

Enhancing Environmental Quality and Sustainability through Negotiation and Conflict Management: Research into Systems, Dynamics, and Practices

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Abstract

In a world of rapid population growth, urbanization, and climate change, sustainability and environmental integrity are increasingly central concerns. The frequent recurrence of conflict within these arenas, coupled to the difficulty in determining their impact on social–ecological systems, challenges governance at all levels of society. Negotiation-based conflict management provides a promising response to these challenges. This guest editor's article examines: (a) the emergence and conduct of environmental and public policy (EPP) conflict management as a distinctive practice over the past 40 years; (b) the interplay between theories of environmental decision-making and practices of EPP conflict management; (c) trends in research into EPP conflict management systems, the dynamics of interventions into these systems to resolve conflict, and the efficacy and impact of EPP conflict management practices; and (d) the contributions of the articles contained in this special issue to this literature and future directions in the field.

Introduction

Sustainability and environmental integrity are increasingly central concerns within and between local, national, and international communities. In a world of rapid population growth, urbanization, and climate change, conflicts over equity, economic well-being, and environmental integrity arise frequently. The recurrence of these conflicts, coupled to the difficulty in determining their impact on social–ecological systems, challenges governance at all levels of society and across the public, private, and nonprofit sectors. We therefore need to improve our understanding of the dynamics of these conflicts, their impact, and approaches to their management.

The use of negotiations to manage public conflict is as old as governance. In contrast, the design and implementation of negotiation-based conflict management processes to public disputes built on direct engagement of stakeholders is relatively recent. As noted by Kriesberg (2009), contemporary conflict resolution includes mediation to resolve specific conflicts, joint efforts to reach mutually acceptable agreements to resolve differences, and broad constructive engagement in conflicts at all stages to arrive at

mutual agreement while maintaining secure and equitable relations. Conflict management practice emerged in domains as diverse as international affairs, peace studies, labor-management relations, and organizational development before and following World War I and was institutionalized to some degree (both in practice and as a subject of research) by the early 1970s (Kriesberg, 2009). The first recorded use of environmental and public policy (EPP) conflict resolution, however, did not occur until 1973. Principles of EPP practice and concomitantly research into its context and implications have therefore emerged over just the past 40 years and continue to evolve.

To situate EPP conflict resolution into the contexts of decision-making for environmental quality and sustainability, we provide first an historic overview of the emergence of EPP conflict management practice and how it developed from and reshaped EPP and sustainability decision-making. Then, we present and discuss major trends in EPP conflict resolution research, and future directions. Finally, we introduce the articles included in this special issue and place them within our larger discussion of research.

Historic Development of EPP Conflict Management Theory and Practice

In the United States, EPP conflict management had distinct roots in the theory and practice of public participation and in the management of conflicts. Both forms of civic engagement practice were responses to challenges specific to public decision-making, which contends with complex social–ecological systems. These systems pose several difficulties to decision makers. They are complex and interrelated, so any desirable change in one aspect has sometimes surprising and negative effects on other components. Social–ecological systems return low feedback, so outcomes of current decisions accrue in the long term and are difficult to attribute to specific decisions. They are sometimes also irreversible.

The resulting indeterminacy of public problems gives rise to the disputing of models of managerial rationality and the arguing for alternative models of pluralism, communicative rationality, and deliberative democracy. This debate also gives rise to new insights into the nature and importance of adaptive resilience and social capital in the functioning of democratic institutions and communities. We explore these themes as a basis for describing approaches to the study of EPP conflicts, the research and emerging practices, and the challenges both continue to face.

Participatory Voice in Public Decision-Making

The practice of EPP conflict management has antecedents in conflict resolution theory and praxes developed in international affairs and union-labor negotiations. However, it also draws heavily from evolving conceptions of the role of citizens and stakeholders in public decision-making. In the United States, this evolution was catalyzed primarily by challenges to decision-making processes for federal and local government rulemaking and community development programs.

Between the late 1800s and the 1950s, the role of federal agencies in political decision-making grew significantly. As agencies took on increasingly complex responsibilities in areas such as forest management or regulation of the economy, they developed managerial models that rationalized and justified their roles. These models relied at the outset on bureaucratic (top-down) identification of “public interests,” coupled with development and implementation of policies and programs designed to maximize benefits for the “public interests” they had defined. Yet this approach to decision-making ran counter to forms of democratic decision-making traditionally used in the United States. In particular, it replaced democratic accountability with expert-driven maximization of social welfare as construed by the experts.

Kerwin and Furlong (2009) observed that the growth of agency managerialism gave rise to a counter demand for democratic voice. Since the Administrative Procedure Act of 1946 systematized requirements for public notice and input into federal rulemaking, the federal government and local governments have

repeatedly expanded participatory involvement in agency decision-making. Yet tensions between expert-driven and community-derived models of decision-making continue to this day.

At the local level, this tension between managerial and democratic accountability emerged around issues of local planning and zoning. The Standard City Planning Enabling Act (1928), a US Department of Commerce document, included requirements for public notice and at least one public hearing for comprehensive plan changes. This enabling act was eventually adopted by all 50 states. The historic impact of this requirement is significant. As noted within the document (US Department of Commerce, 1928):

The public hearing previous to the adoption of the plan or substantial part thereof has at least two values of importance. One of these is that those who are or may be dissatisfied with the plan, for economic, sentimental, or other reasons, will have the opportunity to present their objections and thus get the satisfaction of having their objections produce amendments which they desire, or at least the feeling that their objections have been given courteous and thorough consideration. The other great value of the public hearing is as an educating force; that is, it draws the public's attention to the plan, cause some members of the public to examine it, to discuss it, to hear about it, and gets publicity upon the plan and planning. Thus the plan begins its life with some public interest in it and recognition of its importance (p. 18).

