Critical Next Steps in Research on Public Meetings and Environmental Decision Making

Kathleen E. Halvorsen

209 AOB, Social Sciences
1400 Townsend Dr.
Michigan Technological University
Houghton, MI 49931[1]

Abstract

Research on public meetings and environmental decision making has increased greatly over the past 30 years. Much published research evaluates specific public meeting techniques or officials' and participants' expectations regarding public meetings. However, three questions remain largely unexplored. First, why do or don't people attend public meetings? Research suggests that beliefs and values regarding a meeting's topic are important, but work on this question remains limited. Second, how does working with the public affect decision makers and their willingness to conduct future public meetings? Few researchers have worked on this question. Third, how does public meeting input affect decision making? A great deal of research describes cases where input fails to influence decision making. However, few studies have presented and explained successful incorporation of public input into decision making. Answering these questions is critical to moving forward with the next generation of effective citizen involvement through public meetings.

Keywords: citizen involvement, public meetings, decision making

Introduction

Research on public meetings and environmental decision making in the United States has come of age. Published articles and books abound on the topic. My goal for this article is to summarize and synthesize some of the key roots and findings of this work. I will also identify some critical next steps for researchers. The term "public meetings" generally refers to an agency meeting on a potential decision. These meetings are usually open to the general public. However, agencies sometimes use meeting techniques aimed at reaching a subset of the public. For instance, they may schedule a meeting with an existing community group. While this type of meeting is not technically a meeting open to the "general public" I count it as a meeting with a segment of the public. It should be noted that many other types of collaborative de-

cision making processes also exist within different environmental decision making spheres. These tend to involve self-organized community groups or agency organized advisory groups. Because extended meetings with selected groups can have very different dynamics from one-time or short term public meetings, I do not focus on research on this type of technique. I make an exception in some cases when this research fills a critical gap in the public meeting literature. This article focuses mostly on one-time or short term public meetings that are open to the general public or a segment of the public.

Many locate public participation's roots in the 1960s when civil rights and environmental movements grew powerful and successfully advanced protection of disenfranchised citizens' rights (Rosenbaum 1978). These movements resulted in important federal laws, including the Freedom of Information Act of 1966 (FOIA), the National Environmental Policy Act of 1970 (NEPA), and the National Forest Management Act of 1976. All include provisions that open decision making to public scrutiny.

A number of professions and scientific disciplines responded by developing curricula, research projects, and statements of principle that emphasized the need to involve the public in all levels of decision making. In some ways, political science was the discipline that focused earliest on these issues. Political scientists argued that democratic decision making should move beyond pluralistic allocations of resources and Progressive Era idealizations of science and expertise (Barber 1984; Mansbridge 1983; Pateman 1970; Poisner 1996; Stanley 1978; Stanley 1990; Warren 1992). They believed in the expansion of opportunities for direct/participatory democracy where expertise assisted in the development of a powerful, efficacious citizenry. These authors believed that citizens should have the opportunity to influence decisions likely to affect their lives and values.

Over time these theorists' ideas began to influence specialists in more applied fields like planning. Planning is a broad area of expertise, encompassing work on projects from national highway systems to small town zoning. A series of distinguished planning theorists published critiques of their

field's unquestioning assumption of power through expertise (Arnstein 1969; Fischer 2000; Forester 1989; Friedmann 1987; Healy 1992; Thomas 1995). They argued for a broader sense of expertise that included citizen knowledge. They encouraged the development of planners skilled in both the technical and citizen involvement dimensions of decision making.

A new roster of researchers drew upon these earlier authors in their critiques of federal agency decision making regarding environmental protection and natural resource management (Blahna and Yonts-Shepard 1989; Heberlein 1976; O'Riordan 1976a; O'Riordan 1976b; Rosenbaum 1978; Shannon 1990). Their work was influenced by a strong belief in direct democracy. They also thought that many federal agencies, such as the USDA Forest Service (USFS), Army Corps of Engineers, US Environmental Protection Agency (USEPA), and the Bureau of Land Management (BLM) were unresponsive to changing public values. However, with the exception of Blahna and Yonts-Shepard (1989), most of their work was either theoretical or case study-based. They published little empirical work testing hypotheses about the relationships between governance, citizenship, and public involvement.

In the early 1990s, many state and federal agencies became interested in improving their public involvement processes. The USFS and USEPA led this trend. The USFS was bogged down in litigation and reeling from increasing public demands for policy changes. The USEPA experimented with formal public involvement, but was dissatisfied with its ability to effectively connect its specialists with citizens. These agencies also had internal and external critics pushing them to change their practices. Many scholars believed that improving their public involvement programs through, for instance, demonstrating how public comments were incorporated into decision making, would help the agencies make better decisions and gain public support. The agencies turned to scholars to help them make these changes.

A shift also occurred from regarding agencies as responsible for the provision of public comment periods toward also holding them responsible for bringing the public to the table (Rosenbaum 1978). Citizen participation began to be seen as a right and not just a privilege. Some also saw citizen involvement as a means of citizen development, predicting that participants could gain a stronger sense of self-efficacy and a greater tolerance for those with whom they disagreed (Pateman 1970; Warren 1992). Others believed that agencies relied too much on individuated opinion collection methods, like public hearings, that failed to fulfill the promise of more participatory and deliberative methods (Baker et al. 2005; Cortner 1996; McComas and Scherer 1998; Poisner 1996). In their eyes, participation could both decrease conflict over

environmentally-related values and improve agency employee relationships with the public (Beierle and Konisky 2000; Duram and Brown 1999).

Some also argued that agencies needed to develop more meaningful, satisfying processes. They believed that much public involvement was "therapy," "manipulation," or "cooptation" aimed more at building support for pre-made agency decisions than providing citizens with opportunities to impact public policies (Arnstein 1969; Germain et al. 2001; Landre and Knuth 1993; Rosener 1981). Meanwhile, calls for the evaluation and assessment of public involvement processes grew (Chess 2000; Conley and Moote 2003; Langton 1978; Rosener 1981; Sewell and Phillips 1979).

