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Consensus Building as Role-Playing and Bricolage: *Toward a Theory of Collaborative Planning*

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Abstract

This paper makes the case, based on the authors' observation of and participation in stakeholder-based consensus-building, that successful processes which produce breakthroughs and innovative ways of resolving policy conflict proceed de facto through a form of role-playing where participants play out scenarios and take on different roles. This approach, which is very much parallel to the cooperative role-playing games that have recently gained worldwide popularity, allows participants in consensus processes to consider strategies that are not normally acceptable to their agencies and constituencies and allows them to cooperate in a way that is stimulating and encourages their genuine engagement. They produce packages of recommended actions, not through goal-directed analysis, tradeoffs, weighing of competing evidence, or the taking of moral positions, but through collaborative bricolage or tinkering. That is, participants bring to the dialogue the experiences, ideas, methods, and scenarios they can imagine and they jointly piece them together to create a strategy on which all may agree. The process itself is just and foremost a learning process which enables transformation of participants' previously held convictions, and helps them to develop new shared meanings, purposes, and innovative approaches to otherwise intractable issues.

"If Looks could kill, they probably will
In games without frontiers — war without tears.
If Looks could kill, they probably will
In games without frontiers — war without tears."
Peter Gabriel,
Games without Frontiers

The refrain to this popular song captures the spirit of the role-playing games which it describes and which many young people today are playing, often for days or weeks at a time. In this interactive gaming, players take on roles drawn from fantasy, science fiction, or horror genres. They develop their own characters in accordance with both the lore of vampires and their own preferences. Books describe the settings[1] and a storyteller provides a vision and starting place. Players then join in interactive adventures, around the table, in the community, and on the Internet. In these games players must accomplish a heroic goal by moving about in a dangerous and unfamiliar environment, and by overcoming challenges with the help of various objects they have picked up along the way. An ingenious player creatively reuses these objects for new purposes, turning a letter opener for example into a tool to remove mortar and gain access to a secret room.

These games are cooperative rather than competitive, with players not only trying to achieve their goals, but also helping others to do so. The games have no ending point and no winners and losers. There are few rules in most of the games, but players can in any case change them. As in the song, "anything

can happen and it probably does," because the games are limited only by the imagination of the players. The games are stimulating and mind-expanding. Playing is itself the reward. Players develop skill at portraying their characters while working together to meet challenges. The players are typically young people conscious of growing up in the postmodern context where nothing is certain, where people are disconnected from one another, where values are in question, and where the complexity of the world is all too evident and all too intimidating. For them role-playing is learning through simulation, where they can safely try out different personality traits or actions and see what consequences these may have. Collectively they can push the envelope of what they perceive is possible. As Sherry Turkle (quoted in McCordrick, 1996: 160) pointed out, players use role-playing as "a significant social laboratory for experimenting with the constructions and reconstructions of self that characterize postmodern life."[2]

Peter Gabriel's refrain captures the spirit of these games in the odd mixture of contingent with future — "If looks could kill, they probably will." These games try out possibilities while making those possibilities more real. The games themselves are transformative in that they change the players, how they see the world, and what they will do in it. These are truly "games without frontiers," moreover, because no one can predict all the paths they could take, the scenarios that could evolve, nor the ways the dramas could be resolved. Ultimately, the games allow "war without tears," while encouraging creativity through cooperation.

This article will make the case, using illustrations from the authors' research and practice, that planning through consensus-building, when it most creatively resolves controversies, can be usefully understood as similar in many key respects to these role playing games. People all over the world are experimenting with consensus-building to deal with complex, controversial public issues, changing contexts, and uncertain futures in an institutionally and politically fragmented society. These consensus projects engage dozens of stakeholders in the effort, for example, to develop a management plan for a major urban estuary,[3] a state or regional growth management strategy,[4] or a habitat conservation plan for an area encompassing a number of endangered species.[5]

Consensus-Building

Consensus-building is a broad term encompassing many types of collaborative efforts, but this article focuses on processes which engage individuals representing differing interests in long term, face-to-face discussions in which they seek agreement on strategy, plans, policies, or actions[6]. These processes are usually ad hoc and self-organizing. They are sometimes established by government agencies or legislative bodies to help them deal with what seem to be intractable problems, and sometimes they are put together by developers, environmentalists, and other private players frustrated by years of conflict and stalemate or by loss of limited common resource (Ostrom, 1990; Innes et al., 1994). They range in size from a handful of participants to hundreds, organized into interlocking committees and task forces, each working on different aspects of complex questions.

Consensus-building, by the authors' definition, refers to processes that are truly facilitated, as opposed to merely chaired. This may occur when there is a professional facilitator or a chair who acts as facilitator, or when a task group has established equality among themselves and the ability to have free-wheeling discussion. The processes use special meeting management techniques which allow all participants to be heard and informed, and encourage discussion that is both respectful and open-ended. These techniques discourage the taking of positions, adhering instead to the interest-based model of bargaining (Fisher and Ury, 1981). Assumptions and constraints are not taken for granted but explored. Consensus-building owes a substantial debt to the practice and literature of negotiation and mediation (for example, Moore, 1987; Carpenter and Kennedy, 1991; Susskind and Cruikshank, 1987), which have produced meeting management and discussion techniques to assure a civil environment, where all can express their interests and become informed, where constructive discussion can occur, and where consensus is the goal. Such face-to-face group communicative processes allow the sincerity, legitimacy, comprehensibility, and accuracy of statements to be tested, and the inclusion of opposing stakeholders makes it likely that assumptions are questioned. Innes (1996, 1998) has equated this communicative ideal to the notion of communicative rationality as articulated by Habermas (1984) and interpreted by Dryzek (1990) and Fox and Miller (1996, ch. 5).

Many processes go under the label consensus-building that do not fit the authors' definition, and have little chance of doing creative role-playing and bricolage. A substantial proportion of so-called consensus efforts are little more than conventional meetings which involve a wider range of participants than would have otherwise been engaged, and which seek near unanimous agreement or at least passive acceptance of proposals rather than taking votes. These vary in the degree to which they engage all participants in open-ended discussion or, ultimately, in the effort to *build* agreement by exploring options and understanding different players' perspectives. Other "consensus" efforts are really mediations, where competing players come together to resolve a specific dispute, for example, on the siting of a waste facility. These vary in the degree to which they consider broader issues which have only indirect relation to the dispute. Still other "consensus" efforts are little more than tactical exercises where one set of special interest attempts to gain an upper hand over others or where powerful players seek to coopt the weaker ones.

The kind of dynamic the authors outline in this article is one they found in cases where the consensus building was a long-term effort to develop shared understanding and agreed-on strategy to deal with an uncertain and evolving future, while addressing a broad planning and policy shared concern, such as management of a resource. Sometimes these efforts produced remarkable agreements, innovations, and strategies for addressing difficult issues, which were then adopted by legislatures and public agencies. More often, they produced a few visible agreements. Sometimes it is hard to say just what the processes accomplished, though most of the time participants felt the effort was important and valuable. Innes et al. (1994) and Gruber (1994) conclude that consensus-building processes produce shared social, intellectual, and political capital and that these intangible products of personal and professional relations, joint learning and

agreed on data bases, and political influence may well be their most important products. The processes, like role-playing games, are transformative: they change the players, what they know, and what they are likely to do. Since these are often the people who are in a position to have an effect on the resource or the problem, change in their attitudes and knowledge matters and is itself a major part of the long-term consequences.

Role-Playing and Bricolage As Useful Concepts

Literature on consensus-building tells us a good deal about alternative ways to structure the processes, incentives for getting players to the table, and meeting management techniques (for example, Carpenter, 1989; Carpenter and Kennedy, 1991; Innes et al., 1994; DuPraw and Potapchuk, 1993; Susskind and Cruikshank, 1987; Fisher and Brown, 1988). It offers a rich array of case studies and tells us what kinds of issues have been successfully dealt with through consensus-building.[7] It offers little understanding, however, of the actual dynamic of the discussions or of how discussions came to make a difference in players' attitudes.[8] Reports on consensus-building have often relied primarily on exit interviews with participants who try, mostly unsuccessfully, to remember the course of the dialogue and of their own thinking. Other studies of consensus-building have been done by facilitators or managers of the process, but these typically focus on structuring of discussion and design of tasks and subgroups rather than on the talk itself. Moreover, as these are not done by neutral observers, inevitably the critical perspective is to some degree lacking.