Local public participation therefore emerged from federal government efforts to temper expert-based public actions (planning) with democratic voice (accountability and participation), while providing little recourse for citizens to do more than providing comment. While federal programs such as urban renewal (Housing Act of 1949) and highway construction (National Defense and Interstate Highways Act of 1956) included public hearing and comment requirements, the requirements did little to empower community residents to resist displacement and other negative consequences of these programs.

In 1964, in the context of President Johnson's War on Poverty, the Economic Opportunity Act required "maximum feasible participation of the residents of the area." This amounted to a new approach to public participation. The federal government issued guidance that focused on grassroots participation, built on forums and discussion, and provided for meaningful opportunity not only to protest but also to propose changes to the way community action programs were planned and undertaken. Although this guidance was subsequently weakened under President Nixon's New Federalism efforts, it responded to the increasing demand for voice, and generated debate about the role of participation in representative government.

Perspectives on public participation especially in city and regional planning evolved increasingly toward empowering grassroots involvement and influence over public decisions. From procedural concerns about how to promote community voice, debates moved to structural concerns about the balance of power between community residents, public interest groups, private interests, and government. In her influential *The Death and Life of Great American Cities*, Jane Jacobs (1961) took on directly the concept of expert planning, divorced as it was from the community on which it was inflicted. In "Advocacy and Pluralism in Planning," Paul Davidoff (1965) argued for participatory planning, whereby planners would work directly with communities with different interests, highlighting these differences instead of subsuming all under a single, idealized "public" interest. The idea of multiple publics rather than a single unifying one pointed to the possibility of resolving public conflict in a transparent manner. By 1969, Sherry Arnstein's "A Ladder of Citizen Participation" (one of the most cited article ever published in the *Journal of the American Institute of Planners* and its successor *Journal of the American Planning Association*) argued persuasively that participation was used too often as a form of placation, while its real potential lay in enabling citizen empowerment (see Gasul and Shmueli (2016) in this issue for a fuller discussion of Arnstein's thesis). Jacob's, Davidoff's, and Arnstein's propositions in turn generated considerable debate within the planning and public administration professions and across activist communities seeking meaningful participation. Movements in support of racial equality, poverty action, feminism, and environmental protection (and opposed to the Vietnam War) all converged to contribute to growing

contention over the purposes of government and the role of citizens and activists in government decision-making processes.

While sparked by specific conflicts, debates focused not on procedures per se or on methods of practice of conflict management, but rather on fundamental issues of power allocation in society and the increasing willingness of citizens to voice their demands vigorously. In response, local governments established a host of innovations that strengthened neighborhoods, such as Neighborhood Planning Units (Atlanta) and Community Boards (San Francisco). The federal government enacted the Freedom of Information Act (1966), the Federal Advisory Committee Act (1972), and others to meaningfully expand citizen access to governmental information and decision-making. Federal statutes also significantly increased citizens' and public interest groups' standing to sue corporations or federal agencies that failed to live up to their responsibilities as required by law. Together, these changes amounted to a substantial qualitative shift in the empowerment of citizens and community activists to defend their interests effectively.

Parallel to these political challenges, Rittel and Webber's (1973) article on "Dilemmas in a general theory of planning" provided intellectual impetus for the transition from expert to community-driven solutions. Rittel and Webber were planning theorists whose intellectual roots were in theories of rational, comprehensive planning and in the search for scientific bases for resolving problems of social policy. Their conclusion that this search is bound to fail because of the complex nature of these challenges continues to invite reflection. They deemed science problems "tame" because the scientific method encourages its practitioners to break apart complex problems and clearly delineate the resulting components for study. In contrast, they characterized social problems as "wicked" because such problems are inherently messy and cannot be described definitively: In pluralistic societies, there is no undisputable public good or an objective definition of equity; social policies cannot be meaningfully correct or false; "optimal solutions" to social problems do not exist except in very narrowly qualified situations; and "solutions" to social problems are never definitive or objective. Rittel and Weber's article, now 50 years old, remains one of the most widely referenced in the social sciences, with over 8,300 citations.

Rittel and Weber's conclusions unsettled theories of rational planning. The conclusions not only supported popular critiques of government agencies' objectivity, but also opened the possibility of indeterminacy in ascertaining the public interest and in deriving plans, programs, and policies for improving social welfare. Planners increasingly switched to models linking the determination of public interest to expressions of such interest from communities themselves. Public participation took a central place in planners' work. Models of participation became genuinely interactive and dialogue-based. Five planning theorists led the way: John Forester (1989; 1999; 2009; 2013) and Patsy Healey (1992; 1997a; 1997b; 2003) who laid the intellectual foundation for the centrality of communicative rationality in planning; Lawrence Susskind who bridged between conflict management practice and participatory planning (Susskind & Weinstein, 1980; Susskind, et al., 1978; Susskind, McKearnen & Thomas-Larmer, 1999), and Judith Innes and David Booher (Innes, 1996; 2004; Innes & Booher, 1999b; 2004) who explored larger system dynamics and the role of networks and collaborative processes in decision-making for complex, adaptive environmental systems.

Answering the challenge posed by Rittel and Webber, these and other authors placed the tasks of identifying interests, goals, and choices about how to address social problems in the hands of communities. Negotiation—the main vehicle for joint decision-making—became central to decision-making. However, issues of decision process design required attention. Specifically, the ways of defining communities, identifying their representatives who would negotiate, supporting meaningful dialogue among stakeholders with divergent interests, and balancing private and public interests all needed to be addressed if EPP conflict management were to become a legitimate, implementable process of public decision-making.