Over the past 30 years, the field of public involvement in environmental decision making has exploded. Scholars have published research results in a broad range of journals, most notably *Environmental Management; Human Ecology Review; Society and Natural Resources; Public Administration Review; Policy Sciences; Policy Studies Review; Science, Technology, and Human Values*; and *Environmental Practice*.

It is time to step back, think about what we have learned, and begin to identify unanswered, or largely unaddressed, research questions. I will do this by focusing primarily on work examining formally structured public involvement processes with a primary emphasis on public meetings. These include public hearings, community dinners, focus groups, open houses, and other types of limited term or one-time public meeting mechanisms connecting citizens with decision makers.

The Research to Date

Figure 1 provides a conceptual framework that attempts to describe key relationships between decision makers, citizens, and public meetings. It presents these relationships as interrelated factors, starting from an agency's decision to hold a public meeting. The factors that I argue are well-researched and reasonably well-understood are presented in a box outlined with light dashes. Those key factors that I argue have not been well-researched are presented in boxes outlined with heavy dashed lines.

The factors are intertwined and sometimes difficult to disentangle. While they are not necessarily mutually exclusive, I believe that most are sufficiently distinct that it makes sense to discuss them separately. To begin with, once a public meeting is planned, agencies will begin to decide how the meeting(s) will be organized. Related to this, they will decide goals for the meeting, which should affect design (Creighton 2005). These decisions take the process into the realm of intervening factors. These factors affect the achievement of two outcomes: decision quality and the qual-
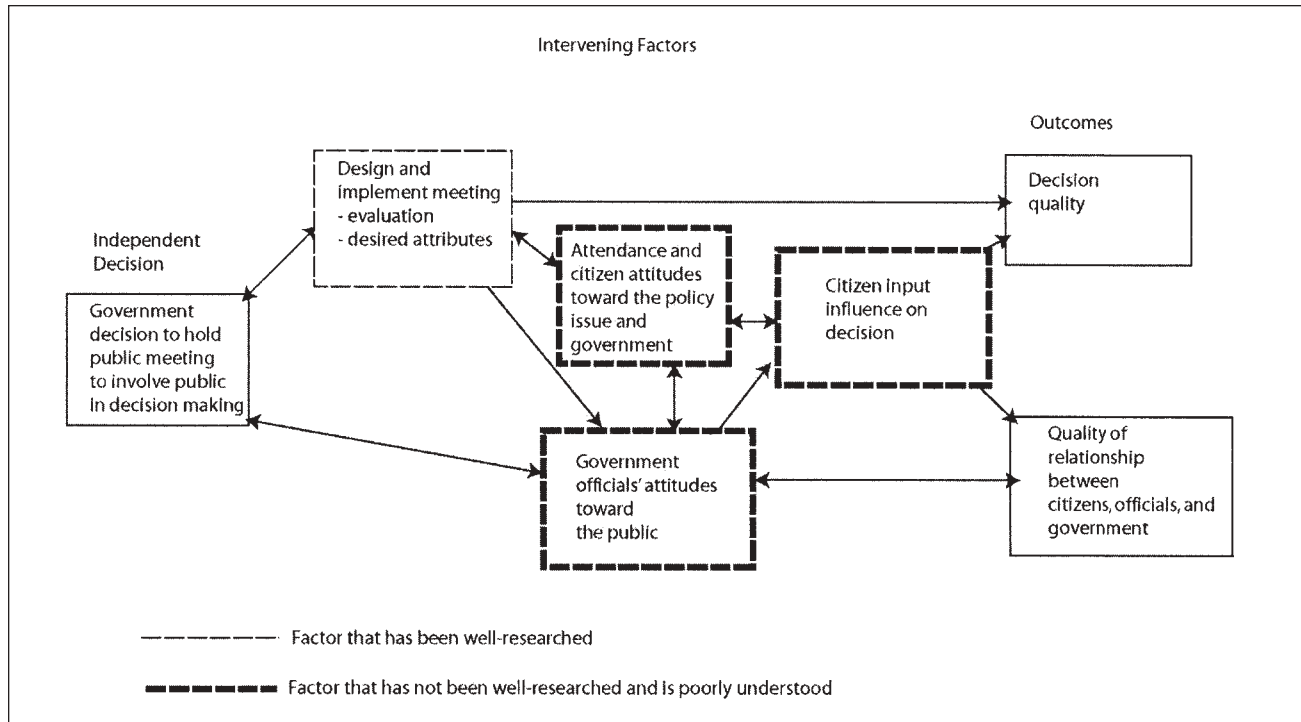
Figure 1. The public meeting process and key intervening factors that are and aren't well-researched to date.

ity of relationships between citizens, officials, and government. This is why understanding the role of the four intervening variables is so important.

A great deal of research has been published on the first: the evaluation of meetings/techniques and on citizens' and decision makers' desired public meeting attributes. I discuss this in further detail in the section that follows immediately after this one. However, government officials' attitudes toward the public are also a key, "early" factor with the ability to affect (and, in some cases, to be affected by) two other important factors: who attends the meetings and citizen attitudes toward the issue and government; and, ultimately, the influence that citizen input from the meetings has on officials' policy decisions. In the case of each of these factors, I will summarize key research findings and present arguments for why each merits further study. These intervening factors are presented in four boxes in Figure 1 and organized into four major sections within this article. These are:

1. The design and implementation of public meetings, including evaluation of the meetings and officials' and participants' desired meeting attributes
2. Attendance and citizen attitudes toward policy issues and government officials
3. Government officials' attitudes toward the public

4. Citizen input and influence on decisions

Links between public meetings and decision quality outcomes are also important, but they are very difficult to assess and therefore have not (with a couple of exceptions described toward the end of this paper) been the focus of a great deal of research.