Our observation and practice of consensus-building suggests that the analogy to role-playing games will help to fill a gap in understanding the dynamic of effective consensus processes. Role playing in consensus-building allows players to let go of actual or assumed constraints and to develop ideas for creating new conditions and new possibilities when prior assumptions were that the disputes were intractable. Drama and suspension of reality allows collaboration among competing, even bitterly opposed, interests while engaging individual players emotionally over many months. Scenario-building and storytelling is a way of making collective sense of complexity, of predicting possibilities in an uncertain world, and allowing the playful imagination, which people normally suppress, to go to work.[9] In the course of this process of engaging in various roles, participants develop identities for themselves and others and become more effective participants, representing more clearly, and ultimately change in the process in important ways.[10]

In many of their most productive moments participants in consensus-building engage not only in playing out scenarios, but also in a kind of collective, speculative tinkering, or bricolage, similar in principle to what game participants do. That is, they play with a range of heterogeneous concepts, strategies, and actions with which various individuals in the group have experience and search for ways to combine these until they create a new scenario which they collectively believe will work. This idea of bricolage, discussed further below, is a type of reasoning and collective creativity which differs fundamentally from the more familiar ideas of argumentation and tradeoffs.[11] The latter are typically modes of problem-solving or dispute resolution, allowing zero sum allocation of resources among participants or finding which actions may be acceptable to everyone. Bricolage however is a design strategy which produces, rather than a solution to a

known problem, a new way of framing the situation and of developing unanticipated combinations of actions that are qualitatively different from options on the table at the outset.[12] The result of this collective tinkering of new scenarios is, most importantly, learning and change among the players and growth in their sophistication about each other, about the issues, and about the possible futures they could seek. Both consensus-building and role-playing games are centrally about learning, innovation, and change in a process that is entertaining and when conducted effectively, in some fundamental sense empowering to individuals.[13]

While the authors do not contend that such familiar discussion methods as making tradeoffs, taking moral positions, or using logic and invoking scientific evidence are irrelevant in consensus-building — indeed they are all part of the overall process — the authors do argue that these more familiar approaches are usually not enough to reach agreement in controversial, complex, and uncertain conditions. Often these methods interfere with cooperative dialogue. None of them encourages the innovation and collective commitment to a new idea which is necessary for moving out of paralyzing disputes and agreeing on a constructive solution. None of them provides the necessary opportunity of putting together the disparate parts of a complex but feasible proposal.

Theory that can support these contentions is scattered in many fields, and the intellectual linkages among seemingly disparate ideas are just beginning to take shape. One important element is in the work of Argyris (1993) and Argyris and Schon (1974) on single- and double-loop learning. They argue that a major obstacle to change within organizations is in participants' "models in use" or theories of action which are defensive, serving as blinders limiting learning. To overcome these obstacles, participants in an organization must not only learn to adjust their actions on the basis of feedback in a process of single-loop learning, but they must often adjust their "master program" or understanding of the system and of the values they wish to promote in double-loop learning.[14] When, how, and under what conditions such double-loop learning can occur remains elusive in their work, as it does in that of others who discuss this idea. The authors of this article contend the ideas of role-playing and bricolage can thus help fill a gap, whether participants are part of a single organization or are multiple stakeholders in a community or resource.

Other current work in organizational development and management theory is also pertinent, most notably Senge's widely read *The Fifth Discipline: The Art and Practice of the Learning Organization* (1990). He argues there are five disciplines necessary to a learning organization, including personal mastery or a kind of individual empowerment, the ability to get past assumptions and engage in double-loop learning, the capacity to create a collectively shared vision, team learning, and systems thinking. Each of these disciplines, we contend, is equally intrinsic to an effective consensus-building process and each is aided by the collective scenario-building we have observed.

Senge (1990: 238-249) draws on the work of scientist David Bohm[15] to argue that team learning, which in many respects resembles consensus-building, requires genuine dialogue. Senge contends that there are two distinct types of discourse — dialogue and discussion — which at best work together synergistically. Discussion is something like ping pong, where an idea is batted back and forth, analyzed, and criticized,

and where those who engage in it seek to win by having their point of view accepted. Dialogue, on the other hand, is about accessing and developing a pool of shared meaning. Its purpose is to go beyond any one individual's understanding to insights that could not be achieved individually. "In dialogue, a group explores complex difficult issues from many points of view. Individuals suspend their assumptions but communicate them freely." The purpose of dialogue, according to Bohm, is to reveal incoherence in our thought, which happens when we fail to recognize that thought is not the same as the world — we become trapped in our thought.

Bohm also comes close to equating dialogue with consensus-building, arguing that three basic conditions are necessary for dialogue: (1) participants must suspend their assumptions; (2) participants must regard one another as colleagues; (3) there must be a facilitator. In a passage which anticipates much of what we will argue about role-playing in effective consensus-building, he argues (1987: 246-7) that,

> Only a dialogue that can, at the same time, meet the challenge both of uncovering the intellectual content of a rigidly held basic assumption and of 'defusing' the emotional charge that goes with it will make possible [moving into the rich creative domain between individual and social consciousness]. . . . The spirit of dialogue . . . is . . . the ability to hold many points of view in suspension, along with a primary interest in the creation of a common meaning. It is particularly important, however, to explore the possibilities of dialogue in the context of a group that is large enough to have within it a wide range of points of view, and to sustain a strong flow of meaning. This latter can come about because such dialogue is capable of having the powerful nonverbal effect of consensus...In true dialogue there is the possibility that a new form of consensual mind . . . may be a more powerful instrument than is the individual mind. . . . Fixed and rigid frames dissolve in the creative free flow of dialogue as a new kind of microculture emerges.

Thus dialogue can lead to what Schon and Rein (1994) call "frame reflection," or the ability to act from one perspective while, in the back of our minds, we hold onto an awareness of other possible perspectives in a sort of double vision.[16] Crucial to such double vision and to the more general concept of reflective policy inquiry, in Schon and Rein's view, is to link it to the experience of concrete practice. The implication thus is that dialogue which is grounded in practice, at least in part, helps to assure that participants do not become trapped in their own thought and fail to see assumptions and possibilities. Forester (1996a) also pursues a line of thought which parallels our contentions as he explores how dialogue can become transformative learning. He argues that deliberative rituals, brainstorming sessions, or search conferences can provide the safe place for participants to tentatively explore new roles and identities along with new norms and agreements. He contends that "ritual occasions enable innovative self-generation, group redefinition and innovation, that *may not be envisioned by any participant* at the meeting's onset" (p 321) (emphasis in the original). The challenge he says for planners is "the structuring of deliberate distraction, the deliberately enabling distraction from participants' own narrowness of focus that prevents them from remembering, recognizing and learning ways they wish to."

In many ways, planning through consensus-building is not just communication, but learning. Don Michael in 1973 called for learning to plan and planning to learn, arguing that we must live with uncertainty and error and yet prepare for the future. We must learn to respond to feedback and to change in his view.

This was a call not really addressed by the profession in the 1970s and 80s, as it went on to focus more on perfecting technical skills and seeking products. In the 1990s, however, Michael's message has taken on new relevance as the comfortable certainties of the earlier period have evaporated. In his 1996 Foreword to the 2nd edition of his classic book, Michael, like Senge and Bohm, emphasizes the importance of making sense of the world as individuals and as a civil society. He reminds us that "Trying to become learners is fraught with profound social and psychological risks . . . . The more disrupting the world becomes the more tightly most of us grasp what we have already learned" (p. 24). Thus he poses the challenge that consensus-building can help to address.

Case Examples

The earlier research of Innes et al. (1994) into 13 cases of consensus-building focused on how and when consensus-building was useful and effective and on the organization of the processes. Since the research was based on interviews with participants and examination of documents, we were unable to compare how the actual discussion was conducted in more and less successful cases. Our indirect evidence suggested that much of the actual discussion which produced innovative agreement focused on exploring the meaning and practical implications of concepts such as regional infrastructure or plan consistency and on framing and reframing a policy problem. In the end, many of the processes resulted in packages of actions to which all, or most, players agreed. Yet, in most cases it was unclear how these particular packages came into being. Traditional logrolling was not a sufficient explanation, as the packages usually included many ideas that no participant had brought to the table. They might even include something that several stakeholders originally opposed. Sometimes the whole scheme was a new one, reflecting an alternative way of seeing the problem or a shared vision perhaps of a regionally interconnected system. We would have to observe the actual discussion to fill the gaps in our understanding about what led to such change.