This right of community members to participate meaningfully is now so deeply incorporated into the planning profession that the first four ethical requirements of planners, as adopted by the American Institute of Certified Planners (1992), are to:

- 1 Recognize the rights of citizens to participate in planning decisions;
- 2 Strive to give citizens (including those who lack formal organization or influence) full, clear and accurate information on planning issues and the opportunity to have a meaningful role in the development of plans and programs;
- 3 Strive to expand choice and opportunity for all persons, recognizing a special responsibility to plan for the needs of disadvantaged groups and persons; (and)
- 4 Assist in the clarification of community goals, objectives and policies in plan-making.

It was in this context that EPP conflict management was birthed in the United States.

Emergence and Institutionalization of EPP Conflict Management as Civic Engagement

In 1973, the Governor of the state of Washington invited two mediators to intervene in a dispute between environmentalists, farmers, developers, and public officials over a proposed flood control dam on the Snoqualmie River near Seattle. This process, the first to explicitly use mediation to resolve an environmental policy dispute, lasted one year. Negotiations resulted in a settlement regarding a wide array of actions and policies, including relocating the dam to a less environmentally sensitive branch of the river, preserving agricultural uses along the river through the purchase of easements and other means, and efforts to improve environmental quality in the watershed.

The success of this process led the way to many other applications. By 1984, mediators or facilitators had helped resolve over 160 environmental disputes (Bingham, 1986). A profession—EPP conflict management—was emerging out of individual, ad hoc mediation efforts. Yet research into the new intervention practices remained scarce and at best descriptive.

By the late 1990s, the practice of EPP conflict management had evolved considerably. There was a sizable number of cases; intervention professionals were increasingly organized; institutions had developed to support their activity and to evaluate their success. Milestones identified by Susskind and McKernan (1999) included the initiation of the Environmental and Public Policy Sector within the Society for Professionals in Dispute Resolution, Kettering Foundation's support of Negotiated Investment Strategies, the Administrative Conference of the U.S. support for federal agency use of negotiation-based processes to resolve regulatory issues (see Furlong & Kerwin, 2005), the US EPA and other federal agencies' adoption and implementation of negotiated rulemaking processes, and the establishment of the National Institute of Dispute Resolution to marshal foundation support for dispute resolution experimentation across the country. The William and Flora Hewlett Foundation, particularly active in promoting theory-building in the field, funded research centers for various aspects of conflict management, including EPP practice and process design. Initiatives such as the Public Conversation Project, Consensus Councils, and state offices of dispute resolution expanded the focus of EPP conflict management from individual disputes to conflict systems, looking for systemic interventions that could transform how conflict is expressed and managed in society.

Since 2000, both research and the practice of EPP conflict management continue apace. Research and education of new practitioners is now supported through graduate dispute resolution programs at 95 U.S. universities and colleges (Polkinghorn & La Chance, 2009). At the same time, the practice of EPP conflict management has faced new challenges in an increasingly contentious political environment.

International Practice of Participation and EPP Conflict Management

Public participation and EPP conflict resolution emerged in the United States at the special confluence of political and cultural conditions discussed above, coupled with legal and institutional structures that could increasingly support negotiated decision-making. Aiming to alleviate tensions between managerial models of expert-based governmental decision-making and increasingly vocal demands for citizen engagement and voice, US conflict resolution practices rely on the possibility that actions by one (including government agencies) can be blocked by others, with dispersed power making joint action necessary. Transferring practices from this context to another with different institutional and legal structures and cultural norms can run into obstacles (see the Matsuura (2016) article in this issue for an example). To what extent then do we find evidence of substantial public participation or EPP conflict management in other countries? While acknowledging the difficulty in answering this question definitively in the absence of more research, we propose some observations.

Although participatory practices in the United States emerged before their use in other countries, such processes are now used widely in advanced democracies, especially Canada, Australia, New Zealand, and some Western European countries—notably the Netherlands, Germany, Great Britain, and the Scandinavian countries. In fact, regardless of when public engagement began in each of these countries, by the 21st century the level of development, concerns, and challenges appear quite similar across borders (Fung, 2006; Gastil & Levine, 2005; Gillham, 2008; Smith, 2005). In a study of citizen action and participation in Western Europe, Susskind and Elliott (1983) found patterns, at least as varied as in the United States, of paternalism (centralized decision-making with limited citizen input), conflict (centralized decision-making with open struggle over decisions), and coproduction (decision-making through negotiations between stakeholders and government agencies). Woodford and Preston (2011) documented similar patterns in Canada.

At the same time, each country faces unique challenges that configure their specific approach to participation. Warren (2009) identifies examples of these challenges such as gridlock induced by widely dispersed political power (Italy), overly concentrated executive powers and parliaments with weak deliberative and policymaking capacities, combined with gridlock in federal–provincial relations (Canada), and institutional problems of national multilevel systems (European Union). As in the United States, gridlocked government, poorly performing programs, and at times grassroots-driven civic innovations fueled the proliferation of public engagement processes (Warren, 2009). These included citizen juries and panels, advisory councils, stakeholder meetings, lay members of professional review boards, representations at public hearings, public submissions, citizen surveys, deliberative polling, deliberative forums, focus groups, and advocacy group representations (Cain, Dalton, & Scarrow, 2003; Christiansen & Tangen, 2002; Fung, 2006; Gastil & Levine, 2005; Holmes & Scoones, 2001; Matsuura, 2006; Mermet, 2006; Mermet & Berlan-Darqué, 2009; Mermet, Dubien, Emerit, & Laurans, 2004; Mermet et al., 2004; Revel, et al, 2007; Smith, 2005; Sørensen & Torfing, 2003; Stagl, 2006; Touzard, 2006). Some of the country-specific arrangements are quite innovative. For example, in 2004 British Columbia's provincial government established the Citizens' Assembly to write a referendum question on electoral reform. Participants were randomly selected to avoid interest-group domination and the Assembly engaged in extensive deliberation over a period of 10 months to generate recommendations (Warren, 2009).

