year consensus building process to produce a management plan for the estuary. It involved fifty stakeholders, including development interests, agriculture, water agencies, environmentalists, and many others (Innes et al. 1994, Appendix 4). The group established a subgroup of scientists and engineers from agencies and organizations representing conflicting interests, to develop a measure of water quality that all could accept. They reached near consensus on an innovative measure: salinity level, indi-

cating the estuary's potential for biodiversity, to replace the more usual measure of levels of specific pollutants. Advocating this measure challenged the governor's position and the practices of California's water policy, which were diverting large quantities of water into agriculture and urban development, away from the estuary. Although the group made no decision about the amount of water needed in the estuary, their agreement on this measure of biodiversity as the appropriate way to measure water quality helped to bring about major changes in California's water policy that reduced the amount of water diverted to agriculture. The communicative process among scientists and stakeholders had changed the shared meaning of water quality, which produced a new collective perception of acceptable policy.

In a somewhat parallel case, when a consensus-building group in Orange County tried to develop a Natural Communities Conservation Plan ending the stalemate between the endangered species protection requirements and development pressures, rather than hiring a consultant they consensually chose a group of independent scientists to help them. They asked that panel to reach consensus on the key information, and the panel developed land use principles and guidelines for cities to protect wildlife corridors while allowing development. The larger group adopted the guidelines; this agreement resolved much of the long and bitter controversy between the region's environmentalists and developers, and became the basis for new state policy (Innes et al., Appendix 7).

What is notable in these examples is that the *policy result became a forgone conclusion in the process of formulating and agreeing on the information*, rather than a later choice *after* the information was in final form. In each case, communicative action around the information changed the players' attitudes about the problem. Both these examples also included a wide range of stakeholders, who all had ample opportunity to challenge the data and discuss its meaning and methods with the experts on various sides. They also could work out whether and how the information applied in a realistic and appropriate way to the practical problem. In the Estuary Project, for example, the managers among the participants not only insisted that the data on the conditions in the estuary be thoroughly discussed and accepted by everyone, but also made sure that, along with the data, management options to deal with problematic conditions were presented. To the managers, these options were what gave the data meaning. They regarded the status and trend reports as meaningless unless the policy implications were made clear.⁸

The Value of Many Kinds of Information

Our studies of consensus building have demonstrated that many kinds of information count in communicative planning. Scientific knowledge has its place, but it is not privileged. Unless the scientific information was related to practical action or to the context and particular situation facing policy makers and managers, participants rejected it. The groups we studied discussed the technical information in considerable detail and from many perspectives before they accepted it. It had to meet demanding standards of scientific acceptability and agreement among experts holding different values, but it also had to be socially meaningful, appropriate for the context, and practically useful.⁹

Technical, formal, or scientifically validated information was only a small part of the information that participants used to argue, persuade, determine the nature of the problem, or decide what strategies might work. A second and important kind of information was the participants' own experience. A local planner, for example, let the members of the Growth Management Consensus Project know how the land use regulations they proposed for state legislation would play out in practice at the local level. She frequently told them their proposals would not work as they anticipated; participants then searched for alternatives. A lawyer in the group successfully argued against requirements for consistency of local plans with state plans, on the grounds—not of the law—but of his experience in trying to use such requirements as tools to control local actions. In the estuary project, the environmentalists' experience with unsuccessful attempts to restore wetlands was a salient part of the discussion about whether such efforts would work.

A third kind of information came through the stories participants told.¹⁰ For example, fishermen told of how many bass they used to catch in the bay, and how they no longer could hook as many. Though the scientists at first dismissed such personal stories as "anecdotal" and unscientific, other participants responded to them as authentic indicators of problems and demanded that more up-to-date scientific studies be done. Indeed, the personal stories turned out to reveal some changes that science had not yet caught. Other stories were more like myths, stories about people in the past or about other problems, told to draw a lesson from the analogy. For example, a representative of a taxpayers group told a horror story about the public's misinterpretation of a decision about investing in water facilities and how it led to a bond issue being re-

jected, as a way of warning the group away from its proposed course of action. Although no one tested the literal truth of the story, the behavior it depicted made perfect sense, and the story translated the consequences of public relations failure into concrete terms. The group took the warning seriously and altered their course.¹¹

A related type of information lies in the images and representations used in discussions, as these influence the framing of the problem and thus the direction of action.¹² Participants in one case, for example, brought in tables, photographs, drawings, and other representations of a disputed tract of undeveloped land. Each representation depicted the land in a different way, as suitable for wilderness preservation, or for recreational development, or for housing. The group then had to consider the meaning of the land (Thompson, forthcoming).¹³ Consensus groups usually spend much of their time discussing basic concepts, because their agreement on the terms and their meanings decides a great deal. For example, one project focused on the meaning of habitat, and another on the meaning of water quality.