Therefore, Innes and Gruber began in 1995 to conduct systematic long-term observations of the crucial meetings in several consensus-building processes. Work is still in progress at this writing, but it has provided us examples for this article. For these studies, researchers attended dozens of working group and task force meetings as observers, taking detailed and, as much as possible, verbatim notes. In some cases meetings were open to the public, but in others they obtained permission from the group to attend, with the understanding that they would not report on the substance of the deliberations as they were ongoing, nor reveal the positions or arguments of participants by name. Over time the participants became used to their attendance, and appeared to conduct discussion without concern about researchers' presence. This observation effort has been supplemented by study of materials produced by the consensus processes, review of published material by others about the processes, and interviews with key participants. The present article relies also on the substantial experience and participant observation of coauthor Booher, who has been a long-time participant in several consensus processes, including one of those currently under study, as well as facilitator of others.

Specific examples in this article are drawn first from an ongoing consensus-building effort in metropolitan transportation planning for which Innes and her co-investigator, Gruber, have been observing deliberations from 1995 to 1997. This is the Metropolitan Transportation Commission's (MTC) Bay Area Partnership of transportation providers and regulators designed to implement in a collaborative way the Intermodal Surface Transportation Efficiency Act (ISTEA). It involves 15 to 20 stakeholder committees working on issues ranging from funding allocation to modeling coordination and regional transportation planning. Innes has also been observing the Sacramento Water Forum (SWF) since mid-1995. This is an effort to develop a water management strategy for the lower American river, a key water source in the Sacramento region. It involves water purveyors, local governments, environmental groups, and business interests. Several million dollars have been spent thus far on facilitation and technical staff to manage this highly conflictual political issue. The third project Innes has been observing is the California Governance Consensus Project (CGCP). Booher has been cochair of this effort since its inception in 1994.[17] This project engages lobbyists and others representing all of the significant interests from business and real estate, to education, local government, environment, ethnic minorities, and the poor in an effort to transform the fiscal and governance structure of the state. This group has professional facilitators and staff. Booher also as part of the CGCP has been conducting a variety of consensus-building efforts among two or three interests at a time designed to bring ideas to the larger table. Innes and Gruber have completed case studies of CGCP's predecessor projects (Innes et al, 1994: 71-89), and Booher was a key participant in those.

Tradeoffs and Argumentation v. Bricolage

As we began our observations of the two facilitated processes, we noted that participants did not necessarily share the mindset of the mediators who were trained in thinking about dispute resolutions, tradeoffs, and compromise. When they spoke the language and framed the issues in dispute resolution terms, referring to such ideas as "sticking points" and "negotiations," they seemed to confuse participants. In the CGCP, for example, their focus was not on resolving a dispute but on inventing strategy to change a broad array of interlinked activities. It was on reframing the future to alter a pattern of counterproductive policies. In consensus-building, many participants arrive without a clear idea of what their interests are in relation to the task, so they are uneasy thinking of themselves as negotiating and wary of saying what they want when they do not yet understand an issue. Groups operated, in our observation, as they moved toward resolution, not by tradeoffs among players nor by arguing about what was right but by some other process. In many cases, however, participants and facilitators lacked a language and even awareness, much less sense of legitimacy, for what they actually did.

The Sacramento Water Forum (SWF) illustrates this divergence of the language and practice. As the group agreed on a complex package of actions to protect everyone's water supply while preserving the American River habitat, staff developed a list of "quid pro quos" to describe the results. That is, they created a list of what water providers were giving up in response to environmentalist concerns, alongside a

list of what the environmentalists promised to do in return to support the water providers' projects. The irony is that the group consensually developed this overall package largely *before* this quid pro quo list was identified. Players during actual discussion concentrated on trying to articulate and create strategies to get what they and others needed collectively or individually (e.g., reliability of water supply). They did not "negotiate" in the sense of trying to find compromises or seeking quid pro quos from each other. In making their individual proposals they often had no idea which, if any, player might have to give up something to achieve their goal. In a fundamental sense, they created new collective value through proposals that would permit higher levels of water use for all purposes. The quid pro quo list was, rather than a documentation of logrolling, simply a tool for players to use to persuade their supervising boards that they had "negotiated" a good "deal." It also helped participants who suddenly became concerned about the fairness of the results to see the overall distributive consequences of the proposed package. While a number of participants repeatedly pointed out that this process was not about everyone getting back the same amount they contributed, but about every player getting what they needed, old habits and conceptions seemed to die hard. Players feared being regarded as foolish and negotiating away advantages they could have used, even when there was little else they needed.

The authors sought an alternative way to describe the nature of the reasoning and dialogue in consensus-building. Participants did not typically engage in logical argumentation of the form "We should do this for the following reasons . . ." Nor did they say "We can give up this benefit in return for that one." They did state their own interests and discuss different ways to understand the problem in the early phases of discussions, in accordance with the principles of *Getting to Yes* (Fisher and Ury, 1981). In the effort to make sense of how the group went beyond this to come up with innovations and agreed-on packages of actions, authors found that the idea of bricolage provided more insight than traditional notions of negotiation, scientific reasoning, or moral argumentation.

Bricolage, as elaborated by Levi-Strauss (1966: 16-33), is sharply contrasted to the rational, instrumental model of searching for means to reach given ends because, on the one hand, the ends are not clearly known at the outset and, on the other, the "reasoning" process is not logical-deductive but more like a creative design effort. The bricoleur (there is no adequate English translation) is one who works with his hands to do a large number of diverse tasks, making things, repairing, artwork, etc., relying on whatever is at hand. The bricoleur has a heterogeneous but finite repertoire of materials and tools with which to work. These materials he will have collected over time without necessarily any specific purpose — they will include items developed in, or left over from, earlier projects, and things collected simply because they might someday be useful. These are, typically, items which are not so specialized as to require an expert to use them, nor to have only one determinate use. For example, a framed photo could serve as a stand for a typist to read a manuscript, or a telephone could be used as a paperweight. An assemblage of leftover parts from other projects could be used to create a unique toy for a child. The bricoleur is like the player in the fantasy

game who picks up the letter opener because it might be useful. He is also like all of us who have gathered up policy ideas, concepts, and practices over time, which we can bring to bear in a policy-making process.

The idea of bricolage has a kinship with Cohen et al.'s (1988) concept of the policy "garbage can," where unused, or partially used, policy ideas pile up until someone reaches in to find one or two that might be useful. Forester (1996a) suggests that in participatory, interactive decision-making, the garbage can is not an adequate metaphor because choices, problems, participants, and solutions meet, interact, and transform one another in an ongoing exploratory process. The garbage can model falls short because it misses this interactive exploration.

Levi-Strauss contends that the bricoleur does something much more sophisticated and creative than pull at random from a "garbage can," and his idea offers us a powerful analogy to make sense of innovative consensus-building. A bricoleur engages in a *dialogue with a collection of materials* to choose among them and to find a subset which in combination can offer a useful approach to his problem. "He interrogates all the heterogeneous objects of which his treasury is composed to discover what each of them could 'signify' and so contribute to the definition of a set which has yet to materialize." Thus, the bricoleur does not have a clear end in sight, but a rather vaguely defined project or sketch of an idea. The project itself will take shape and its characteristics will be determined by what is available and how it can be assembled. Moreover, the significance of the object in the end will depend on the role it plays in the total creation, and of course on what that creation turns out to be. The process of getting from a collection of objects to a coherent and meaningful combination is one of dialogue. Swidler (1986), in an article entitled "Culture in Action," has argued similarly that people interrogate their culture for concepts and practices that will help them to deal with change and new challenges. She contends individuals and social groups actively interact with their culture to make new social strategies, but notes that they are limited to the tools and ideas in their repertoire. Bamberger (1991) makes a comparable argument in relation to the creative process of composing tunes, where composers come to see in new ways elements they already knew, to see new possible relations among them, and to develop unexpected insight through the evolutionary process of making. They too learn through reflective conversation with materials.

Bricolage as a form of reasoning, according to Levi Strauss, is fundamentally different from science or engineering, where the end product determines what means should be used. In bricolage the end product is defined by the way the materials at hand can be assembled. There is not one best way, but many different ways which one might assemble heterogeneous and available concepts and policy ideas into some kind of coherent and workable strategy. One might even change the purpose if the materials seem to work better for something else. By contrast, science as a form of reasoning disassembles a phenomenon, reducing it to narrowly defined variables and relationships among them. Its purpose is to explain, predict, or analyze, but not to create or synthesize. Bricolage is a nonlinear, holistic attack on a problem which results in a practical working product. The design of the product is not grounded in positivist, predictive theory, but rather in a

combination of practical and aesthetic sensibilities. The decision about when the product is satisfactory is an intuitive one.[18]

The authors contend that the dialogue that goes on in effective consensus-building is not only a form of role-playing around issues and problems, but also that the "solutions" are often achieved through a form of collective, intellectual bricolage. The players' discussion is in great part a dialogue with the materials they have — the laws and practices, the funding, the political resources, the concepts and ideas, the personalities, and perceptions of public opinion. They explore these materials in order to devise a set of actions they believe will work or improve matters. They shift the pieces, try other pieces, and, like the bricoleur, do not agree on their creation till the whole comes into focus.