Design and Implementation of Public Meetings

There are a number of books available which discuss a wide range of public meeting types (see e.g. Creighton 2005; Thomas 1995). To some degree, meeting evaluation evolved as a reaction against just one form: public hearings (Baker et al. 2005; Checkoway 1981; Duram and Brown 1999; Lando 2003; McComas and Scherer 1998; Poisner 1996). Early authors questioned whether this type of meeting resolved or exacerbated conflict; encouraged or discouraged participation; and enhanced or degraded relationships between citizens and officials. As late as the early 1990s, little empirical research had been published that systematically evaluated public meeting techniques (Chess 2000). Additionally, there was little information about what citizens or decision makers expected or desired from these meetings (Rosener 1981). The

lack of information about evaluation and desired attributes prevented further investigation of the relationship between these factors and outcomes.

Much initial evaluation work focused on what researchers assumed to be important factors. Beierle and Cayford (2002), Rowe et al. (2004), and Rowe and Frewer (2000; 2004; 2005) synthesized particularly exhaustive reviews of this public involvement evaluation literature. Key factors included whether meetings were fair, legitimate, and representative. Some work assessed whether participants thought meetings were comfortable and convenient. Finally, a number of researchers assessed the interactive, deliberative quality of participant discussions. For instance, Beierle and Cayford's (2002) meta-analysis of participation case studies focused on linking meeting type to success. They found that the more interactive or "intensive" the mechanism, the more successful it was in achieving its goals.

A common criticism of public meetings has been that attendees were not representative of their community (Burch 1976; McComas and Scherer 1998; Stedman and Parkins 2003). As will be presented later in this paper, participants frequently believe that representativeness is important and that it is tied to the fairness and legitimacy of the meeting process (Duram and Brown 1999). However, public meetings and comment solicitations frequently generate viewpoints from a group of people older, whiter, more affluent, more educated, and more likely to be male than the citizens within their community (Anthony et al. 2004; Berry et al. 1984; Carr and Halvorsen 2001; Marshall and Jones 2005; McComas 2001a; McComas 2003a; Stedman and Parkins 2003). This is important because people in these demographics often have more status and power within a community than people in different demographics. They may also have different beliefs and values than non-attendees or the community-at-large. One study found that, even when participants were demographically similar to nonparticipants, their viewpoints were different (McComas and Scherer 1998). Participants were significantly more likely to believe that the decision in question posed an important risk to community members and they were more likely to be angry about the proposed project. There is some suggestion that low overall participation rates might be overcome by going to existing community groups to discuss policy issues, but little other published research suggests how to overcome this problem (Halvorsen 2001a).

Public meetings can also be intimidating and uncomfortable. With this in mind, one researcher assessed two techniques chosen because they were expected to overcome these problems. The techniques were community dinners and focused conversations. The community dinners took place in a centrally located place in the community over an inexpensive dinner (Halvorsen 2001a). The presence of food was expect-

ed to set a more relaxed tone and to free people's time from dinner preparation while providing for discussion over a meal. The focused conversations took place at the regularly scheduled meetings and locations of existing community groups, such as Kiwanis and sportsmen's groups. This was expected to be convenient for participants because the agency representatives were coming to them. They were expected to be comfortable because discussion took place between people who already knew each other. Participants evaluated the meetings and gave the techniques high scores on these criteria.

Another important theme in the public meeting literature has been the call for techniques that facilitate deliberation about issues and common values rather than just soliciting individualistic position or preference statements (Cortner 1996; Duram and Brown 1999; Lauber and Knuth 1998; 1999). Deliberative public meeting processes allow for discussion among participants and between participants and officials (Fishkin 1991; Parkins and Mitchell 2005; Tuler and Webler 1999a; Webler and Tuler 2000). Free and open dialogue is characteristic, allowing for the identification of both differences and commonalities. Citizens can speak and expect to be listened to with respect regardless of whether their views coincide with those of the listeners (Lukensmeyer and Boyd 2004). Ideally, participants in deliberative meetings develop fuller senses of how and why they disagree. However, they may find that areas of disagreement are relatively shallow, while shared core values are more deeply held. For instance, individuals may disagree over motorized vehicle access to public lands, but find that they share concerns about their community's economic and environmental health. Deliberative public meetings can therefore create desired outcomes ranging from reduced conflict to a more tolerant citizenry.

With these expectations in mind, Darnall and Jolley (2004) assessed multiple public meeting processes and found that deliberation was particularly appropriate and useful when there was little agreement about the technical aspects of environmental problems. They found that deliberation fostered the identification of, and agreement on, important risks in low information situations. Another researcher surveyed participants regarding the deliberative qualities of community dinners and focused conversations with existing community groups (Carr and Halvorsen 2001; Halvorsen 2001a; 2003). Participants rated both as generally deliberative in that discussion was free, open, and respectful.

On the other hand, Lauber and Knuth (1998; 1999) assessed New York State participatory processes designed to elicit views on moose reintroduction. They found that the organizing agency used techniques eliciting "shallow" preference statements from individuals rather than encouraging deliberation to identify shared values underlying those preferences. They argued that the agency did not solicit the in-

formation that it really needed to make a policy decision. On the other hand, Rowe et al. (2004) evaluated a deliberative conference technique and found that it scored well on measures of deliberative quality (Rowe and Frewer 2000; 2004).

In summary, it is clear that some public meeting techniques (such as public hearings) tend not to be deliberative, while others (community dinners, deliberative opinion polling [Fishkin 1991], and focused conversations) are more successful in facilitating open, respectful dialogue about citizens' values and concerns. There are, however, many obstacles to greater deliberation within public meetings, especially "one-time" meetings. For instance, it may not be in the interest of agency officials to encourage a lengthy, full discussion of a policy issue. Their need for a greater sense of public concerns may be more efficiently served through public hearings or public comment periods that provide one-way communication from individual citizens to agency officials.

Another potential problem is that citizens may not come to a meeting with sufficient knowledge for thoughtful discussion of an issue. Because two of the most commonly used techniques, public hearings and open houses, do not require it, they may not be accustomed to or prepared for such discussions. It is notable that the researchers who have found particular meeting techniques to be deliberative have studied either specially designed techniques (community dinners, focused conversations, and deliberative opinion polls) or multi-meeting processes such as advisory groups. Gaining deliberativeness may require either setting aside favorite techniques or investing significant time in extended processes.