Finally, intuition, the participants' personal sense of the situation and of the other participants, is also an essential form of information. In the consensus building cases we studied, participants sized each other up and decided whether others were trustworthy or knowledgeable according to their own instincts. They decided what to do based on their "sense of the meeting." They talked about their "comfort level" with proposals, or whether the proposal passed the "sniff test." The typical participants in these processes were experienced, and accustomed to assessing other people and situations. Sometimes they could not articulate why they knew something, but they felt confident of it.

It is not surprising that so many types of "information" come into play in free-ranging group discussions with many kinds of things to be accomplished. Habermas' notion that there are three types of "knowledge interests" is illuminating here. He argues that we have an interest in knowledge for instrumental or technical purposes, to predict and to choose strategies likely to produce particular outcomes. This interest is served by empirically based, scientifically grounded knowledge. But we also have a practical and interpretive interest. Even if theory tells us a program with certain features will work, we ask, what do we know from experience about how to actually make it work? We want to be able to make sense of the context, the problem, and the other participants' situations. This practical interest is served by knowledge

grounded in experience, and by the stories and metaphors that help participants make collective sense of a complex and uncertain array of facts and contentions. Finally, we have a critical, or emancipatory, interest. We want knowledge to help us break out of assumptions, rules, and expectations that make us lose touch with some deeper reality and that prevent innovation. To advance this interest, intuitive knowledge is crucial. The term "information" becomes stretched perhaps beyond its limit, as we begin to pay attention to the many forms of knowing that participants can use in learning through collaborative processes.

What Planners Do in Communicative Practice

In these examples of the collaborative processes of social learning, planners played a variety of roles quite different from those anticipated by the scientific model of planning. In some cases, planners¹⁴ were the initiators, providing the impetus and the ideas to establish a consensus-building process, a task force, or other collaboration. Sometimes they designed the committees and their tasks or invited the first group of stakeholders to the table. Most often, they worked along with stakeholders. In all, they played a part in designing processes and, ultimately, new institutions.

In these cases, planners also played the role of finders and presenters of formal information as background, and answered questions that arose along the way. Planners did not just formally present their analysis, however; they had to deal with critical challenges from participants, and often had to redesign their study when participants found it to be beside the point or missing an important perspective. Planners identified experts with different political perspectives and agendas who could make presentations, provided specialized analyses, and participated in discussion. They made good use of the interdisciplinary reach of their education and their ability to view various paradigms critically.

Planners did other things. They prepared memoranda and minutes, brief issue papers, and talking points for committees, either on request and on their own, to help focus and move the process along. Sometimes they prepared the first drafts of negotiating documents and then redrafted them in response to direction given in meetings. Some acted as mediators and facilitators, occasionally as committee chairs, sometimes as consultants hired especially for meeting management, and sometimes as committee staff, doing shuttle diplomacy behind the scenes and getting participants to be more explicit about their interests.

Other planners actually represented stakeholders at the table, in the role of lobbyists, professional staff to public agencies or private interest groups, or technical experts employed by interest groups.

Communicative Rationality and Practice

If planning is understood as communicative action, it presents a challenge: not only to articulate a new role for information, but also to develop a matching concept of rationality that can provide an ethical and legitimate stance for planners. Instrumental, scientific rationality has no guidance to offer the communicative process of embedding information in people, practices, and institutions. If deliberations and learning take place in a collaborative and communicative way, we need appropriate rules, parallel to those of the scientific method, to ensure that the products of these discussions are acceptable and socially worthwhile, as well as properly informed.

Several principles can be applied to evaluate the *communicative rationality* of a process of deliberation.¹⁵ First, individuals representing all the important interests in the issue must be at the table. All the stakeholders must be fully—and equally—informed and able to represent their interests. All must be equally empowered in the discussion; power differences from other contexts must not influence who can speak or who is listened to, or not. The discussion must be carried on in terms of good reasons, so that the power of a good argument is the important dynamic. The discussion must allow all claims and assumptions to be questioned—all constraints to be tested. Within the process it must be possible for the participants to assess the speakers' claims in terms of four tests: Speakers must speak sincerely and honestly; they must be in a legitimate position to say what they do, with credentials or experience to back them up; they must speak comprehensibly—jargon and technical language communicates poorly; and what they say must be factually accurate in terms of scientific or other methods of verification. Finally, the group should seek consensus. The results of such a communicative process, one can argue, will be rational to the degree that these conditions are met. Like the scientific method, the conditions of communicative rationality will never fully be met, but the attempt to approximate them should help ensure that decisions take into account important knowledge and perspectives, that they are in some sense socially just, and that they do not simply co-opt those in weaker positions.