Role-Playing

Whatever consensus-building may be, it is definitely role-playing. Participants come to the table representing stakeholders with different interests. It is their job to play the role of that interest group in this discussion, just as in games where one person plays a vampire and another a werewolf. In this role they speak in the voice of that group — as they believe its members would if they were to hear the discussion or proposal. Participants also have a variety of other roles into which they shift during the discussions, roles which are all part of their overall persona. They may have a role, for example, as lobbyist or as agency staff member. In that role they tell the other participants about the difficulties they will have selling a particular idea, though they may contend it is an excellent idea which they support in their role as a professional and member of the group. The latter roles are crucial because they allow the building and maintaining of trust even when the group cannot reach agreement on something that seems reasonable to all. Players also take different roles as participants in deliberation, choosing, for example, the naysayer role, the skeptic, or the enthusiast. Some try to generate new alternatives, and still others see their role as clarifying emerging arguments or noting connections among the players' views.

Finally, participants also bring to the table personal roles as parents, commuters, suburbanites, bicyclists, or people who care about the environment. They often bring valuable knowledge and opinions from these roles into the discussion, opinions that might otherwise not be included. Sometimes they even advocate for things that the stakeholder they represent would oppose, like the urban transit manager at MTC who opposed efforts to expand transit funding because as a suburban dweller he sympathized more with the need to improve highways, or the suburban transit manager who pushed for bikeway funding because he was an avid cyclist. In a dramatic moment in the Water Forum, a frustrated water provider representative switched into his personal role as environmentalist and citizen, and challenged the providers who were saying their boards would not agree to install water meters.

> We sound like a goddamn school board talking about the algebra schedule. It seems we have a consensus here that we need to put meters on everyone's home here. I am serious (passionately) . . . We need to have the gumption to say to our boards 'we need to do this.'

Another player replied in a distressed tone, "But we have to feed our families!" He retorted, "But are *we* here to protect ourselves?"

All the players also have roles, simultaneously, in other games.[19] Their positions in their agencies may be harmed or enhanced by a particular strategy of the consensus-building group. For example, a county transportation director supported MTC's scoring criteria for determining which projects would be funded, because in reducing his own discretion, it saved him from contending with the competing pressure of mayors and other elected officials wanting their local streets improved. A player may agree within the group to one set of ideas while fighting those very proposals in other arenas. For example, in the CGCP, while players were agreeing on the importance of linking new revenues to government efficiency reform, some of them were promoting unlinked new revenues or governance reforms in separate bills in the legislative arena. In the Water Forum some of the participants formally protested the actions of others at the State Water Board, while working constructively together in the Forum process. Although this kind of action understandably causes some anger within the groups, on the whole participants are able to accept that, as one facilitator often pointed out, they are "living in two worlds." Until players know that the consensus-building process will provide the most effective avenue to serve their constituencies' interests, they will continue to work in these parallel, competing games in ways that may contradict the views they express in the consensus process. On the whole participants accept these activities, in great part because they recognize that operating in these games is part of the players' various roles.[20] Support for an idea within the consensus process, they recognize, is contingent on other things being included in the package, whereas outside activities are done on the assumption collaborative actions will not control the result.[21]

Consensus-building is also like many role-playing games in that the only formal rules are simple ground rules. These set the stage, provide some accountability, guide behavior, control intrusions from nonparticipants, and provide for a way to resolve differences the group cannot work through. These rules cover such matters as how often players must report to their stakeholders and get feedback, the conditions for bringing in new stakeholders, and the rules for reaching decision. Other rules deal with the nature of appropriate discussion. Thus, players are typically discouraged from espousing specific positions or from making personal attacks or direct criticisms of other's views.

Like role-playing games, these processes begin with something like a storytelling phase where the setting, the drama, and the characteristics of players are laid out for, and with, the group. Community leaders or a project organizer may begin by describing the situation, explaining why they set up the project; experts may be invited to outline their understandings of the problems and statistical information on the issues, and the players give their own views of these. This leaves the group with a complex, but only partially delineated, story about, for example, California's fiscal crisis and why infrastructure is essential to its future.

All this sets the stage for the next phase, which is, typically, to develop a set of tasks and activities which can lead to constructive ideas and actions. At this point no one knows how things will evolve, and they try to find tasks that will trigger people's thinking and generate a productive dialogue to move things

forward. For example, in the CGCP, the first tasks selected were to develop a statement of the problem and a vision of what the state would be like with a good solution. The facilitator and project staff in the CGCP and the SWF learned by trial and error to label the documents around which they focused the meetings with terms that emphasized that these were hypothetical proposals made up by staff, not real proposals that came from specific groups who were seriously planning to promote them. This made it easier to avoid getting bogged down in position-taking and to get into the role-play and exploratory exercise. In the SWF the documents for the demand conservation negotiating team were called "trial balloons" to emphasize that ideas on the volatile issue of installing water meters, for example, were just scenarios to explore. In CGCP, staff began by putting on paper all the important proposals "floating around" on, for example, budget reform. This was, they told participants, to be a "jumping off place" for discussion.

The Dialogue: Storytelling, Drama, and Bricolage

When project managers hit on the right starting points, the dialogue took off. Discussion of these "unowned ideas" frequently generated other ideas unanticipated by the document in front of the group. Proposals triggered reactions in the players, and one or another would weave a tale of what would happen in their community if a particular proposal were implemented. One Water Forum participant for example drew a vivid picture of the irate citizens of Sacramento marching on the water district office if meters were installed too quickly and without public education about the need for controlling water usage. Environmentalists told parallel tales of what would happen in the environmental community if meters were *not* installed, noting which powerful and well-financed organizations would file lawsuits, and which would get new legislation passed in Sacramento, bringing all water projects to a halt.

Players gave a perspectives from their own angles on the proposals about meters. Any outsider listening would have a hard time following the conversation, which was in no way linear, and certainly was not what one would call a reasoned argument. Players stayed to the topic of how and when to install meters, but they all had very different kinds of things to say. They did not disagree directly with one another, nor make universal claims about whether a proposal was good or bad. They usually claimed in instead that what someone else wanted would for themselves be a disaster or a waste of time and money but they did so by telling a story rather than just making an assertion. For example, some water districts contained mostly commercial property which was easy to meter, while others contained residences where both the technology and the politics would be far more difficult. Those that could install meters for major water users could make more rapid progress in conservation than those with all small users. The stories of each of these districts showed how complex the overall situation was and how one-size-fits-all solutions would not work.

There were many specific things that were said in such discussions, but they seldom fit neatly together nor are neatly differed from one another. They were like the bricoleur's heterogenous materials in that they did not obviously fit into some scheme. As the group participated and listened, some members began to see a pattern, or to develop a radically different idea about how to approach the problem, that might

not require some jurisdictions to be winners and others to be losers. Someone would propose another scenario in the form "what if we tried this?" Then others would play with the idea for a while. They would then consider the dynamics of implementing the idea through more scenario-building, rather than by reacting directly or saying whether they agreed or not. The truth is they did not know whether they agreed until they each tried it out in their own frame of reference and until they could see how the idea would fit in the whole context. As they spun out the scenarios, the original idea typically evolved.

To understand what is going on in such processes, the idea of scenario-building helps, but the idea of intellectual bricolage also is needed. Like the players in the fantasy games who pick up random, potentially useful objects, the players at the table have been picking up ideas and learning different practices throughout their professional lives. During their months of discussion they have added to and modified their repertoire. In discussion they typically start with the obvious and recognized ideas that have already been proposed to solve the problem. When, after exploring these, they remain at an impasse, the more creative participants look for analogies to the solutions to other problems, and draw on ideas that have not been used on the problem before. These are the moments of genuine creativity, where breakthroughs can occur.

For example, in the SWF an impasse was broken over how to pay for a habitat restoration program through borrowing an idea from another context. One player suggested that players should withhold their required payments to the federal fund for environmental restoration, earmark it in a special account, and insist it be spent on the American River instead of elsewhere in the state or region. While the idea of withholding legally required federal payments was not in the repertoire of these agencies, but drawn from the repertoire of tax protesters (some even spoke of the Boston Tea Party), it provided them all a way of seeing there were other options and the dramatic scenario turned some players around who had felt stuck. While these agencies probably would not actually disobey federal law, the scenario made them think about political means to redirect existing federal funds.

