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Deer, Dissension, and Dialogue: A University-Community Collaboration in Public Deliberation

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Abstract

Michigan State University embarked upon an initiative to explore deliberative dialogue as a tool for addressing community-based contested issues in agriculture and natural resources. Our goal is to assess the extent to which deliberative dialogue can help "bridge the divides" among citizens and professionals and fulfill the land-grant mission. In this article, I explore the strengths and impediments to this practice by examining the growing—and for many, unwelcome—population of white-tailed deer in an urban community. I discovered that deliberative dialogue can help resolve social tensions and invigorate civic life as people—working in conjunction with community-based and university professionals—consider complex issues. The three primary lessons drawn from this collaboration focus on the importance of context, learning, and the role of science. This article concludes with a discussion of how this collaborative approach can become part of the culture of university-community relations.

Introduction

In mid 2007, Michigan State University (MSU) College of Agriculture and Natural Resources (CANR) embarked upon a three-year action-research initiative to explore the use of dialogue and deliberation for addressing contested issues in agriculture and natural resources. This initiative extends the CANR's priority to advance leadership for the public good. Contested issues abound in the work affiliated with agriculture, food, and natural resources, often resulting in tense and acrimonious interaction that fragments social relations and challenges the social authority of public institutions, such as land-grant universities. Public controversies are evident in literally all areas represented within agriculture and natural resources—from biotechnologies to land use management to matters of animal agriculture to crop and soils research. Many inside the land-grant college interpret these controversies as a challenge to the integrity of individual careers, institutional stability, or scientific sovereignty. Such challenges do not have to be interpreted as a threat, however, but should be viewed as an opportunity for

the land-grant college complex to fulfill its civic mission within a changing social milieu.

Controversy in knowledge institutions is not unique to agriculture and natural resources. Couched within a broader context of modernity's development, the tension presented in this article is symptomatic of trends facing higher education in general, and is not discipline- or subject-matter specific. Critical reflexivity has come to dominate most areas of modern life, forcing us to rethink traditional habits and customs and doubt what was once perceived with surety *(Giddens 2002)*. Doubt and the transformation of surety into hypotheses or claims open to interpretation confront nearly every academic domain from the classics to medicine. Such reflexivity presents fundamental existential questions about how we shall live, and it also weakens the hold of institutional structures as social authorities. This article uses the case of community deliberation around deer conflict as a context for exploring means to use deliberative dialogue in contested issues that divide citizens from their land-grant colleges.

The central premise of this action-research initiative is to assess the extent to which civic engagement, through dialogue and deliberation, can help "bridge the divides" among citizens and professionals who hold dissimilar values, beliefs, and preferences—differences that are sources of interpersonal conflict, tension, and struggle. The case profiled in this article illustrates the challenges faced by one community as they struggle to come to public judgment *(Yankelovich 1991)* using deliberative dialogue to address a pressing local issue. When I speak of public deliberation in this article, I am referring to the reflexive dialogue of individuals as they work cooperatively to weigh complex and ill-structured issues with copious advantages and disadvantages in an effort to access various lines of action open to them for tackling local social problems *(Mathews 1999)*. When practicing reflexivity, individuals listen to and evaluate claims made by a host of diverse actors and make decisions based on those claims perceived to be legitimate *(DuPuis 2000)*. This requires consciously putting oneself in the place of others and probing the intentional and unintentional meanings people create in their everyday lives, revealing their values and worldviews. It is the discovery and validation of these multiple meanings or diverse ways of knowing the world—coupled with meaningful citizen engagement—that can facilitate the construction of shared governance of agricultural and natural resource issues.

In 2007, Green Port, Michigan, public officials asked county extension educators for support in addressing a local community issue. Their challenge: a growing population of white-tailed deer making themselves at home in their community and argued to be damaging personal property and natural resources. For these individuals, the "deer crisis" was unacceptable. Complaints lodged through local city administrators described instances of "citified," "domesticated," or "urban" deer growing tolerant of human interaction. It would soon become clear, however, that the deer were not uniformly defined as a problem by all. Some arrived at a different interpretation of the situation. Conflicting social values regarding the "proper" role for deer in public life not only led to contentious community relations but also presented an opportunity to advance deliberative democracy.

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The lessons learned from community-level public deliberation around the issue of human-deer interaction are examined in this article. The first section provides an overview of the rationale for this action-research, locating it within a broader context of relations between the land-grant college of agriculture and the community. The second section describes the unfolding of events and community residents' perceptions of the issue. The final section of the article suggests strategic lessons learned, detailing strengths and impediments in the use of deliberative dialogue to address natural resource controversies. This case study reveals that communities can use deliberative dialogue to address community-level natural resource conflicts and land-grant universities can be instrumental in this process, but the process is complicated by the ways in which science is used that separates "lay" and "expert" actors.

Public Good in the Land Grant?

Higher education can and should be a partner with communities facing social problems, and it can do so by fostering the development and spread of leadership approaches that respect and advance the public good, thereby leading to sustainability rather than disproportionate reliance on institutional structures.