Citizens' and Officials' Desired Public Meeting Attributes

Much of the research described above evaluated criteria assumed by scholars to be important indicators of quality participation. Until recently, there was little published research on citizens' and officials' desired characteristics. When researchers have surveyed citizens and decision makers to find out what was important to them, fairness, representativeness, and ability to influence decision making emerged as factors important to a wide range of people (Berry et al. 1984; Chase et al. 2004; Germain et al. 2001; Lauber and Knuth 1998; 1999; Lawrence et al. 1997; McCool and Guthrie 2001; McClaran and King 1999; McComas 2001b; Smith and Mc-Donough 2001; Tuler and Webler 1999b).

The first two interrelate in that a fair process involves the full range of people who care about an issue and provides them with an equal opportunity to speak and to be heard. Decision making processes that are seen as fair and representative are more likely to also be seen as legitimate. Participants are more likely to view them as reasonable and supportable

(Lawrence et al. 1997; Smith and McDonough 2001). This links to another common goal for participants: that their input has some effect on the final decision. However, when the basis for a decision is well-explained, including why specific concerns were not fully addressed, participants are more likely to support the decision and believe that decision makers acted in good faith.

While many researchers have identified overlapping desired attributes, some research suggests that different public meeting participants place priority on different attributes (Tuler and Webler 1999b; Webler and Tuler 2000; 2001; Webler et al. 2001). While these authors found that individuals generally valued fairness, representativeness, and influence on decisions, they also found that they cared about factors like good leadership and participants' willingness to compromise. However, it is important to note that one of their key findings is that participants also tended to favor distinctly different sets of desired attributes. Additionally, participants and decision makers tended to prefer different kinds of meeting characteristics. This work reminds us that viewpoints on appropriate participatory methods are not homogeneous. No single process is likely to satisfy every participant's or organizer's preferences.

On the other hand, McComas (2003b) found that many participants had low expectations of public meetings and did not expect that their participation would affect decisions. Her interviewees went to meetings anyway because, among other reasons, they viewed them as important opportunities to gather information about a potential decision and about other community members' viewpoints.

As explained above, we also know that attendees at environmentally-related public meetings tend to be demographically different from their communities (Burch 1976; Carr and Halvorsen 2001; Stedman and Parkins 2003). Given that participants' perceptions of attendee representativeness greatly affect their perceptions of process fairness and legitimacy, an understanding of why people do and don't participate in meetings is particularly important. As will be described in the next section, we don't yet know a lot about the answer to this question. It should also be noted that most of the research described above focuses on people telling us what they think is important. Little work has been done that takes these findings, establishes empirically that particular meetings have met these characteristics, and then looks at long term impacts on environmental quality or citizen relationships to public officials.

Attendance and Citizen Attitudes toward Policy Issues and Government Officials

Anyone who has organized many public meetings has experienced the disappointment of scheduling a carefully

planned meeting on an important topic that was well advertised and having very few people show up (Irvin and Stansbury 2004; Laurian 2004). Similarly, public officials commonly complain that it "never rains but it pours" with regard to attendance. For instance, they schedule informal open houses to encourage people to drop by and chat with staff in a relaxed setting and find that, in the absence of a contentious issue, the same handful of people always show up (Irvin and Stansbury 2004; Lukensmeyer and Boyd 2004). On the other hand, when a difficult and controversial issue emerges, attendance soars to standing room only and attendees engage in long, angry harangues directed at well-meaning public employees (Lukensmeyer and Boyd 2004). This raises the question: why do (or don't) people attend a public meeting?

Some believe that most people will only attend a meeting on a personally critical issue (Creighton 2005; Irvin and Stansbury 2004). Unfortunately, little published research has focused on fully understanding this relationship. For some, nonattendance is linked to the belief that public meeting participation is not part of their gender role. They may not think that they would be particularly effective participants if they chose to go (Burns et al. 2001; Halvorsen and Jarvie 2002; Schlozman et al. 1994; 1995; 1999; Verba et al. 1993; 1995; 1997). Burns, Schlozman, and Verba's national level studies of political participation suggest an underlying reason for this belief. They found that many citizen participants gained the skills and self-confidence to participate in political settings, like public meetings, from professional work. Their results suggest that, because women are less likely than men to hold such positions, this makes women less likely to attend and participate in a public meeting.

Tuler et al. (2002) and Webler et al. (2003) investigated why local government officials did or didn't participate in a watershed management effort. Although watershed groups often require significantly greater commitment than a single public meeting, their results probably also pertain to individuals' choices about whether or not to attend a meeting. They found the officials had different approaches to deciding whether or not to participate. However, key factors included officials' beliefs regarding whether they could make a difference in the process, whether it would meet their personal participation goals, and whether participation was worth their investment of time and money. They also found that past experiences with public meetings and the organizing agency affected beliefs regarding the value of taking part in a particular planning process. It is likely that individuals use similar approaches to figure out whether or not they need to go to a public meeting.

Others have suggested that the willingness to participate boils down to trust in a public agency, but it is not clear what role this factor plays. For instance, Laurian (2004) found that

a limited amount of distrust of an agency made people more likely to participate in public meetings. However, this author also found that a deep distrust in the organization caused individuals to "exit" the process by not attending at all. These individuals didn't trust an agency to do the right thing, but they also didn't trust them to listen to their concerns (Laurian 2004). McComas and Scherer (1998) and McComas (2001a; 2003a) compared participants and nonparticipants and found that participants were more likely to view the proposed projects covered in the meetings as involving significant risks. McComas (2001a; 2003a,) showed that those who believed the risks were significant were also less likely to view agency employees as credible. This linked to meeting participation because participants were less likely than nonparticipants to view decision makers as credible. Her findings reinforce Laurian's (2004) that a certain amount of distrust of an agency seems to lead people to believe they need to attend that agency's public meeting about an important decision.