Sometimes in the processes, members of these groups began to get highly creative in a collaborative way. They gained energy from others' ideas and spun out more of their own. Getting to this point took time, however, and required a high level of comfort among participants. New ideas are risky to offer. It is testimony to the ways that typical bureaucratic and political norms stifle creativity, that many participants in all the processes expressed great hesitation about offering an idea. Participants often wondered aloud if their idea was sensible. They apologized for bringing in a new idea when there was already so much on the table. The encouragement of the facilitator was sometimes needed, though they knew that their idea would not be ridiculed in this setting. Often the facilitator had to spot and articulate the new idea because the participant did not present it as such. The ideas were sometimes startling to others in the group, but in well-functioning processes players did not dismiss them out of hand. Once participants began to accept that what they were doing was *playing* with the ideas and *simulating* through their discussion the possible ramifications of a proposed policy, rather than advocating it or arguing against it, they were more comfortable.[22]

This fear of proposing new ideas partly explains why participants in consensus processes are usually uncomfortable about the press or nonparticipant observers being in the room. In their other roles, players take formal and agreed-on positions publicly and defend them staunchly. For them to be heard even contemplating some proposals that are at that point unthinkable to their constituency and certainly contrary to its espoused position, would be at best awkward and at worst politically disastrous. Frequently therefore groups set up ground rules forbidding observers and the press. Participants think, probably accurately, that the press would report on the proposals and scenarios without communicating their hypothetical qualities.

Drama is a significant part of the consensus-building and, the evidence suggests, a crucial aspect of any effort which moves and changes the players. The drama is in some sense a ritual, but like a ritual it has an impact. For example, the player who had a new idea about funding that would resolve the discussion over the habitat improvement plan in SWF stood at the front of the room to explain his idea. The facilitator, who had introduced him in tones of anticipation and excitement, wrote in big letters across the board, "BREAKTHROUGH!" Then awed silence reigned as each member in turn said, "I like the idea." "I can sell that to my board." The sense of relief and excitement was palpable. It was like the climax to a story, and all that came after was simply the denouement. Afterwards players came to Innes and said, "this process is amazing." "I do not know how this happened but it is terrific."

Emotions run high in creative consensus processes, not because of direct conflict, but through participants' telling of stories and anecdotes, even though the stories themselves are hypothetical ones about what would happen if. . . . The room often breaks out into laughter, commiseration, or frustrated mutterings. Players become intensely engaged. The facilitator in the SWF and CGCP strides from side to side, occasionally climbing on the table, gesturing, dramatizing the issues, making jokes, shushing people, reminding them in colorful terms of players not in the room who would be outraged by the direction of discussion. Four hours fly past as the players' personalities and multiple roles emerge and develop, as they start generating ideas and as they all try to absorb the many stimuli, the impressions, and information simultaneously, while continuing to play their multiple roles. The drama engages the players emotionally. They hear the emotion of each others' views, and come to understand what it is like to be in the others' shoes. They often as a result come to care not only about one another but also about reaching the denouement.

Both humor and conviviality are important elements of such a creative collaborative process. Humor allows players to relate to others with whom they disagree and permits them to communicate criticism gently and respectfully. In MTC's processes, where some of the dynamic involves a power struggle between staff who have always done the planning and Partnership members who want more control, this tension was both communicated and alleviated through teasing. Meetings which could have broken down into rancorous exchanges were rescued by the humor. In SWF, some of the older white male participants around the table deal with the peculiar situation of their group being "managed" by a younger, attractive woman at times by teasing her, and, at other times, by humorously acting out the roles of adolescent males with teacher. Water providers tell environmentalists they will be out of a job when the agreement is reached, as their only role

in life is to harass the providers. Environmentalists answer back in kind, amid a general hilarity. Through humor they acknowledge conflicts and uncomfortable power relations and make them emotionally manageable. The observer of the processes can tell when the group's comfort level is improving by the degree to which there is shared humor in the room.

Peattie (1996) has argued that planners must make physical and other spaces for conviviality if the civil society is to be achieved. It is that informal, unstructured interaction among individuals which is so crucial to building the personal connections and comfort level that is crucial to consensus-building as well. Facilitators who build in opportunities for informal interaction, through breaks, meals together, and workshop retreats, often see beneficial results in the ability of players to work together. In the SWF, after meeting for more than two years over dinners and in both formal and informal settings, players chatted intensely in breaks with those on opposing sides, almost always about the project or related water issues. Those in opposition to each other often sit together and whisper convivially. In the Growth Management Consensus Project,[23] a predecessor of the CGCP, two of the leading players representing opposing interests of business and environment became close friends and, while they never fully agreed, learned to incorporate each others' views into their own considerations. There is a reason that lobbyists and politicians do much of their work at receptions and lunches.

Consensus-building decision-making in the final analysis resembles the bricoleur's effort when he is trying to assemble a workable product. Groups are usually unwilling to agree piecemeal to ideas and proposals. They want to imagine the whole package before they take any votes. For example, although eliminating earmarking of parts of the state budget for specific purposes such as education is possibly a desirable policy for all players in the CGCP, those who currently benefit from such earmarking will not support it unless they can feel assured that a total package assures a revenue stream that will be overall greater and more reliable than what they now get. The new package as a whole might create another reality and a new set of relationships, making existing positions irrelevant, but until and unless that whole is on the table, this potential remains hypothetical. Rather than try to choose strategies one at a time as would occur in a more traditional piecemeal policy-making effort, participants in the CGCP agreed to narrow down the discussion to the ideas that *might* be acceptable, if the right other conditions were met. Without reaching a decision or taking a vote. they moved from ideas on education to others on the revenue system and budget, and then to infrastructure. Players engaged in discussion and disagreement at first over using this messy and even ambiguous approach, but as one player thought out loud about its advantages, he moved his hands in front of his face as if he were trying to assemble a difficult puzzle on the wall. He suddenly saw the group as the bricoleur, and for him it was a breakthrough. He liked the idea and the others quickly agreed.

The Advantages of Role-Play

Many so-called consensus-building processes are not like the ones we describe here. They are flat and dull, without drama, without bricolage, and without spontaneous, collaborative discussion. These, the

authors argue, are missing the most important power of consensus-building — the power to move the players and the ability to cement the learning deeply, as well as the ability to develop innovative, outside-the-box thinking, thinking that requires a sense of play. Many processes may fail because the participants are not good at playing their roles or because the project tasks are narrowly focused on disputes or insoluble questions, hemmed in by constraints and rules given by public agencies or players' assumptions about public opinion. The fact that most facilitators and participants do not explicitly see consensus processes as play, drama, or simulation limits them. When they do begin to see them in this way, they can help participants' energy and creativity to emerge, and get them to engage. Participants enjoy the stimulation and learning of a role-play, just as their sons and daughters enjoy their games. This enjoyment is crucial, if only to assure that participants come regularly to sessions.

Simulation has long been regarded as a legitimate form of analysis, even in the positivist instrumental way of thinking, though this role-play form is far more dynamic and less controlled than conventional simulations. The purpose of this role-play version, however, is not only to work out what the future might be like, but also to help participants learn to respond to the unexpected and complex possibilities, and to produce innovative strategy. As these simulations include the real-life actors, the exercises themselves and the learning associated with them are part of the product. Players learn about the dynamics of how their own ideas and actions play out in a complex world of interlinked players and unanticipated events.

As this imagery of the collaborative role-playing game becomes accepted and recognized, it will also accomplish a number of other things. To begin with, it will be easier to get people out of the mode of competitive and beggar-thy-neighbor positions. They will know that they can and should "check their guns at the door" and expect to work cooperatively at least inside the room. They will also be more likely to let their minds move in creative ways, not bounded by the strictures and practices of their organization or constituency that so often prevent innovation, and obscure the bigger picture, the larger story in which all of them are players.

It will also help participants to accept that there will be no end point in these games without frontiers, that dealing with complex, controversial issues must be continuous. No matter how sound and well-developed the package of actions, the future holds unanticipated events, and the group's scenarios may have failed to anticipate what actually happens. The implementation literature (Pressman and Wildavsky, 1974; Sabatier, 1981; Bardach, 1997) has amply demonstrated what these participants also know, to paraphrase from Pressman and Wildavsky's book title, that the best-laid plans in Washington don't work out in actual cities. There are too many individual decision-points and judgments which can never be fully anticipated, and most of them will not obviously flow from policies laid out earlier. Players need motivation and understanding to act, much less to act appropriately, just as did those who made the strategies to begin with. Events or experience may show a need to change or rethink an action as it fails to be workable after all. As a result, most of the consensus-building processes studied by Innes et al. (1994) generated additional con-

sensus groups to work to address emergent issues as proposed actions became programs, organizations, and practical activities.