Unlike the United States where political discourse is dominated by two parties, third parties such as the Green Party play an important role in local and national governance in several democracies, providing avenues not found in the United States for influencing environmental and sustainability policy. In addition, some OECD countries have refined administrative hearing processes that focus on environmental issues and governmental decision-making. These options help ensure that environmental and sustainability issues are well integrated into political discourse. However, they also reduce the use of mediation and similar conflict resolution techniques, which even in the United States tend to be used to

resolve issue-specific conflicts with clearly identifiable stakeholders rather than more broadly based policy disputes.

In the United States, at the outset practitioners largely drove EPP conflict resolution innovation through trial-and-error application of personal practice models. They built “best-practice” models through professional interaction with other like-minded practitioners. The advent of EPP conflict management in other countries has tended to be less extemporaneous. Careful attention has been devoted to fit such processes into existing decision-making structures before processes were initiated. Consider Germany: with almost no significant prior use of EPP conflict resolution, the Berlin Social Science Research Center received substantial funding to explore the potential for using EPP conflict resolution in Germany and to evaluate its consequences. In 1990, funding for this research project substantially exceeded the cumulative total of all the EPP conflict resolution evaluation projects conducted in the United States over the—at the time—almost 20 years of accumulated US experience. As Holzinger (2001) noted, the research center identified the conflict to be studied (a waste management siting dispute), convinced the local authority and stakeholders to participate, and selected and financed the mediator. The center then both observed and evaluated the process as it unfolded. The mediation failed to reach agreement, primarily because of decisions made by the regional authority responsible for licensing waste management plants (who had not participated in the mediation). The evaluation laid out the problems underlying the mediation procedure, their short-term impacts, and the longer-term results achieved by a process that had succeeded only partially. In comparison, the strongest evaluations in the United States at that time consisted of descriptive case studies of a wide range of EPP conflict management processes, almost all of which had reached agreement (Bingham, 1986). While less rigorous in its research, the experimental, experiential practices in the United States led to wider use, more practitioners, more significant institutions supporting professional practice, and greater diversity of processes than emerged in Germany. In turn, this increased activity provided more opportunity to investigate in more depth the processes and impacts of EPP conflict management.

Lastly, we note that the various forms of participation in the resolution of environmental conflicts that have evolved in the United States, Canada, Great Britain, Germany, Scandinavian countries, Australia, and New Zealand share one characteristic: they are institutionalized to at least some degree. Researchers and practitioners report cases of negotiation and intervention in environmental disputes the world over, but these usually consist of unique interventions to resolve specific situations rather than institutionalized processes. These attempts, gradually fine-tuned to local conditions, may pave the way for future institutionalization.

30 Years of EPP Conflict Resolution Research: Systems, Dynamics, and Practice

Before plumbing the field of EPP conflict resolution research, we summarize the challenges posed by the EPP system as an object of research. EPP conflict management processes generally take from three to twelve months, with some cases unfolding over multiple years. As noted by Gray (2011), these processes are neither simple nor easily detachable from their political context, nor can any particular process be replicated elsewhere even when the issues in contention are similar. Each is deeply embedded in the specifics of an environmental or sustainability conflict and its context. Compared to all the other means society uses to resolve EPP conflicts, participatory decision processes are relatively few in number while also being highly variable along dimensions such as the skill and knowledge of the interveners, the power and other dynamics among the parties, and the range of external constraints both before, during, and after intervention processes. Moreover, process dynamics cannot be reduced to their individual components. These processes are socially constructed dialogues with perceptions and interactions that transcend those of the individuals who participate. At their best, they convert disputes over indeterminate public interests, unbounded problems, and unlimited options into implementable agreements and

actions that transcend these limits precisely because the stakeholder group can make choices that individual disputants cannot.

These process characteristics have several implications for EPP research:

- (1) Understanding the complexity and interactivity of any particular process is essential to drawing meaningful conclusions about its dynamics;
- (2) Empirical work in situ has to be at the heart of the research endeavor;
- (3) Careful observations and measurements are problematic particularly when processes engage stakeholders over long periods of time under conditions of confidentiality;
- (4) Experimental manipulations of a few variables cannot adequately replicate how numerous variables interact in constantly shifting real situations, although interactive simulations involving groups can claim greater credibility than can studies of individuals' behavior;
- (5) Given the diversity of processes, comparisons across cases remain difficult even with careful matching, observation, and measurement; and
- (6) The study of disputes and their management must ultimately transcend its focus on discrete, particular phenomena to understand conflict dynamics within systems of social choice.

For all these reasons, research into EPP conflict management primarily occurs at three levels of analysis: the impact of conflict resolution on social–ecological systems within which we engage in environmental and sustainability management, the dynamics of EPP conflict and its resolution, and the characteristics and impact of EPP best-practice models. At a meta-level, different perspectives have been proposed for understanding various social, cultural, legal, and institutional contexts and the kinds of participation they enable or prevent. We next review the state of research in each of these areas, in light of the characteristics of EPP decision-making systems discussed above.

Impact of Conflict Resolution on Social–Ecological Systems of Environmental and Sustainability Management

From a social perspective, EPP conflict management is a way to effectively manage a complex, interactive, and adaptive system rather than to resolve individual disputes. To a degree generally not found in negotiation research, EPP conflict management research is therefore deeply embedded in normative theories of the public interest as it applies to environment and community. Success in EPP conflict resolution does not depend primarily on its capacity to fulfill the private interests of the various stakeholders in disputes, but also, as importantly, on how those private interests interact to enhance public interests and community values as well. EPP processes which satisfy private interests but do not improve the environment or strengthen community would not be considered successful by theorists, practitioners, or even by the disputants themselves.