Some research suggests that attending a comfortable, convenient, and satisfying public meeting increases participant trust in an agency (Halvorsen 2003). However, if the goal is to get people who care about an issue to a meeting about that issue, Laurian's (2004) and McComas' (2001a; 2003a) findings suggest that increased trust could actually hinder participation. Better understanding the role trust plays in citizens' participation decisions may make it easier to attract more representative sets of participants. Citizens' trust of agencies affects not just their participation, but also their expectations of and interactions with, public officials. These interactions are, in turn, likely to affect officials' expectations of and interactions with citizens. This is the subject of the next section.

Government Officials' Attitudes toward the Public

As agency employees work year after year to involve the public in decision making, they will usually have both positive and negative experiences. The professional training they bring to their positions frequently lays a foundation for their views regarding citizens and public involvement. An agency or agency office where negative or positive experiences with the public predominate may respond by developing a culture that conveys associated beliefs, values, and norms to new employees (Duram and Brown 1999; McKinney and Harmon 2002; Meyer and Rowan 1991). For instance, as Meyer and Rowan (1991) point out, complex organizations tend to protect themselves from external demands perceived as interfering with the accomplishment of core tasks. If public participation requirements are viewed solely as pointless legal

requirements or social expectations that prevent employees from meeting more important day-to-day demands, public meetings become a ritualized exercise unlikely to satisfy participants or officials.

Agencies that are subject to frequent citizen legal challenges may begin to see them as inevitable regardless of the quality of their public involvement opportunities (Germain et al. 2001). A few public meeting experiences with a room full of hostile audience members may make them less likely to have positive expectations regarding their ability to work effectively with members of the public (McKinney and Harmon 2002). These difficult experiences may override multiple positive encounters with publics in various settings. Unfortunately, because this is one of the understudied areas of public meeting research, we know little about how these interactions work.

A few researchers have published results which begin to give us a sense of how public officials view the public (Berry et al. 1984; Halvorsen 2001b; Yang 2005a; 2005b). Two of the most notable pieces are by Kaifeng Yang (2005a; 2005b). In his investigation of how experiences with the public impact local officials, he found that good experiences positively influenced officials' expectations of the public and willingness to work with them in the future. He also found that, not surprisingly, negative experiences, including personal experiences with citizens, and beliefs that media, government, and citizens "bashed" government, had the opposite effect. Yang (2005b) found that personal propensities regarding trust were less powerful predictors of officials' attitudes toward the public than their experiences with them in settings like public meetings. However, personal orientation did explain a significant amount of variation in these attitudes, as did having a "procedural" orientation toward work that predisposed individuals to be rule- and authority-focused. Additionally, his work suggests that female officials are significantly more likely than males to both trust citizens and to want to involve them in decision making (2005b). This last result supports prior work that found that "non-traditional" categories of USFS employees (women, minorities, and new types of professionals) tended to have significantly more positive expectations of members of the public and a wide variety of interest groups, including both commodity and environmental groups, than did traditional categories of employees (Halvorsen 2001b).

The research summarized in this section suggests that if officials trust the public and view working with them as rewarding they will be more likely to hold public meetings and to incorporate resultant input into decision making. Research discussed in earlier sections shows that citizens, in turn, use their assessment of the influence they had on decision making to decide whether a process succeeded or failed (Lauber

and Knuth 1998; 1999; Tuler and Webler 1999b). It is therefore critical to understand when and how input influences decision making. This is the subject of the next section.

Citizen Input and Influence on Decisions

A great deal of research has been published describing situations where citizen input from meetings and other processes did not affect decisions or was poorly used or interpreted (Adams 2004; Alkadry 2003; Blahna and Yonts-Shepard 1989; Germain et al. 2001; Moote et al. 1997; Lando 2003; Lawrence et al. 1997; Lukensmeyer and Boyd 2004; Marinetto 2003; McCann 2001; McKinney and Harmon 2002; Rosenbaum 1978). Unfortunately, there is surprisingly little published research about when and how involvement, including public meetings, does affect decision making (Rowe and Frewer 2000; 2004; 2005). It is particularly limited when researchers attempt to move beyond measuring impacts on the decision to impacts on an outcome that affects environmental quality. The only known example of this does not come from the public meeting literature on one-time or short term meetings. It comes from research on watershed management groups and links watershed planning to environmental restoration (Leach et al. 2002; Leach and Sabatier 2005).

Two of the rare publications that report findings regarding linking public input and influence are Beierle and Konisky's (2000) and Beierle and Cayford's (2002) meta-analyses of case studies of public involvement processes, including public meetings. Three additional exceptions are discussed in more detail below. Beierle and Konisky (2000) and Beierle and Cayford (2002) found that, in a majority of the cases, citizen input, whether from one-time meetings or extended processes, did affect decision making. However, there are limitations to meta-analyses. These researchers could only use case studies already available in the peer-reviewed or "grey" literature. Those cases might lean toward describing particularly successful processes. Additionally, although the researchers developed a careful methodology for analyzing these cases, they were still limited by the information available in pre-existing publications.

One of the reasons that the literature on the ability of citizen input to influence decisions is limited is that it is a difficult item to measure definitively. For instance, meeting participants frequently disagree with each other. This may make it particularly difficult to determine whether these differing viewpoints affected decision making. Would a decision "in the middle" best reflect listening to both sides? An additional challenge is the fact that while public meetings may occur over a short period of time, officials' decisions may be made for years afterward. This can make it difficult to track deci-

sion making for a sufficiently long period of time to determine whether there was an impact.

However, some researchers have come up with some basic measures to at least begin to assess whether input was incorporated. For instance, Rosener (1982) designed a simple measure of influence when she studied California Coastal Commission decisions regarding building permits. Using transcripts of the public meetings held on the permit decisions, she compared those where citizen opposition to permit issuance was voiced to cases where it wasn't. In those situations where it was voiced, she found that commissioners were much more likely to overrule staff recommendations regarding a permit than when it as absent. While her measure has some limitations, it suggests how future researchers might approach the challenge of measuring such a complex variable.