This set of conditions maps well onto some of the processes we examined, where participants sought to

achieve many, if not all, of them. Indeed, on this issue it seems that practice and theory have been moving in parallel for some years without much mutual recognition. Professionals who manage dispute resolution and consensus building processes do try to assure that all are heard and informed.¹⁶ In these cases, participants usually tried to get all stakeholders involved, even those they disagreed with, because they knew they could not find a stable solution without the knowledge and perspectives of all those with significant interests. Participants often challenged accepted constraints and assumptions, and sometimes found these could be changed. Sometimes groups produced innovative strategies that would not have emerged from bureaucratic or expert analysis. The presence of multiple stakeholders and the equalizing of information helped prevent co-optation.

Implications for Research

It is essential that the academy learn how information functions in the practice of planning, both for normative purposes—to define practices that are ethical and effective—and for analytical purposes—to understand and explain how and why plans and policies are made. Research on practice should pay explicit attention to identifying many types of information and their roles in planning, and to the ways information comes to be embedded in new practices and institutions. Most research on practice simply does not use a lens that allows researchers to see what types of knowledge are in play, much less to document their functions. Once more research has accumulated, the next step will be to develop a more elaborate normative and descriptive model of the roles of information in communicative practice.

Implications for Practice and the Education of Practitioners

Although many planners are learning by doing in this emergent communicative practice of the 1990s, often they have had little relevant preparation from their professional education. Those of us who are educators have as yet only a partial understanding of communicative practice, and we have only begun to consider how it should be translated into education. One indicator of the curricular need can be found in a recent survey of University of California, Berkeley graduates.¹⁷ Ninety-two percent of these practicing planners regarded negotiation as important, or very important, in their work, and 72 percent said that mediation was important. Negotiation ranked third, just after report and memorandum writing and oral presentation. Those surveyed saw it as slightly more im-

portant than data analysis, understanding regulations, and working with community groups. Yet, the reality is that few planning schools offer course work in negotiation or mediation, and when they do, it is not in the core requirements.

Beyond the obvious value of negotiation and mediation skills, a number of other curricular changes would benefit the future communicative planner. More emphasis on qualitative research methods is essential: open-ended interviewing, listening skills, and learning to interpret and make sense of stories and complex interactions are indispensable. More opportunities, too, to work directly with actual clients in studios, workshops, and methods courses will help students learn to work cooperatively on such matters as problem framing, which in collaborative efforts is central.¹⁸