Relatively little research has been conducted on the impact of conflict resolution on environmental and community systems from the perspective of a system as a whole. This dearth reflects the difficulty in conducting such research, in isolating effects of conflict resolution processes on large-scale systems in which many actors interact over extensive periods of time to produce the social–ecological systems that we can observe today. Two extensive examinations of the impact of collaborative processes on environmental systems and the corresponding decision-making processes illustrate these difficulties. Each focused on ecologically and socially important watershed systems: the Everglades (Frank, 2009) and the Sacramento River Delta (Connick & Innes, 2003; Innes, Connick, Kaplan, & Booher, 2006). Both watersheds had undergone extensive planning and implementation processes of ecosystem and natural resource management. Both watersheds were managed as ecosystems in part through collaborative processes, entailing integrative, adaptive, and ecologically protective governance. Both cases therefore offered opportunities to evaluate the impact of EPP collaborative processes.

Extensive collaborative processes had been conducted in the Everglades watershed since the mid-1960s. Frank (2009) examined their impacts. Proponents of collaborative processes have argued that they are particularly suitable for the integrative, adaptive, and protective needs of ecosystem management, while critics focused on the potential for cooptation of environmental interests within such processes. Using an embedded case study methodology, the research found that collaborative processes:

- (1) Helped integrate values, information, activities, and political support across the ecosystem, but also reinforced biases and limits as a result of stakeholder groups' strategic behaviors and the processes' emphasis on reaching agreement rather than fully exploring issues;
- (2) Did not lead to serious cooptation of environmental interests;
- (3) Promoted adaptation and social learning in specific cases, but at a macro-level helped to maintain the status quo of the dominant water management agencies and technocratic paradigms; and
- (4) Protected ecological health by making steady, incremental progress toward ecological restoration, but also faced significant setbacks because collaboratively developed policies were subject to capture by economic interests after agreements were finalized.

Innes et al. (2006) examined the impact on the Sacramento River Delta of a series of highly collaborative processes, embedded in the CALFED program, to develop a comprehensive framework for decision-making for multipurpose interagency projects and local and regional solutions rather than single-purpose, agency-specific projects. The processes emphasized public involvement with stakeholders playing leadership roles, independent science review, accountability and transparency of decision-making, flexible and adaptive management, and joint learning. In this and follow-on studies (Booher & Innes, 2010; Innes & Booher, 2010), the researchers use qualitative case analysis to explore the effects of collaborative processes on the functioning of environmental decision-making and on the health of the environmental system being managed. The findings largely paralleled those of Frank. Following completion of these studies, we should note, both of these collaborative systems were significantly stressed by the political gridlock and economic hardships of the mid-2000s.

Amy (1987, 1990) examined EPP conflict resolution as a field and identified threats of cooptation of environmental values, power imbalances, distortions of issues, and the drive to compromise that undermines environmental integrity. Amy concluded that rather than being exceptional and therefore amenable to effective mediator management, these problems evinced systematic biases built into the processes themselves, which tended to favor some interests over others and incremental change from (and therefore attachment to) the status quo. Amy identified a decrease in the power of environmental groups as EPP conflict resolution rose, and environmentalists were forced to the negotiation table. Note that while Amy's analysis implicitly valued transformational change, incremental change is currently viewed as a desirable adaptive management approach in the uncertainty-fraught context of environmental threats such as climate change (Quay, 2010).

Forester (1989, 1999, 2009, 2013) examined the role of collaborative processes in planning from the perspective of planners and the impacts of their practice on the persistent conflicts they face. In juxtaposition to Amy's results, Forester found that innovative mediators and planners are able in practice to bridge seemingly intractable differences, thereby empowering communities to resolve their problems.

Three studies of specialized environmental decisions deserve mention. O'Hare, Bacow, and Sanderson (1983) examined the process of facility siting and public opposition to locally unwanted land uses through multiple cases and cross-case comparisons. They paid particular attention to the distribution of benefits and costs to different stakeholders and the role of negotiated agreements in rectifying concerns. Portney (2013) studied characteristics of cities that lead to sustainability. Employing quantitative indicators, surveys, and qualitative assessments, the study identified the central contribution of collaborative networks to the development and implementation of sustainability. Such networks help bridge between multiple stakeholders to build dynamic, systemic practices, programs, and policies in these cities. The long-term, still ongoing work of Wondolleck, Yaffee, and Crowfoot (Crowfoot & Wondolleck, 1990;

Wondolleck, 2013; Wondolleck & Yaffee, 2000) to identify and delineate the impact of collaborative networks in public lands management, particularly within the context of our national forests, has contributed to our understanding of EPP conflict management processes, as well as to the construction of meaningful and sustainable models of interaction and collaboration through mobilizing and entrepreneurial networks.

While continuing to evolve, research to date on systemic impacts of EPP conflict management already points to overall benefits to EPP policymaking and implementation, but also serious challenges. Collaborative networks and the systems that support them seem to be a significant but not sufficient condition for the development of adaptive, resilient, and environmentally sound communities.

Dynamics of EPP Conflict and Its Resolution

Research into EPP conflict dynamics and resolution has several strands, including promotion of constructive responses to conflict, systemic evaluations of EPP conflict resolution, processes of deliberative democracy that build on collaborative networks, and particular aspects of EPP conflict management, such as framing and joint fact-finding.