Koontz (2005) adds another piece to the puzzle with his study of local land use planning advisory groups. While advisory groups can be very different from short term public meeting processes, I include his findings here because cases where input successfully influenced decision making are so rare. He found that a group's ability to influence officials' decisions depended mostly on the context within which the officials worked, including local social capital levels and population trends. In this case, he operationalized "influence" on decisions by simply asking advisory group members and local officials (some time after decisions had been made) whether the groups' recommendations affected the officials' decisions. He found that in some cases they did have an effect and in others they did not, for the reasons discussed briefly above. His results begin to build an understanding of when and how public input influences decisions.

Koontz's (2005) measure of influence is similar to the one used by Rowe et al. (2004) although they used several survey questions to assess whether decision makers and participants believed the public's input from a meeting would affect future decisions. Again, this type of measure has limitations, but it begins to suggest a way to approach this thorny issue. His findings suggest that future researchers studying whether meeting input influenced decision making might start by simply interviewing the citizens and officials who were part of the process. It also suggests that the social context within which the officials operate might significantly affect their ability or propensity to use the input from a meeting.

As our knowledge of influence develops, we will hopefully begin to have a sense of when and under what circumstances public meeting input affects policy decisions. This type of information might be useful in improving future participatory opportunities. It might also be helpful in communicating to the public that their concerns and values are of real interest to public officials.

Conclusion

Public meetings are a well-established part of environmental policy making in the United States today. Public policies, professions, and academic disciplines have institutionalized a variety of values, beliefs, and practices related to involving citizens in decision making. An agency's public involvement efforts link to a series of factors that affect the agency's decisions and relationships to citizens. Some of these factors are well-understood while others are not. For instance, a great deal of scholarship has been published describing meeting techniques. We know a great deal about what people believe constitutes a high quality public meeting. We understand this fairly well from the viewpoints of both public officials and citizen participants. However, we haven't really gone beyond what people think is important to performing research on how meetings with these attributes affect environmental quality or relationships between citizens and officials over time.

We also lack a firm understanding of some of the factors that intervene between high quality meetings and the creation of successful decisions and stronger relationships to citizens. We know that citizens who view a potential project as particularly risky and decision makers as untrustworthy are somewhat more likely than those who don't to participate. Research findings regarding why citizens do or don't participate in a meeting are, however, still limited. This impedes our ability to attract groups of participants who are relatively representative of their community. We also know little about public officials and their attitudes toward citizens. The research that has been done suggests that a negative experience with the public causes officials to have more negative expectations of public involvement in general, including public meetings. Officials' and citizens' attitudes affect and are affected by the degree of influence that public meeting input has on policy decisions. Unfortunately, we know more about cases where input did not influence decision making, than about cases when it did. As a result, our ability to suggest strategies to ensure influence is limited. This paper is designed to provide a snapshot of the literature on environmentally-related public meetings as it exists today. I have pointed out some missing pieces that I believe warrant further research that would be of practical and theoretical value. It will be interesting to watch the field unfold over the decades to follow.

Endnote

1. Author to whom correspondence should be directed: E-mail: kehalvor@mtu.edu

Acknowledgments

References

Adams, B. 2004. Public meetings and the democratic process. *Public Administration Review* 64, 43-54.

Alkadry, M.B. 2003. Deliberative discourse between citizens and administrators: if citizens talk will administrators listen? *Administration and Society* 35, 184-209.

Anthony, M.L., B.A. Knuth, and T.B. Lauber. 2004. Gender and citizen participation in wildlife management decision making. *Society and Natural Resources* 17, 395-412.

Arnstein, S.R. 1969. A ladder of citizen participation. *Journal of the American Institute of Planners* 35, 216-224.

Baker, W.H., H.L. Addams, and B. Davis. 2005. Critical factors for enhancing municipal public hearings. *Public Administration Review* 65, 490-499.

Barber, Benjamin R. 1984. *Strong Democracy: Participatory Politics for a New Age.* Berkeley, CA: University of California Press.

Beierle, T.C., and J. Cayford. 2002. *Democracy in Practice: Public Participation in Environmental Decisions.* Washington, D.C.: Resources for the Future.

Beierle, T.C., and D.M. Konisky. 2000. Values, conflict, and trust in participatory environmental planning. *Journal of Policy Analysis and Management* 19, 587-602.

Berry, J.M., K.E. Portney, M.B. Bablitch, and R. Mahoney. 1984. Public involvement in administration: the structural determinants of effective citizen participation. *Journal of Voluntary Action Research* 13, 7-23.

Blahna, D. J. and S. Yonts-Shepard. 1989. Public involvement in resources planning: Toward bridging the gap between policy and implementation. *Society and Natural Resources* 2, 209-227.

Burch, W.R. 1976. Who participates-a sociological interpretation of natural resource decisions. *Natural Resources Journal* 16, 41-54.

Burns, N., K.L. Schlozman, and S. Verba. 2001. *The Private Roots of Public Action: Gender, Equality, and Political Participation.* Cambridge: Harvard University Press.

Carr, D.S. and K.E. Halvorsen. 2001. An evaluation of three democratic, community-based approaches to citizen participation: Surveys, conversations with community groups, and community dinners. *Society and Natural Resources* 14, 107-126.

Chase, L.C., D.J. Decker, and T.B. Lauber. 2004. Public participation in wildlife management: What do stakeholders want? *Society and Natural Resources* 17, 629-640.

Checkoway, B. 1981. The politics of public hearings. *The Journal of Applied Behavioral Sciences* 17, 4, 566-81.

Chess, C. 2000. Evaluating environmental public participation: Methodological questions. *Journal of Environmental Planning and Management* 43, 769-784.

Conley, A., and M.A. Moote. 2003. Evaluating collaborative natural resource management. *Society and Natural Resources* 16, 371-386.