Finally, reflecting on consensus-building through scenario-building and bricolage allows changes in our thinking about comprehensive planning. Innes has argued (Innes, 1996) that consensus-building overcomes the dilemma posed by Alan Altshuler (1965) when he contended comprehensive planning was impossible. He said it required the planner to become an expert in the public interest, which he viewed as infeasible. He also argued that to do an adequate comprehensive plan would require both specificity and generality, which he contended would also be difficult. Ultimately, he doubted that one could prepare a comprehensive plan in any real sense. Innes notes that, in accord with Kent's (1964) precepts for the general plan, consensus-building focuses on specifics, yet the precepts it develops are general and designed to anticipate the future. Consensus-building groups which have become deeply enmeshed in understanding and dialogue typically seek comprehensive solutions and are aided in the process by scenario-building. Perhaps most importantly, these groups can develop new "public interest" conceptions of themselves as being part of a regional system or a community through this kind of imagining process. In the SWF, for example, the breakthrough solution was one which allowed all water users to pay the same modest fee to support habitat restoration as a community need rather than to apply fees based on complex formulas.

The Intellectual and Cultural Context

We contend these developments in consensus-building converge with trends in science and culture. This may be because our culture is in what Sherry Turkle (1995) calls a "liminal moment," a period of fundamental transition. Old structures have broken down and new ones have not yet been fully created.[24] These are times of turmoil, ambiguity, change, and creativity. They are accompanied by pain, tension, anxiety, opportunity, and exhilaration. It is not surprising that a response to this kind of uncertainty is to search for collaborative ways to understand and respond. Nor is it surprising that drama, role-playing, and bricolage may turn out to be the methods of choice for this work. Turkle's contention is that young people in the postmodern world find these activities help them develop their identities and personal directions. The authors regard consensus-building as a parallel exercise in the planning world.[25]

Several sets of ideas emerging in other fields, particularly in science, computers, and management, both parallel the observations we are making about consensus-building and potentially offer us insights into what is happening. While this article cannot do more than point in the direction of some of these emerging literatures, we mention them because we believe they offer opportunities for planning theory to import concepts and theories that will be far more fertile and more useful in illuminating these emerging planning practices than are some of the concepts we have relied on for decades.

Recent work with artificial intelligence, for example, and on the functioning of the human brain provides a powerful alternative metaphor for how collective knowledge is created (Crevier, 1993). This provides a way of understanding why and how collaborative, communicative processes may genuinely produce "bet-

ter" products than individual, expert-based analysis. It also suggests directions for a new theory of reasoning and analysis in planning. The first generation of artificial intelligence research worked on the assumption that the goal of computing was to develop formulas to say what to do in a given situation, or to do faster and more thoroughly the many calculations it was assumed the brain did in playing chess or solving problems. But these methods did not do more than reach a modest chessplayer's skill. The programming of computers to learn from experience and feedback has proved to be far more successful than the earlier approach at achieving high levels of performance. Moreover, the invention of parallel processing opened up new potential for alternative approaches to information processing. Thousands of tiny computer processors connected together as parallel systems have been shown to handle problems that were impossible with serial computers. They can do so in great part because they can learn faster and develop complex responses based on feedback, rather than attempting to analyze all possibilities (Kelly, 1994).

At the same time, some research on the brain now contends that it can best be conceived of as a neural network where small bits of information are distributed throughout, as is the information-processing capability. Intelligence is the result of the brain connecting this distributed information together to produce a meaningful idea or activity. The linkages among the synapses connecting neurons are closely associated with the speed and effectiveness of the brain. Learning and memory patterns occur because the brain is constantly making subtle changes in these synapses. Stimulation of the brain through learning and thinking leaves traces on the neural network by strengthening all the synapses that lie along its path. Strong, frequently used synapses grow stronger and seldom-used ones atrophy. Memories are created, which in turn are widely distributed over the brain, corresponding to a complex pattern of synapses involving millions of neurons. These organize themselves into subsets connected to other subsets so that more complex concepts and behaviors can emerge (Briggs and Peat, 1989).

We contend that consensus-building is a form of collective intelligence, which works as researchers now think the brain does, through distributed intelligence and networks or synapses linking it together. Thus, in the first instance it may be essential to getting a workable plan to link up the knowledge of many types of players, each of which has some pertinence to the issue. But then as consensus-building and particularly the collective storytelling effort stimulates participants and creates new connections among them and their experiences, this interaction creates new patterns of information and understanding. In observing interactions, one can actually see the emergence of new concepts and new organization of information among group members. Moreover, consensus-building transcends the limits of even parallel processing because, like the human brain, it incorporates reactions to the environment and to emotions in the solution process (Capra, 1996).

The knowledge also stays with the players when they are outside the consensus-building process, becoming part of their intellectual capital. We believe role-playing is central to this process of developing more sophisticated shared knowledge because it gives individuals permission (indeed, encourages them) to explore insights, interpretations, and patterns of the information. As they interact and test scenarios collec-

tively, they can develop increasingly complex concepts and patterns of concepts. They build their individual and collective capacity to handle ever-shifting realities.

Not surprisingly, the emerging area of complexity theory is another that provides potential insight to understand and develop the practices of collaborative planning. Complexity theory is the study of system behavior at what has been called the "edge of chaos." Systems in this state somehow balance order and chaos. The network of components never quite come into static order, but somehow also don't devolve into chaos. Instead they are characterized by self-organization, spontaneity, adaptiveness, decentralization, and constant motion as the components revise themselves and recombine (Waldrop, 1992). The urban and natural systems, as well as the policy world planners face, have the characteristics of complex systems (Kauffman, 1995). Indeed, this complexity has always been planners' greatest challenge as they tried to apply expert analyses, incrementalism, mixed scanning, or comprehensive planning tools (Innes, 1996). It is only recently that scientists have developed conceptual handles on the complexity of which planners have always been conscious. Thus it now becomes easier to see that many consensus-building processes themselves also have properties of self-organization, decentralization, and adaptiveness. Because consensus-building maps so effectively onto these complex systems, it can be a particularly powerful planning method in the present social world. Because of its reliance on the fluid process of role-playing and bricolage, it provides a method to deal with change and complexity in dialogue.

Management theorists are seeing a dynamic in business organizations which is similar to the dynamic we observe in consensus-building. This work views the economy as a complex adaptive system. Hence these theorists place increasing emphasis on what Kevin Kelly (1994) calls network economics. Organizations which structure themselves in response to this adaptive system adopt four strategies, each of which has similarities to consensus-building in planning. First they become collaborative, forming alliances even with competitors for some vital functions, while continuing to compete in other areas. They develop adaptive strategies to rapidly assimilate knowledge and develop new approaches. They distribute their activities so there is no single location for all aspects of the business. Finally, these businesses are decentralized as the lowest-level players, those in contact with the customers, play a significant part in determining the strategy (Wheatley, 1992; Handy, 1994; Stinchcombe, 1990; Saxenian, 1994). Senge (1990) in particular outlines a concept of dialogue in team learning which strongly parallels the basic conditions for consensus-building.

Conclusions

One of the keys to developing a theory of collaborative planning, and to elaborating the emergent paradigm of communicative planning,[26] will be to provide a central place for the notions of role-play simulation as a method of interaction and bricolage as a mode of collective reasoning. Communicative rationality, and the methods of meeting management developed in the practices and literatures of mediation and busi-

ness and public management, provides the platform or setting in which these creative, collaborative exercises can take place.

To further develop theory for collaborative planning, theorists will have to mine additional literatures. These include ideas drawn from work on both artificial intelligence and brain research to understand the potential of distributed or group intelligence. Theories and experience with flexible industrial organization can help us to understand how networks and linkages in the private sector allow for adaptability, innovation, and responsiveness. Complexity theory can help develop an alternative way to see the dynamics of the social and political world of planning — a way that is more realistic than that offered in the mechanistic and overly simplified models social scientists have been relying on. Ideas will need to be developed about the ethics and institutions for example which are best suited to collaborative planning (Innes, 1995). Ultimately "games without frontiers" will not only allow "war without tears," they will help us to look beyond constraints to new possibilities and they will help to turn the possible into the real.

NOTES

[1]For an example of one in this genre, see Rein Hagen, 1992.

[2]Ivan Illich (1970) among others has made the case that games in logic and science can be a "special form of liberating education, since they heighten their awareness of the fact that formal systems are built on changeable axioms and that conceptual operations have a gamelike nature. They are also simple, cheap and to a large extent can be organized by the players themselves" (p. 117).