NOTES

1. Forester (1989) introduced this term into planning thought, pointing out that when a planner communicates he is warning, calling attention, prioritizing, and thus acting on his audience. Other theorists have documented other ways to see communication itself as a form of action rather than simply a way of transmitting truth (or perhaps untruth) to those who decide on later action. For example, planners play a part in framing problems (Rein and Schön 1993), use rhetorical devices to influence (Throgmorton 1993), and persuade with stories and myths (de Neufville and Barton 1987; Forester 1993). These accounts suggest that a rubric of planning as communicative action is a useful way to think of much of planning. How this concept can illuminate practice remains as yet little developed. This paper attempts to develop one set of implications, about information and what it can mean to inform communicative planning.
2. For example, a recent collection of articles (Fischer and Forester 1993) explores communicative dimensions of planning and policy making, showing how problem framing, rhetoric, discourse, and argumentation play a part in policy making. Sager's (1994) new text on planning theory is appropriately titled *Communicative Planning Theory*, since he explores the interactive and communicative side of planning. A new introductory textbook on planning by Hoch (1994), *What Planners Do: Power, Politics and Persuasion*, is replete with quotes and dialogues and treats communication and interaction as central to understanding planners' work. Innes (1995a) contends that the pattern of findings and arguments in the recent literature amounts to a new paradigm in planning theory.
3. This model, I would argue, tacitly informs planning education, and most practitioners would recognize it as the primary form of legitimate practice. Studies by Howe (1994) of practice show that a minority of practitioners operate in a highly political way, and that some of them believe this to be legitimate.
4. That social science knowledge should serve a public purpose is a long standing assumption, since Lynd (1939), *Knowledge for What?*, but the literature offers few examples of when social science or formal information, specifically, has influenced public decisions because of its substance. Szanton's *Not Well Advised* (1981) documents, for example, how academic efforts to inform municipal policy makers have failed. Lindblom and Cohen (1979) contend that formal information produced by experts is typically not usable. Feldman (1989) contends that reports produced by bureaucratic analysts can seldom be identified as influencing decisions, and Caplan (1975) agrees. Indeed, there is more literature documenting the failure of information to influence decisions than demonstrating success, as Innes (1990, Introduction) has contended. Although it is easier to show that there are strategic and symbolic uses for information, as outlined by Weiss (1979), it remains difficult to demonstrate that the information produced for policy making does serve instrumentally rational purposes. De Neufville (1975), for example, showed that neither the standard budget nor crime rates were used to influence policy making, despite the tremendous resources devoted to creating these policy indicators.
5. Wilensky (1967) and Stinchcombe (1990) both write of how central are organizational intelligence and the information function within public agencies and private businesses. Feldman (1989), too, makes clear that bureaucracies spend substantial time on preparing reports.
6. Hajer (1993) and Sabatier and Jenkins-Smith (1993) both show how fundamental mindsets and belief systems powerfully determine people's positions on policy. Policy debates are competitions over the problem frames and value systems. Discourse coalitions join together with shared world views and try to change the way others understand the issues, rather than to change an opinion with discrete pieces of formal information designed to show logically what the correct answer is. Williams and Matheny (1995) contend that the mental frameworks and language of market analysis, pluralism, and communitarianism all limit our ability to deal effectively with environmental disputes, and that we need to embed a framework that is an alternative to these three.
7. There were exceptions within the report. Most observers, by the early 1980's, regarded the reports as largely unbiased and reasonably accurate, except for a few countries with which the U.S. had client relations.
8. Dewey (1954, ch.V), in his lectures delivered in 1926, articulated a similar perspective emphasizing the importance of symbols and the development of shared meaning through communication as essential for the individuals in a community to identify needs and wants, and views on public issues. His overall argument in these lectures was that economists and utilitarians misrepresent the world as made up of autonomous individuals, when, in fact, their individual preferences are

socially constructed—a view that dovetails with the perspective in this article. Those who see individuals as only rationally pursuing their self-interest are comfortable with the instrumental rationality of the conventional view of planning. Those, however, who contend that individuals are moved by many other reasons than calculated self-interest are more satisfied with a broader, communicative view of planning.

9. See also Ozawa (1991), whose case studies of science-intensive disputes show that even these disputes involve many types of knowledge.
10. Forester (1993) has illuminated how important stories are to practitioners' learning and communications. Kaplan (1993), himself a practitioner, also writes of the centrality of narrative to practice.
11. de Neufville and Barton (1987) explore the role of myth in public policy debates and contend that myth-like stories can always be found wherever controversial new policies are passed. These stories facilitate the collective leap of faith into the future that is needed for such policy change.
12. Throgmorton (1993), for example, talks about the use of surveys as a kind of rhetorical device to help frame the issues a certain way. Rein and Schön (1993) argue that the problem-framing process is central to policy making.
13. See the classic chapter by Peattie (1987) on how visual and statistical representations played a crucial part in framing the planning issues in Ciudad Guayana. Because there was no stakeholder dialogue or collaborative process, a city was designed that no one used.
14. I use this term broadly to accommodate all the professionals who worked as part of these processes, since most of them either were, or could have been educated as planners. In any case, many who act as planners in our society are self-taught. Few, if any, professionals are now explicitly trained for these emerging and innovative processes. It is my observation that those formally trained as planners are often the most effective professionals in this context.
15. This draws on the work of Habermas, who has articulated a valuable set of ideas providing a way of thinking about "communicative rationality" (Habermas 1984; Dryzek 1990).
16. A growing literature on consensus building and mediation (e.g., Amy 1987; Moore 1987; Carpenter and Kennedy 1988; and Ozawa 1991) documents that many of the points as laid out by Habermas are paralleled in practice—though much of the practice has been guided not by theory, but by common sense, and trial and error.
17. This was a sample of 280 graduates between 1980 and 1990, with a response rate of about 65 percent of the total number of graduates. The survey is unpublished, and was designed and conducted by the author.
18. The survey of University of California, Berkeley planning graduates also placed problem definition as the single skill most used by planners (92 percent), ahead of statistics (56 percent for descriptive and 42 percent for

inferential), survey methods (72 percent), and even spreadsheets (87 percent).