Cortner, H. 1996. Public Involvement and Interaction. In A.W. Ewert (ed.), *Natural Resource Management: The Human Dimension*, 166-179 Boulder, CO: Westview Press.

Creighton, J.L. 2005. *The Public Participation Handbook.* San Francisco, CA: Jossey-Bass.

Darnall, N., and G.J. Jolley. 2004. Involving the public: When are surveys and stakeholder interviews effective? *Review of Policy Research* 21, 581-593.

Duram, L.A., and K.G. Brown. 1999. Assessing public participation in U.S. watershed planning initiatives. *Society and Natural Resources* 12, 455-467.

Fischer, F. 2000. *Citizens, Experts, and the Environment.* Durham: Duke University Press.

Fishkin, J.S. 1991. *Democracy and Deliberation: New Directions for Democratic Reform.* New Haven, CT: Yale University Press.

Forester, J. 1989. *Planning in the face of power.* Berkeley, CA: University of California Press.

Friedmann, J. 1987. *Planning in the Public Domain.* Princeton: Princeton University Press.

Germain, R.H., D.W. Floyd, and S.V. Stehman. 2001. Public perceptions of the USDA Forest Service public participation process. *Forest Policy and Economics* 3, 113-124.

Halvorsen, K.E. 2001a. Assessing public participation techniques for comfort, convenience, satisfaction, and deliberation. *Environmental Management* 28, 179-186.

Halvorsen, K.E. 2001b. Relationships between National Forest System employee diversity and beliefs regarding external interest groups. *Forest Science* 47, 2, 258-269.

Halvorsen, K.E. 2003. Assessing the effects of public participation. *Public Administration Review* 63, 5, 535-543.

Halvorsen, K.E., and M.E. Jarvie. 2002. Working and lower middle class women and obstacles to environmentally related public meeting participation. *Environmental Practice* 4, 36-45.

Healy, P. 1992. Planning through debate: The communicative turn in planning theory. *Town Planning Review* 63, 143-162.

Heberlein, T.A. 1976. Some Observations on Alternative Mechanisms for Public Involvement. *Natural Resources Journal* 16, 197-212.

Irvin, R.A., and J. Stansbury. 2004. Citizen participation in decision making: Is it worth the effort? *Public Administration Review* 64, 55-65.

Koontz, T.M. 2005. We finished the plan, so now what? Impacts of collaborative stakeholder participation on land use policy. *The Policy Studies Journal* 33, 459-481.

Lando, T. 2003. The public hearing process: A tool for citizen participation, or a path toward citizen alienation? *National Civic Review* 92, 73-82.

Landre, B.K., and B.A. Knuth. 1993. The role of agency goals and local context in Great Lakes water resources public involvement programs. *Environmental Management* 17, 153-156.

Langton, S. (ed) 1978. *Citizen Participation in America.* Lexington, MA: Lexington Books.

Lauber, B.T., and B.A. Knuth. 1998. Refining our vision of citizen participation: Lessons from a moose reintroduction proposal. *Society and Natural Resources* 11, 411-424.

Lauber, B.T. and B.A. Knuth. 1999. Measuring fairness in citizen participation: A case study of moose management. *Society and Natural Resources* 11,19-37.

Laurian, L. 2004. Public participation in environmental decision making: Findings from communities facing toxic waste cleanup. *Journal of the American Planning Association* 76, 53-65.

Lawrence, R.L., S.E. Daniels, and G.H. Stankey. 1997. Procedural justice and public involvement in natural resource decision making. *Society and Natural Resources* 10, 577-589.

Leach, W.D., N.W. Pelkey, and P.A. Sabatier. 2002. Stakeholder partnerships as collaborative policymaking: Evaluation criteria applied to watershed management in California and Washington. *Journal of Policy Analysis and Management* 21, 645-670.

Leach, W.D., and P.A. Sabatier. 2005. To trust and adversary: Integrating rational and psychological models of collaborative policymaking. *American Political Science Review* 99, 491-503.

Lukensmeyer, C., and A. Boyd. 2004. Putting the "Public" back in management: Seven principles for planning meaningful citizen engagement. *Public Management* 86, 1-6.

Mansbridge, J.J. 1983. *Beyond Adversary Democracy*. Chicago: University of Chicago Press.

Marinetto, M. 2003. Who wants to be an active citizen? The politics and practice of community involvement. *Sociology* 37, 103-120.

Marshall, B.K., and R.E. Jones. 2005. Citizen participation in natural resources management: does representativeness matter? *Sociological Spectrum* 25, 715-737.

McCann, E.J. 2001. Collaborative visioning or urban planning as therapy? The politics of public-private policy making. *Professional Geographer* 53, 207-218.

McClaran, M.P., and D.A. King. 1999. Procedural fairness, personal benefits, agency expertise, and planning participantsí support for the Forest Service. *Natural Resources Journal* 39, 443-458.

McComas, K.A., and C.W. Scherer. 1998. Reassessing public meetings as participation in risk management decisions. *Risk: Health, Safety, and Environment* 9, 347-360.

McComas, K.A. 2001a. Public meetings about local waste management problems: Comparing participants to nonparticipants. *Environmental Management* 27, 135-147.

McComas, K.A. 2001b. Theory and practice of public meetings. *Communication Theory* 11, 36-55.

McComas, K.A. 2003a. Citizen satisfaction with public meetings used for risk communication. *Journal of Applied Communication Research* 31, 164-184.

McComas, K.A. 2003b. Trivial pursuits: Participant views of public meetings. *Journal of Public Relations Research* 15, 91-115.

McCool, S.F., and K. Guthrie. 2001. Mapping the dimensions of successful public participation in messy natural resources management situations. *Society and Natural Resources* 14, 309-323.

McKinney, M., and W. Harmon. 2002. Public participation in environmental decision making: is it working? *National Civic Review* 91, 149-170.

Meyer, J.W., and B. Rowan. 1991. Institutionalized organizations: Formal structure as myth and ceremony. In W.W. Powell and P.J. DiMaggio (eds.), *The New Institutionalism in Organizational Analysis*, 41-62. Chicago: University of Chicago Press.