[3]This was called the San Francisco Estuary Project and is documented in Innes et al. (1994), pp. 115-45.

[4]This includes the New Jersey State Plan (N J State Planning Commission, 1988), which is described in Innes (1992), and the San Diego Regional Growth Management Strategy, by Judith Gruber and Michael Neuman in Innes et al. (1994: 91-113).

[5]Described in Innes et al. (1994: 183-209).

[6]Many processes that are called consensus-building are more like workshops with citizens or groups which include people representing only themselves rather than stakeholders. We have not studied these processes and we are not discussing them in this paper. There is no reason, however, to suppose that creative collaboration in such citizen-based groups would not operate similarly.

[7]An excellent example is Susskind and Podziba (1990), which describes in detail the procedures and evolving debates in an effort to develop regional agreements on affordable housing in Connecticut.

[8]One exception is the study by Kolb (1995), *When Talk Works.*

[9]John Forester in much of his recent work has called our attention to the importance of stories in planning. His profiles of planners and of mediators are offered through the medium of their stories in which they in turn recount others' stories. He argues that "practice stories" are key to learning about what is going on in a planning dispute (1993) and that stories play an important part in collaborative efforts because they highlight what is valued and remind participants of many things that it would not otherwise occur to them to say (1996a) or give them insight into others perspectives (1996b). He argues that storytelling is itself performance (1996a). Similarly in the public policy literature increasing note is being taken of the importance of narrative as an organizing tool for shaping discussion (Kaplan, 1993 and Roe, 1994).

Facilitators often train people in negotiation and consensus building by using scenarios for practice. Larry Susskind uses this method routinely in ways that are documented in (references). Such interactive "stories" help partitipants

to get out of their patterns of making assumptions, ar guments, or taking positions, which interfere with creative approaches to problems and disputes. We are going further than either of these to make a case that role playing and speculative story telling are integral to creative dialogue and successful consensus building.

[10]Forester (1992) has asked what kinds of identities should be shaped in mediated processes, suggesting such alternatives as private persons, territorial residents, interest maximizers, communitarian loyalists, public citizens. In a later paper (1996a) he contends that the transformational learning process that can be involved in dialogue is one that involves transformation of identities. In this his argument strongly evokes Turkle's (1995) account of young people engaged in internet role playing.

[11]This idea is also entirely compatible with the mutual gains approach to negotiation, which typically does involve inventing new options and new combinations.

[12]Schon and Rein (1994) propose (p. xviii) that reflective policy practice can be usefully understood as a kind of distributed designing, undertaken by multiple actors in the policy environment very much parallel to the collective bricolage of role-playing games. Sanger and Levin (1992), in a study of public management innovations and innovators, concluded that most innovation is not a revolutionary breakthrough but depends on "evolutionary tinkering with existing practices" (p. 87).

[13]While Freire (1981) does not discuss role-playing, these same principles of the centrality of self-directed learning, learning together, and empowerment are basic to his arguments about education that truly works.

[14]Argyris and Schon (1974) draw on Bateson (1958) for the basic concepts of single- and double-loop learning grounded in an analogy to a thermostat. When the household temperature oscillates around a steady temperature, the system may be said to engage in single-loop learning. When the householder changes the desired temperature, this is a case of double-loop learning. The desired value has changed, and it is not a case of using feedback to maintain a constant level. It is a more fundamental change in the system.

[15]Senge refers to conversations with Bohm, to unpublished work, and to a 1965 book. Readers can access most of these ideas in a more developed form in Bohm (1994) and Bohm and Peat (1987).

[16]They attribute this concept to Lisa Peattie, p. xvii.

[17]This project has its roots in two earlier consecutive consensus-building efforts dating back to 1991. These included first the Growth Management Consensus Project, a statewide consensus-building effort designed to develop growth management legislation among the major state interests, and the Environmental and Economic Recovery Coalition, directed not only at growth management but also at the development of infrastructure. The present Governance Consensus project has moved the discussion to the more fundamental issues preventing genuine solutions, including particularly fiscal and governance structure of the state. The formation of the governance project itself is a product of the creative deliberations of the earlier projects. These projects were cosponsored by the Hewlett Foundation and by California State University Sacramento's Center for Public Dispute Resolution. Innes et al (1994) completed case studies of both the earlier projects. Booher was an active participant throughout both of these earlier processes as well as cochair of the Governance Consensus Project.

[18]This notion of creating a new synthesis or perspective on the "whole" is a time-honored, traditional approach to politics. The politician tries to structure the environment and context so to get others to want to join him, or even to feel forced to join. Riker (1986) has coined the term "heresthetics" for this process. Heresthetics is similar to role-playing bricolage in the sense that they are both about policy, interactions, and structuring the world of the events, practices, and available ideas. They are different, however, in the important sense that the former is about manipulation and the latter is about collaboration. In the former, the players do not know how they are being influenced. In the later, the players themselves create the new scenarios and perceptions. See also Tzu (1963).

[19]Allison (1971) has provided an excellent description of how we can see policy processes as games with stakes and players. His conception of game is simpler than the role-playing example we use, but it is in the same spirit.

[20]This may partially account for why our research and observation suggests consensus-building groups work most effectively when interests are represented at the table by a single type of player — agency staff, elected officials, lobbyists, or citizens rather than a heterogeneous mixture. Whatever their role in relation to the stakeholder's interests, they can at least understand each others' situation sympathetically.

[21]Players in consensus-building even develop strategies to take advantage of games within games. In one case, for example, they proposed that the consensus process agree to allow — tacitly — environmentalists to challenge in the legislature and courts the very positions that many players were obliged to hold by their governing boards, but with which they did not agree, and which they recognized were blocking the potential for agreement.

[22]A dilemma here is, that employers might not be comfortable with sending their staff to "play" a game. This notion of playfulness which is so essential to creativity appears in modern culture to be irresponsible or irrelevant to getting business accomplished. For the idea of role-playing to be accepted, considerable change in public understanding will be required.

[23]This project, documented in Innes et al. (1994), was a state-level effort involving 35 major interest groups, designed to develop state growth management legislation.

[24]Innes (1994) has argued in particular that planning institutions are in crisis because planning values and practices are at odds with norms of bureaucratic and democratic institutions of which they are a part. In 1997 she argued that a key strategy to deal with the fragmentation of governing institutions and discourses is for planning to be about making connections, through communication, boundary spanning, mediation, learning, and inventing.

[25]Care will need to be taken that the role-play process not become divorced from a real social, political, and moral context. Role-playing and bricolage is a method of deliberation and experimentation. Theorists will need in the future to develop an ethical framework for this kind of work, as our current concepts of ethics offer us little capacity to evaluate the results of this kind of work.

[26]Communicative planning is the term increasingly being used among planning theorists to denote the types of practice which involve first and foremost interaction and communication among planners and others. This view, first developed by John Forester (1989), suggests that most planning needs to be understood as communicative action, rather than scientific analysis or neutral expert advising. Collaborative planning, which involves multiple players, including planners, is by definition communicative, and theory about it must build on our understanding of the basic interactive communicative nature of planning.

REFERENCES

Allison, Graham. 1971. *The Essence of Decision: Explaining the Cuban Missile Crisis.* Boston: Little Brown.

Argyris, Chris. 1995. *Knowledge for Action: A Guide to Overcoming Barriers to Organizational Change.* San Francisco: Jossey Bass.

Argyris, Chris, and Donald Schon. 1974. *Theory in Practice: Increasing Professional Effectiveness.* San Francisco: Jossey Bass.

Altshuler, Alan. 1965. "The Goals of Comprehensive Planning." *Journal of the American Institute of Planners*: 186-197.

Bamberger, Jeanne. 1991. "Learning as Reflective Conversation with Materials." In *Research and Reflexivity, Inquiries in Social Construction*, F. Steier, ed., London, U.K.: Sage Publications.

Bardach, Eugene. 1977. *The Implementation Game: What Happens After a Bill Becomes a Law.* Cambridge, Mass.: The MIT Press.

Bateson, Gregory. 1958. *Naven*, 2nd ed. Stanford, CA: Stanford University Press.

Bohm, David. 1965. *The Special Theory of Relativity.* New York: W. A. Benjamin.

____. 1994. *Thought as a System.* New York City: Routledge.

Bohm, David, and F. David Peat. 1987. *Science, Order and Creativity.* Toronto: Bantam Books.

Briggs, John, and F. David Peat. 1989. *Turbulent Mirror.* New York: Harper & Row.