REFERENCES

- Altshuler, Alan. 1965a. *The City Planning Process: A Political Analysis*. Ithaca, NY: Cornell University Press.
- Altshuler, Alan. 1965b. The Goals of Comprehensive Planning. *Journal of the American Institute of Planners* 31,3: 186–97.
- Amy, Douglas. 1987. *The Politics of Environmental Mediation*. New York: Columbia University Press.
- Berger, Peter, and Thomas Luckmann. 1967. *The Social Construction of Reality: A Treatise in the Sociology of Knowledge*. Garden City, NJ: Anchor Books.
- Bernstein, Richard. 1976. *Restructuring of Political and Social Theory*. Philadelphia, PA: University of Pennsylvania Press.
- Bijker, Wiebe E. 1990. *Social Construction of Technological Systems*. Cambridge, MA: MIT Press.
- Caplan, Nathan S. 1975. *The Use of Social Science Knowledge in Policy Decisions at the National Level: A Report to Respondents*. Ann Arbor, MI: Institute for Social Research, University of Michigan.
- Carpenter, Susan L., and W.J.D. Kennedy. 1988. *Managing Public Disputes: a Practical Guide to Handling Conflict and Reaching Agreements*. San Francisco, CA: Jossey-Bass.
- de Neufville, Judith I. 1975. *Social Indicators and Public Policy: Interactive Processes of Design and Application*. Amsterdam: Elsevier Scientific Publishing Company.
- de Neufville, Judith I. 1986. Human Rights Reporting as a Policy Tool: An Examination of the State Department Country Reports. *Human Rights Quarterly* 8,4: 681–99.
- de Neufville, Judith I., and Stephen Barton. 1987. Myths and the Definition of Policy Problems: An Exploration of Home Ownership and Public Private Partnerships. *Policy Sciences* 20: 181–206.
- Dewey, John. 1954. *The Public and its Problems*. Chicago, IL: The Swallow Press Inc.
- Douglas, Mary. 1986. *How Institutions Think*. Syracuse: Syracuse University Press.
- Dryzek, John. 1990. *Discursive Democracy: Politics, Policy and Political Science*. Cambridge, U.K.: Cambridge University Press.
- Feldman, Martha S. 1989. *Order Without Design: Information Production and Policy Making*. Stanford, CA: Stanford University Press.
- Fischer, Frank, and John Forester (eds). 1993. *The Argumentative Turn in Policy Analysis and Planning*. Durham, NC: Duke University Press.
- Forester, John. 1989. *Planning in the Face of Power*. Berkeley, CA: University of California Press.
- Forester, John. 1993. Learning from Practice Stories: The Priority of Practical Judgment. In *The Argumentative Turn in Policy Analysis and Planning*, edited by Frank Fischer and John Forester. Durham, NC: Duke University Press. 186–209.
- Gruber, Judith. 1994. *Coordinating Growth Management through*