Promoting Constructive Responses to Conflict

Researchers connected to practitioners and practitioners themselves have conducted research into EPP conflict dynamics and management. They examine efforts to transform conflict, thereby building a theory of practice. Gray (1989) built on case studies to identify general principles of collaborative conflict resolution and to illustrate their application. Bush and Folger (1994, 2005) assessed conflict dynamics and in particular the potential for mediation to foster empowerment and recognition. Kriesberg (2007) and Mayer (2010) situated EPP conflict management within a broader examination of the causes and patterns of community conflict and range of responses. Margerum (2011) located EPP conflict resolution among a wider array of collaborative systems that he assessed.

Systemic Evaluations of EPP Conflict Resolution

Systemic evaluations of EPP conflict resolution efforts are relatively rare. Most evaluation research consists of single-case or small-n descriptive analyses. More extensive evaluations have built on work such as Beierle (1999) and Beierle and Cayford's (2002) studies of public participation processes in environmental decision-making, which examined criteria for what constitutes success, which goals are typically achieved and which are more elusive, and the extent and limits of evidence of success.

As noted above, Bingham (1986) conducted an early extensive evaluation of EPP conflict resolution. Based on more than 160 EPP conflict resolution cases, she characterized the overall condition of EPP conflict resolution practice, rather than offering in-depth evaluations of individual processes. She examined:

- (1) Factors linked to reaching agreements: identification and involvement of affected interests, number of parties involved, types of parties involved, and direct involvement of decision makers;
- (2) Factors associated with process and context: agreement on procedural issues, presence of a deadline, sufficient incentives, ability to satisfy each party's underlying interests, whether the dispute was in litigation, maintenance of good representative-constituency relationships, and negotiation in good faith;
- (3) Factors related to the substance of the dispute: issues, agreement on their scope, and agreement on facts;
- (4) Factors impinging on agreement implementation: comparing site-specific disputes and policy dialogues; and
- (5) Efficiency of EPP dispute resolution processes: comparing mediation to litigation, strategies of delay, and cost and duration of EPP dispute resolution processes.

Overall, the study found considerable success in EPP dispute resolution, but also over-reliance on ad hoc approaches to mediation and a lack of institutionalization of EPP conflict resolution processes in public decision-making at the time.

As the use of EPP conflict resolution expanded, comprehensive study of their impact became increasingly difficult (Koontz & Thomas, 2006). One response was to develop databases of cases associated with particular substantive issues. Susskind, Van der Wansem, and Ciccarelli (2000) worked with such a database developed by the Lincoln Land Institute for studying land use disputes and their resolution. In a series of quantitative studies, Leach, Sabatier, and associates (Leach, Pelkey, & Sabatier, 2002; Leach & Sabatier, 2005; Sabatier et al., 2005; Leach & Pelkey, 2001) examined the effectiveness of watershed partnerships and keys to their success. Dukes (2004) (with commentary by Emerson, O'Leary, and Bingham (2004)) and Dukes, Firehock and Birkhoff (2011) sought to systematize EPP conflict resolution research findings.

To systematize the evaluation of EPP conflict resolution processes, the US Institute of Environmental Conflict Resolution (USIECR)—federally mandated and funded to help federal agencies and affected stakeholders address environmental conflicts—developed quantitative indicators and protocols for systematically assessing EPP conflict resolution processes and enabling cross-case evaluations. Cases initiated by USIECR, as well as those initiated by several state offices of dispute resolution, have been subject to this analysis (Emerson & Carlson, 2003; Emerson, Orr, Keyes, & McKnight, 2009; Orr, Emerson & Keyes, 2008).

Finally and of particular note, a special-purpose conference held in 2001, "Evaluating Environmental and Public Policy Dispute Resolution Programs and Policies," focused attention on EPP conflict management evaluation (Bingham, Fairman, Fiorino & O'Leary (2003); O'Leary & Bingham, 2003). The papers provide considerable evidence of the difficulty in isolating outcomes and impacts of these processes given the lack of counterfactual cases. Also challenging is the formulation of appropriate indicators of success. The authors concluded that evaluation of these processes should be conducted as a form of continuous learning over time rather than to provide a static answer as to whether EPP conflict management is better than other forms of dispute resolution. The authors further identified many of the problems highlighted here: namely that EPP conflicts involve large groups operating within complex systems over extended periods of time and that impacts of such processes on social-ecological systems have proven difficult to measure given the wide range of influences on outcomes from outside the processes.

Overall, these and other studies generate mixed research findings on environmental conflict systems. On the one hand, EPP conflict resolution has proven very successful at generating agreement through processes highly rated by participants, with proximate outcomes consistent with the agreements reached. On the other hand, evidence of longer-term impacts on the environment, efficiency of decision-making, and decision process effectiveness compared to other approaches is harder to ascertain.

Processes of Deliberative Democracy that Build on Collaborative Networks

In parallel with the emergence of EPP conflict practices, concerns with the functioning of our democratic decision-making processes have also arisen. These emerged from political theory's focus on shortcomings of representative governance and managerial practices of agency policy implementation and from practical concerns of how best to enhance public voice in these decision-making processes. Deliberative democracy therefore is a second offshoot of public participation. However, in comparison with EPP dispute management, deliberative democracy aims to open decision processes to widespread participation in ways that reflect the makeup of the citizenry rather than resolving specific disputes among stakeholders. Gastil and Levine (2005) offer cases from several cities and types of institutional settings, providing evidence of the degree of effectiveness of civic innovations drawing from and extending public participation and EPP conflict practices.