Moote, M.A., M.P. McClaran, and D.K. Chickering. 1997. Theory in practice: Applying participatory democracy theory to public land planning. *Environmental Management* 21, 6, 877-889.

O'Riordan, J. 1976a. The public involvement program in the Okanagan Basin Study. *Natural Resources Journal* 16, 177-196.

O'Riordan, T. 1976b. Policy making and environmental management: Some thoughts on processes and research issues. *Natural Resources Journal* 16, 55-72.

Parkins, J.R., and R.E. Mitchell. 2005. Public participation as public debate: The deliberative turn in natural resource management. *Society and Natural Resources* 18, 6, 529-540.

Pateman, C. 1970. *Participation and Democratic Theory*. Cambridge, UK: Cambridge University Press.

Poisner, J. 1996. A civic republican perspective on the National Environmental Policy Actís process for citizen participation. *Environmental Law* 26, 53-94.

Rosenbaum, N. 1978. Public participation and democratic theory. In Stuart Langton (ed.), *Public Participation in America*, 43-54. Lexington, MA: Lexington Books.

Rosener, J.B. 1981. User-oriented evaluation: A new way to view citizen participation. *The Journal of Applied Behavioral Science* 17, 583-596.

Rosener, J.B. 1982. Making bureaucrats responsive: A study of the impact of citizen participation and staff recommendations on regulatory decision making. *Public Administration Review* July/August, 339-345.

Rowe, G., and L.J. Frewer. 2000. Public participation methods: A framework for evaluation. *Science, Technology, and Human Values* 25, 3-29.

Rowe, G., and L.J. Frewer. 2004. Evaluating public-participation exercises: A research agenda. *Science, Technology, and Human Values* 29, 512-556.

Rowe, G., and L.J. Frewer. 2005. A typology of public engagement mechanisms. *Science, Technology, and Human Values* 30, 251-290.

Rowe, G., R. Marsh, and L.J. Frewer. 2004. Evaluation of a deliberative conference. *Science, Technology, and Human Values* 29, 88-121.

Schlozman, K.L., N. Burns, and S. Verba. 1994. Gender and the pathways to participation: The role of resources. *The Journal of Politics* 56, 4, 963-990.

Schlozman, K.L., N. Burns, and S. Verba. 1999. "What Happened at Work Today?": A Multistage Model of Gender, Employment, and Political Participation. *The Journal of Politics* 61, 1, 29-53.

Schlozman, K.L., N. Burns, S. Verba, and J. Donahue. 1995. Gender and citizen participation: Is there a different voice? *American Journal of Political Science* 39, 2, 267-293.

Sewell, W.R.D., and S.D. Phillips. 1979. Models for the evaluation of public participation programmes. *Natural Resources Journal* 19, 337-358.

Shannon, M.A. 1990. Building trust: The formation of a social contract. In R.G. Lee, D.R. Field, and W.R. Burch (eds), *Community and Forestry: Continuities in the Sociology of Natural Resources*, 229-239. Boulder, CO: Westview Press, Inc.

Smith, P.D., and M.H. McDonough. 2001. Beyond public participation: Fairness in natural resource decision making. *Society and Natural Resources* 14, 239-249.

Stanley, M. 1978. *The Technological Conscience*. Chicago, IL: University of Chicago Press.

Stanley, M. 1990. Taking citizens seriously. *Kettering Review* 30-38.

Stedman, R.C., and J.R. Parkins. 2003. Public involvement in forest management: Toward a research program in Alberta. In B.A. Shindler, et al. (eds), *Two Paths toward Sustainable Forests*, 131-148. Corvallis, OR: Oregon State University Press.

Thomas, J.C. 1995. *Public Participation in Public Decisions: New Skills and Strategies for Public Managers*. San Francisco, CA: Jossey-Bass.

Tuler, S., and T. Webler. 1999a. Designing an analytic deliberative process for environmental health policy making in the U.S. nuclear weapons complex. *Risk: Health, Safety, and Environment* 10, 1, 65-87.

Tuler, S., and T. Webler. 1999b. Voices from the forest: What participants expect of a public participation process. *Society and Natural Resources* 12, 437-453.

Tuler, S., T. Webler, I. Shockey, and P.C. Stern. 2002. Factors influencing the participation of local governmental officials in the national estuary program. *Coastal Management* 30, 101-120.

Verba, S., K.L. Schlozman, and H.E. Brady. 1995. *Voice and Equality: Civic Voluntarism in American Politics*. Cambridge, MA: Harvard University Press.

Verba, S., K.L. Schlozman, and H.E. Brady. 1997. The Big Tilt: Participatory inequality in America. *American Prospect* 32, 74-80.

Verba, S., K.L. Schlozman, H.E. Brady, and N.H. Nie. 1993. Citizen activity: Who participates? What do they say? *American Political Science Review* 87, 2, 303-318.

Warren, Mark. 1992. Democratic theory and self-transformation. *American Political Science Review* 86, 1, 8-23.

Webler, T., and S. Tuler. 2000. Fairness and competence in citizen participation: Theoretical reflections from a case study. *Administration and Society* 32, 5, 566-595.

Webler, T., and S. Tuler. 2001. Public participation in watershed planning. *Human Ecology Review* 8, 29-39.

Webler, T., S. Tuler, and R. Krueger. 2001. What is a good public participation process? Five perspectives from the public. *Environmental Management* 27, 435-450.

Webler, T., S. Tuler, I. Shockey, P. Stern, and R. Beattie. 2003. Participation by local government officials in watershed management planning. *Society and Natural Resources* 16, 105-121.

Yang, K. 2005a. Explaining citizen involvement efforts: SES, institutions, and managerial behavior. Presented at Public Management Research Association Conference, Los Angeles, CA.

Yang, K. 2005b. Public administrators' trust in citizens: A missing link in citizen involvement efforts. *Public Administration Review* 65, 273-285.