Carpenter, Susan. L., and W. J. D. Kennedy. 1991. *Managing Public Disputes: a Practical Guide to Handling*

Conflict and Reaching Agreements. Jossey-Bass Management Series, San Francisco, CA: Jossey-Bass.

Carpenter, Susan L. 1989. *Solving Community Problems by Consensus.* Washington, D.C.: International City Management Association.

Cohen, M. D., J. G. March, and J. P. Olsen. 1988. "A Garbage Can Model of Organizational Choice." In *Decisions and Organizations*, J. March, ed., (1988), Oxford, U.K.: Basil Blackwell. Paper originally published in *Administrative Science Quarterly* 17(1), March 1972.

Crevier, Daniel. 1993. *AI: The Tumultuous History of the Search for Artificial Intelligence.* New York City, NY: Basic Books.

Dryzek, John. 1990. *Discursive Democracy: Politics, Policy, and Political Science.* Cambridge, MA: Cambridge University Press.

DuPraw, M. E., and W. R. Potapchuk. 1993. *ISTEA: Relevant Strategies of Collaboration from Transportation and Other Policy Arenas.* A Working Document prepared for the National Association of Regional Councils and the Federal Transportation Administration. Washington, DC: Program for Community Problem Solving.

Fisher, Roger, and William Ury. 1981. *Getting to Yes: Negotiating Agreement Without Giving In.* Boston, MA: Houghton Mifflin Co.

Fisher, Roger, and S. Brown. 1988. *Getting Together: Building a Relationship That Gets To Yes.* Boston, MA: Houghton Mifflin.

Forester, John. 1989. *Planning in the Face of Power.* Berkeley, CA: University of California Press.

____. 1992. "Envisioning the Politics of Public-Sector Dispute Resolution." *Studies in Law, Politics and Society* 12: 247-286.

____. 1993. "Learning from Practice Stories: The Priority of Practical Judgment." *The Argumentative Turn in Policy Analysis and Planning*, Frank Fischer and John Forester, eds., Durham, NC: Duke University Press.

____. 1996a. "Rationality, Dialogue, and Learning: What Community Mediators Can Teach us About the Practice of Civil Society." Paper prepared for presentation in Planning and the Rise of Civil Society: A Symposium Celebrating the Planning Career of John Friedmann, Los Angeles, April.

____. 1996b. "Beyond Dialogue to Transformative Learning: How Deliberative Rituals Encourage Political Judgment in Community Planning Processes." *Poznan Studies in the Philosophy of the Sciences and the Humanities* 46: 295-333.

Fox, Charles J., and Hugh T. Miller. 1996. *Postmodern Public Administration: Toward Discourse.* Thousand Oaks, CA: Sage Publications.

Freire, Paolo. 1981. *Pedagogy of the Oppressed.* New York: Cintinuum.

Gruber, Judith. 1994. *Coordinating Growth Management Through Consensus-Building: Incentives and the Generation of Social, Intellectual, and Political Capital.* Working Paper #617, Berkeley, CA: Institute of Urban and Regional Development, University of California at Berkeley.

Habermas, Jurgen. 1981. *The Theory of Communicative Action.* Boston, MA: Beacon Press.

Handy, C. 1994. *The Age of Paradox.* Boston, MA: Harvard Business School Press.

Illich, Ivan. 1970. *Deschooling Society.* New York: Harper and Row.

Innes, Judith. E. 1992. "Group Processes and the Social Construction of Growth Management: Florida,Vermont and New Jersey." *Journal of the American Planning Association (JAPA)* 58(4): 440-53.

____. 1994. "Planning Institutions in Crisis." *Planning Theory* 10(11): 81-96.

____. 1995. "Planning Theory's Emerging Paradigm: Communicative Action and Interactive Practice." *Journal of Planning Education and Research (JPER)* 14(3).

____. 1996. "Planning Through Consensus Building: a New View of the Comprehensive Planning Ideal." *Journal of the American Planning Association (JAPA)* 62(4).

____. 1997. "The Planner's Century." *Journal of Planning Education and Research (JPER).*

____. 1998. "Information in Communicative Planning." *Journal of the American Planning Association (JAPA).*

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 University of California at Berkeley, California Policy Seminar, 270 pp.

Kelly, Kevin. 1994. *Out of Control: The Rise of Neo-Biological Civilization.* Reading, MA: Addison-Wesley.

Kent, T. J. 1964. *The Urban General Plan.* San Francisco, CA: Chandler Publishing Company. 2nd Edition. Chicago, IL: Planners Press/American Planning Association, Chicago.

Kolb, Deborah. 1995. *When Talk Works.* Jossey Bass: San Francisco.

Levi-Strauss, Claude. 1966. *The Savage Mind.* The Nature of Human Society Series. London: Weidenfeld & Nicolson.

McCordrick, P. 1996. "Sex, Lies and Avatars." *Wired Magazine* (April): 160.

Michael, Donald N. 1997. *Learning to Plan and Planning to Learn.* 2nd Ed. Alexandria, VA: Miles River Press.

Moore, Christopher. W. 1987. *The Mediation Process: Practical Strategies for Resolving Conflict.* 1st Edition. Jossey-Bass Social and Behavioral Science Series, no. 1, San Francisco, CA: Jossey-Bass.

New Jersey State Planning Commission. 1988. *Communities of Place: a Legacy for the Next Generation, the Preliminary State Development and Redevelopment Plan for the State of New Jersey.* New Jersey State Planning Commission.

Ostrom, Elinor. 1990. *Governing the Commons: The Evolution of Institutions for Collective Action.* Cambridge, MA: Cambridge University Press.

Peattie, Lisa. 1996. "Conviviality." Paper prepared for presentation at the symposium celebrating the planning career of John Friedmann, "Planning and the Rise of Civil Society." Los Angeles, Calif.: University of California, Los Angeles.

Pressman, J., and A. Wildavsky. 1974. *Implementation: How Great Expectations in Washington Are Dashed in Oakland; Or, why It's Amazing that Federal Programs Work at All, This Being a Saga of the Economic Development Administration as Told by Two Sympathetic Observers Who Seek to Build Morals on a Foundation of Ruined Hopes.* Oakland Project Series. Berkeley, CA: University of California Press.

Rein Hagen, M. 1992. *Vampire: The Masquerade.* Stone Mountain, GA: White Wolf.

Riker, W. H. 1986. *The Art of Political Manipulation.* New Haven, CT: Yale University Press.

Roe, Emery. 1994. *Narrative Policy Analysis: Theory and Practice.* Durham, NC: Duke University Press.

Sabatier, Paul. A., and Mazmanian, Daniel, eds. 1981. *Effective Policy Implementation.* Policy Studies Organization Series. Lexington, MA: Lexington Books.

Sanger, Mary Bryna, and Martin A. Levin. 1992. "Using Old Stuff in New Ways: Innovation as a Case of Evolutionary Tinkering." *Journal of Policy Analysis and Management* 11(1): 88-115.

Saxenian, Annalee. 1994. *Regional Advantage: Culture and Competition in Silicon Valley and Route 128.* Cambridge, MA: Harvard University Press.

Senge, Peter. M. 1990. *The Fifth Discipline: The Art and Practice of the Learning Organization.* 1st Edition. New York: Doubleday.

Schon, Donald A., and Martin Rein. 1994. *Frame Reflectionz; Toward the Resolution of Intractable Policy Controversies.* New York: Basic Books.

Stinchcombe, A. L. 1990. *Information and Organizations.* Berkeley, CA: University of California.

Susskind, L., and Cruikshank, J. 1987. *Breaking the Impasse: Consensual Approaches to Resolving Public Disputes.* New York: Basic Books.

Susskind, Lawrence, and Susan Podziba. 1990. *Affordable Housing Mediation: Building Consensus for Regional Agreements in the Hartford and Greater Bridgeport Areas.* Cambridge, MA: Lincoln Institute of Land Policy.

Swidler, Ann. 1986. "Culture in Action: Symbols and Strategies." *American Sociological Review* 51: 273-86.

Turkle, Sherry. 1995. *Life on the Screen: Identity in the Age of the Internet.* New York: Simon and Schuster.

Tzu, S. 1963. *The Art of War.* Translated and with an introduction by S. B. Griffith. With a foreword by B. H. Liddell Hart. Oxford, U.K.: Clarendon Press.

Waldrop, M. Mitchell. 1992. *Complexity: The Emerging Science at the Edge of Order and Chaos.* New York: Simon and Schuster.

Wheatley, Margaret J. 1992. *Leadership and the New Science.* San Francisco, CA: Berrett-Koehler.