Specialized Aspects of EPP Conflict Resolution Dynamics

Finally, we examine research that specializes in particular facets of EPP conflict dynamics and aspects of resolution processes, including such diverse topics as trust and trust development (Lewicki & Wiethoff,

2000), conflict transformation (Lederach, 2003), and intractability (Kriesberg, 2005; Lewicki, Gray, & Elliott, 2003). Studies of the relationship between science, fact-finding, and local knowledge (Andrews, 2002; Fischer, 2000; Kressel & Gadlin, 2009; McCreary, Gamman, & Brooks, 2001; Ozawa, 1991, 1996, 2005) examine how expert and local knowledge get integrated into environmental conflict resolution processes, and the role of learning in EPP decision-making. Researchers have also examined the role of social capital, in terms of the impact of EPP conflict resolution on its construction (Innes & Booher, 1999a; Rydin & Pennington, 2000) and the reciprocal effect of social capital on democratic decision processes (Adger, 2010; Armitage, Berkes, & Doubleday, 2010; Putnam, 2001).

Finally, an aspect of EPP conflict dynamics that has attracted intense research attention is framing, both as cognitive devices people use to make sense of complex information and as strategic communication devices. Of particular interest to EPP conflict researchers are frames associated with identity and characterization, power, risk and information, and gain–loss (Lewicki, Gray and Elliott, 2003; Brummans et al., 2008; Donohue, Rogan, & Kaufman, 2011; Elliott, 2003; Putnam, 2010; Rothman, 1997a, 1997b; Shmueli, Elliott, & Kaufman, 2006; Elliott & Kaufman, 2003). This research entails coding and other analytic tools but remains primarily qualitative. In this issue, Czaika and Selin (2016) article uses experimental design to investigate the role of models in negotiated decision-making for sustainability, a rare example of the use of such experiments in the study of negotiations in the context of EPP conflicts.

EPP Best-Practice Models

Research on the practice of EPP conflict resolution represents the dominant form of research in the field. It is driven by the need of practitioners to develop theories-in-practice concerning their management of conflict and the form and substance of their interventions. This research takes two main forms: (a) case-based assessments and evaluations of interventions and (b) reflective practice models wherein skilled practitioners draw lessons from their experiences and make their insights available to their colleagues.

Case-Based Assessments and Evaluations of Interventions

Large-n systematic multicase studies evaluating EPP collaborative processes are relative rare; small-n studies evaluating particular interventions are far more common. For example, Crowfoot and Wondolleck (1990) examined cases on mediations and consensus processes associated with national forests, water supply, groundwater, farmland protection, negotiated investment strategies, and critical areas. Elliott, Bourne, and Yarn (1995) examined the impacts of the facility issues negotiation process established by the Georgia Comprehensive Solid Waste Management Act. Susskind, McKearnen, and Thomas-Larmer (1999) developed 17 detailed cases, with commentary by academic scholars, for a wide range of EPP conflict resolution processes. Elliott (2000) and Elliott and Bourne (2005) evaluated processes developed by the US Environmental Protection Agency to promote stakeholder involvement in Project XL and facilitation of brownfield redevelopment.

While research in the United States has increasingly emphasized multicase comparisons using common indicators and research protocols, the complexity of the information necessary to understand conflict management processes coupled with the relative newness of their use continues to drive research in other countries to primarily single or small-n case study-based inquiries. Case studies are used either to illustrate some theoretical propositions (e.g., Aarts & Leeuwis, 2010; Gauthier, Simard, & Waub, 2011; Idrissou, Aarts, van Paassen, & Leeuwis, 2011; Shmueli & Ben-Gal, 2003; Turnhout, Bommel, & Aarts, 2010) or to extract lessons and begin to build theory on the basis of observed practical experiences (e.g., Eben, 2006; Gillham 2008; Hiwasaki, 2005; Kastens & Newig, 2008; Keen & Mercer, 1993; Klerkx & Aarts, 2013; Li, Liu, & Li, 2012; Shmueli, Kaufman & Ozawa, 2008; Soneryd, 2002). One research stream compares participatory practices in two or more countries (e.g., Cain et al., 2003; Darier et al., 1999; Morgenstern & Pizer, 2007; Stoll-Kleemann & O’Riordan, 2002; Tilleman, 1995). As noted above, one of the most effective evaluations of a single case was conducted in Germany (Holzinger, 2001). Focusing on a

specific waste management facility siting process, the study included measurement of process, outcome, and impact variables collected through direct observations of the process as it unfolded.

The efficacy of transferring EPP conflict management practices from countries where these practices have evolved to countries where use is more limited has received inadequate research attention. In particular, what are the key dimensions fostering participation in public decisions and how do those dimensions interact with EPP conflict management systems, dynamics, and practices? Several North American or West European initiatives have sought to implement environmental conflict management approaches in African, Asian, and South American countries that lack the political, institutional, or legal structures found in advanced democracies or have traditions of centralized, top-down decision-making (e.g., Porter and Young (1998) on Ghana, Yasmi (2003) on Indonesia, Zbinden and Lee (2005) on Costa Rica and Idrissou et al. (2011) on several cases in Benin). These cases have been described and evaluated, but they await analysis to derive process elements that travel well and others that cannot be implemented away from the contexts in which they evolved. Two of the articles in this issue, the first by Gasul and Shmueli (2016) and the second by Matsuura (2016), extend this literature by examining processes that grow from endogenous conditions found in Israel and Japan.

Reflective Practice Models Wherein Skilled Practitioners Draw Lessons From Their Experiences

Building on models of the role of social learning within professions and the construction of theories-in-practice (Argyris & Schon, 1974; Schon, 1987), EPP conflict resolution practitioners have engaged in self-examination and sharing of lessons learned from practice. These practice-based studies conducted by highly skilled practitioners consist of reflections on best practices (Adler & Birkhoff, 2002; Carpenter & Kennedy, 1988; Dukes, 2006; Dukes, Pisolish, & Stephens, 2000; Gray, 1989; Mayer, 2004, 2009, 2012; Moore, 2014; Susskind & Cruikshank, 1987; Susskind & Ozawa, 1984) or of “failures” (Buckle & Thomas-Buckle, 1986). Of particular note is the compendium produced by Susskind et al. (1999), linking three forms of practice-based reflection: an overall set of principles for multiparty collaborations; detailed discussions of best practices associated with 17 distinct phases of EPP conflict resolution by nationally recognized experts in each phase; and 17 detailed case analyses of complex EPP conflict resolution processes by practitioners, with reflections by noted scholars on lessons learned.