- Consensus-Building*. Working Paper #617. Institute of Urban and Regional Development, University of California at Berkeley.
- Habermas, Jurgen. 1984. *The Theory of Communicative Action*. Boston, MA: Beacon Press.
- Hajer, Maarten A. 1993. Discourse Coalitions and the Institutionalization of Practice: The Case of Acid Rain in Great Britain. In *The Argumentative Turn in Policy Analysis and Planning*, edited by Frank Fischer and John Forester. Durham, NC: Duke University Press. 43-76.
- Hoch, Charles. 1994. *What Planners Do: Power, Politics & Persuasion*. Chicago, IL: American Planning Association.
- Howe, Elizabeth. 1994. *Acting on Ethics in Planning*. New Brunswick, NJ: Rutgers University, Center for Urban Policy Research.
- Innes, Judith E. 1988a. The Power of Data Requirements. *Journal of the American Planning Association* 54,3: 275-8.
- Innes, Judith E. 1988b. Effects of Data Requirements on Planning: Case Studies of Environmental Impact Assessment and Community Development Block Grants. *Computers, Environment, and Urban Systems* 12: 77-88.
- Innes, Judith E. 1990. *Knowledge and Public Policy: The Search for Meaningful Indicators*. 2nd ed. New Brunswick, NJ: Rutgers, Transaction Books. Introduction.
- Innes, Judith E. 1995a. Planning Theory's Emerging Paradigm: Communicative Action and Interactive Practice. *Journal of Planning Education and Research* 14,3: 183-9.
- Innes, Judith E. 1995b. Planning Is Institutional Design. *Journal of Planning Education and Research* 14,2: 140-3.
- Innes, Judith E. 1996. Planning Through Consensus Building: A New View of the Comprehensive Planning Ideal. *Journal of the American Planning Association* 62,4: 460-72.
- Innes, Judith E., Judith Gruber, Michael Neuman, and Robert Thompson. 1994. *Coordinating Growth and Environmental Management through Consensus Building*. CPS Report: A Policy Research Program Report. California Policy Seminar, University of California at Berkeley.
- Kaplan, Thomas J. 1993. Reading Policy Narratives: Beginnings, Middles, and Ends. In *The Argumentative Turn in Policy Analysis and Planning*, edited by Frank Fischer and John Forester. Durham, NC: Duke University Press. 167-85.
- Kennedy, Kevin. 1996. Local Negotiations and Public Participation in Hazardous Waste Incinerator Permitting. Unpublished dissertation. Berkeley, CA: University of California, Berkeley.
- Krimsky, Sheldon, and Alonzo Plough. 1988. *Environmental Hazards: Communicating Risks as a Social Process*. Dover, MA: Auburn House.
- Landis, John, and Rolf Pendall. 1994. Issues and Opportunities for CEQA Reform. CPS Report: A Policy Research Program Report. California Policy Seminar, University of California at Berkeley.
- Lindblom, Charles Edward, and David K. Cohen. 1979. *Usable Knowledge: Social Science and Social Problem Solving*. New Haven, CT: Yale University Press.
- Lynd, Robert S. 1939. *Knowledge for What? The Place of Social Science in American Culture*. Princeton, NJ: Princeton University Press.
- Moore, Christopher. 1987. *The Mediation Process: Practical Strategies for Resolving Conflict*. San Francisco, CA: Jossey-Bass.
- Peattie, Lisa. 1987. *Planning: Rethinking Ciudad Guayana*. Ann Arbor, MI: University of Michigan Press.
- Ozawa, Connie. 1991. *Recasting Science: Consensual Procedures in Public Policy Making*. Boulder, CO: Westview Press.
- Rein, Martin, and Donald Schön. 1993. Reframing Policy Discourse. In *The Argumentative Turn in Policy Analysis and Planning*, edited by Frank Fischer and John Forester. Durham, NC: Duke University Press. 145-66.
- Rein, Martin, and Sheldon White. 1977. Policy Research: Belief and Doubt. *Policy Analysis* 3: 239-71.
- Sabatier, Paul A., and Hank C. Jenkins-Smith. 1993. *Policy Change and Learning: An Advocacy Coalition Approach*. Boulder, CO: Westview Press.
- Sager, Tore. 1994. *Communicative Planning Theory*. Aldershot, UK: Avebury.
- Schutz, Alfred. 1976. *Collected Papers II*. The Hague: Martinus Nijhoff.
- Stinchcombe, Arthur L. 1990. *Information and Organizations*. Berkeley, CA: University of California Press, Ltd.
- Szanton, Peter. 1981. *Not Well Advised*. New York: Russell Sage Foundation and The Ford Foundation.
- Taylor, Serge. 1984. *Making Bureaucracies Think: The Environmental Impact Statement Strategy of Administrative Reform*. Stanford: Stanford University Press.
- Thompson, Robert. Forthcoming. Unpublished dissertation. Berkeley, CA: Department of City and Regional Planning, University of California, Berkeley.
- Throgmorton, J. A. 1993. Survey Research as Rhetorical Trope: Electric Power Planning Arguments in Chicago. In *The Argumentative Turn in Policy Analysis and Planning*, edited by Frank Fischer and John Forester. Durham, NC: Duke University Press. 117-44.
- Weiss, Carol. 1979. The Many Meanings of Research Utilization. *Public Administration Review* 39,5: 426-31.
- Weiss, Janet, and Judith Gruber. 1984. Detering Discrimination with Data. *Policy Sciences* 17,1: 49-66.
- Wilensky, Harold L. 1967. *Organizational Intelligence: Knowledge and Policy in Government and Industry*. New York: Basic Books, Inc.
- Williams, Bruce A., and Albert R. Matheny. 1995. *Democracy, Dialogue, and Environmental Disputes: the Contested Languages of Social Regulation*. New Haven, CT: Yale University Press.