Professional organizations have also used collaborative processes to develop guidance for best practices. In the United States, the Society of Professionals in Dispute Resolution’s EPP Section collaborated with government agencies and other stakeholders to identify and promote best practices for government agencies seeking to utilize EPP conflict resolution processes (Bourne, Carlson, et al., 1997). The International Association of Facilitators coproduced a handbook for group facilitation (Schuman, 2012).

An even more ambitious effort to identify widely legitimated best-practice standards was conducted in Canada. The National Round Table on the Environment and the Economy, established to promote, develop, and use consensus-based processes in achieving sustainability, established the National Task Force on Consensus and Sustainability in 1991. Over 100 individuals (participants of various National Round Table processes from across Canada) worked with the National Task Force members to develop, over a two and a half year process, an understanding of negotiation-based processes and their role in building a sustainable society, for setting out essential elements of successful consensus building, and to guide its use. Ten principles emerged, with guidance on the problems that arise in applying the principle and how these can be addressed (Cormick, Dale, Emond, Sigurdson, & Stuart, 1996).

Future Directions

We are left with some conspicuous gaps in our knowledge of EPP conflict resolution processes. We identify three of particular interest:

- (1) A lack of systematic, multicase and long-term evaluations that examine the practice and impact of EPP conflict resolution and seek to measure the outcomes and impacts of such processes, to

determine the efficacy of strategies for intervention, and to identify contingencies that render such processes useful or specific modes of managing EPP conflict appropriate.

- (2) A dearth of nuanced assessments of the design, usefulness, and impact of particular modes of intervention and the conditions under which they are best applied. While careful observations of practice-in-action need to continue, efforts to develop experimental settings for studying group process dynamics need to be advanced. Complex simulations, in which particular variables are altered, show promise for future research.
- (3) A need for in-depth understanding of the role context plays in the design, implementation, and success of EPP conflict resolution processes, particularly as these relate to culture and politics in the transference of techniques developed within one context (e.g., the United States) to other contexts (e.g., in particular developing countries).

Regrettably, this special issue of the journal of *Negotiation and Conflict Management* does not address the first of these gaps. It does, however, present three articles that advance our understanding of the other two gaps.

“Establishing a ‘Community Forest’: Insights from the Collaborative Process in Migdal HaEmek, Israel,” by Gasul and Shmueli (2016), uses analysis of a case coupled with single-case evaluation methods to examine the impact of collaborative community involvement in the establishment and implementation of a community forest in Israel. The Balfour Forest, enveloping the town of Migdal HaEmek, was initially ignored as a potentially dangerous no-man’s land, but eventually integrated into the activities, identity, and management responsibilities of the community. The paper identifies the particular political and cultural characteristics of Israel within which this process took place, how collaborative structures were designed and established, and the means by which community activists were identified, recruited, and empowered. It evaluates the implication of the process dynamics, outcomes, and impacts on intergovernmental relations, community empowerment, and environmental and development issues. It advances our understanding of how contextual factors affect the design and efficacy of EPP collaborative processes and their application in countries with unique political and cultural environments.

“Taking Action to Reduce Waste: Quantifying Impacts of Model Use in a Multi-organizational Sustainability Negotiation,” by Czaika & Selin (2016), utilizes a role-play simulation to test the impact of using a quantitative model (to assess life cycle impacts of alternative policies on carbon emissions) on the process and outcome of sustainability negotiations. By measuring both negotiating outcomes and process variables, the researchers found that teams using a model, even those co-creating the model while negotiating, reached agreement more quickly than teams not using a model. They also found that teams co-creating the model reached a higher number of favorable agreements. This project tests the efficacy of a particular aspect of EPP conflict resolution process, namely the use of models in joint fact-finding in an experimental setting, and suggests how other process elements might be tested in the future.

“Consensus Building for Long-term Sustainability in the Non-North American Context: Reflecting on a Stakeholder Process in Japan.” by Matsuura (2016), describes the author’s experience with designing and implementing a consensus building process in a Japanese community on a small, remote island. The author-intervener attempted to engage stakeholders in a dialogue regarding use of wood biomass available on the island for sustainably producing energy. Matsuura analyzes the reasons why this process, designed on the basis of prescriptions developed in the United States, failed to garner consensus among participating stakeholders. The author’s reflective analysis provides insight into cultural factors that may have defeated this initiative. The article makes a double contribution. It reports first-hand the experience of a cultural insider who is also familiar with the American context and practices and can therefore also act as an observer. The article also connects field research to a rich stream of experimental research that has explored the effects of culture on negotiation.

The articles in this special issue are illustrative of a very active research field applying conflict management theory and practice to issues of significant importance to society. This research has remained

heavily reliant on qualitative research techniques, with few connections to the equally prolific experimental research found in other branches of negotiation-based conflict management. Building bridges between the two sets of researchers is likely to inform both. Experimental researchers might consider the context of EPP conflict management as a testing ground, where their ideas and findings would be pitted against the complex and ever-shifting reality of EPP processes instead of being relegated to carefully controlled “*caeteris paribus*” laboratories. EPP conflict management researchers, on the other hand, could find that careful consideration of experimental results in environmental case studies would enrich their repertory of conjectures and accounts of observed processes and outcomes, thereby improving their prescriptions for practice. We invite the readers to explore the three articles included here, and challenge them to consider how to build connections between two major modalities of negotiation research that have tended so far to operate in separate spaces.

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