Although instances of such leadership can be found in the historical record of land-grant universities, this is not the approach that has typified community relations within colleges of agriculture. The conventional approach across the land-grant system has been for campus-based faculty to generate new technical knowledge—knowledge that is then transferred to local audiences by extension educators, albeit stripped of its social and cultural context. Under the cloak of "scientific objectivity" and in search of irrefutable truths, agricultural research and extension programming embraced the power of science and technology to solve what they defined as purely technical problems. The search for the absolute and universal truths in agriculture and natural resource scholarship is indicative of modernism that privileges dominant institutions of agricultural research and extension as ultimate authorities whose primary responsibility to society is to disseminate "truths" in a top-down fashion *(Bell 2004)*. As Peters, Alter, and Schwartzbach *(2008, 39)* have argued, the land grant as popularly conceived

> privileges faculty engagement in the pursuit of people's technical interests in meeting basic material needs through processes of instrumental learning and the development of technical knowledge and theory that are oriented toward prediction and control and principles of economy and efficiency.

Piekle *(2007)* goes further to argue that once science is "settled" and truths are revealed, knowledge can be used to resolve political disputes as well. However, such a premise reveals a lack of awareness of, or a blindness to, the socially situated nature of knowledge construction, the new problems that emerge from innovation, or competing ways of knowing the world not informed by scientific rationality *(Busch 2000)*.

The shortcomings of an unreflexive and wholesale embrace of scientific rationality, wedded to an industrial logic in the context of agriculture and natural resources, have been well documented for many years. These include single-minded attention to productivity enhancement *(Berry 1977; Fitzgerald 2003; Hightower 1973)*; production and maintenance of rural race, class, and gender stratification *(Danbom 1986; Neth 1995; Sachs 1983)*; capture by special interests such as farm commodity groups and state agencies (e.g., USDA) *(Busch et al. 1991; Buttel and Busch 1988; Hightower 1973; McDowell 2001)*; and creation by the land-grant colleges of agriculture of asymmetric relationships *(Bennett 1986; Hassanein 1999)* between

"expert specialists" who create knowledge and citizens who are viewed merely as passive recipients of knowledge *(Bell 2004; Fear et al. 2006; Wynne 1996)*, among other criticisms.

In much the same way that the hegemony of techno-science has been questioned, the limitations of a knowledge transfer approach to behavioral change have also been identified. The knowledge transfer model embraced by extension over the years has been closely modeled after the research on the adoption of innovations, most notably attributed to Rogers *(1962)*, but also connected to the work of early anthropologists studying the incursions of technology on peasant livelihoods. Adoption and diffusion research was generally concerned with the question of how new knowledge created in the land-grant system could be organized to catalyze behavioral change in society. Early enthusiasm for this framework prompted a paradigm change in the fields of rural sociology, agricultural education, and communications, and the "objective" and asocial veneer attached to this framework helped to construct an "expert" model of education delivery—the same expert-driven approach now critiqued *(see Boyer 1990)*.

Research gradually began to show that this diffusion/adoption research took an uncritical "promotional posture toward technological change and had failed to scrutinize whether particular forms of new technology were socially beneficial" *(Buttel, Larson, and Gillespie 1990)*. Moreover, environmental and conservation innovations had been neglected for a focus on diffusing commercial innovations *(van Es 1983)*, reinforcing the needs of capital. Others have identified the neglect of structural constraints such as socioeconomic factors that are critically linked to innovation adoption rates *(Goss 1979)*. These cumulative findings have challenged the utility of the innovation adoption framework, yet it continues to be used. Stephenson *(2003)* contends that "[b]etween 1984 and 2002, nearly 50 articles [in the *Journal of Extension*] specifically cite innovation diffusion theory."

Taken together, both techno-science and linear knowledge transfer have neglected the whole person. These approaches have fragmented scholarly practice and human beings, ignoring the complexity and interconnectivity of social phenomena and relying on singular disciplines and unitary methods to answer questions that are "much too complex to be judged appropriately, much less solved with the subject-knowledge of a single discipline" *(Hübenthal 1994)*.

Many of the problems related to agriculture and natural resources, however, are nontechnical. Broadly, they arise from competing visions of how to organize natural resources, technology, labor, and capital to achieve betterment in agriculture and food systems. Such problems are frequently brought to our attention due to the collision of differing value systems and worldviews that challenge taken-for-granted views about how the world is organized. Rather than possessing objective qualities that position them in the world of the real, tangible, and physical, they are matters of perception or subjective definition. For example, scientists might be able to calculate the optimal manner in which to splice genes, but science cannot tell us if we should be in the gene-splicing business. Likewise, we can easily calculate the appropriate caloric intake for an individual's age and sex, but scientific inquiry is not equipped to answer ethical questions regarding how to organize food environments to reduce their negative impacts on food insecurity and health. These are social and moral questions that exist outside the scientific purview. They are fundamentally questions of how we shall live together *(Giddens 2002)*. Such issues are better considered social problems rather than technical problems, because they evidence morally troublesome issues, are widespread in their reach, and are often considered human-constructed problems and therefore correctable by humans.

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Land-grant universities are increasingly urged to consider and account for multiple ways of knowing that do not fit preconceived logic models *(Hassel 2007)*, to move beyond a one-way transfer of information and technology, and to be "sympathetically and productively involved with their communities" *(Kellogg Commission 1999, 9)*. The conventional approach that has come to dominate the land-grant college system "marginalizes if not entirely ignores faculty engagement in interpreting meaning and significance through processes of communicative learning and social interaction aimed at the development of practical knowledge and judgment about what is to be done about social problems" *(Peters, Alter, and Schwartzbach 2008, 39)*. When confronted with social problems, or when the public has different opinions about the problem and how it should be solved, land-grant universities should engage with

community members in context-specific problem solving that prioritizes citizen engagement. This is leadership for the public good.

It is widely recognized that knowledge construction for community and public policy work is enhanced when it is participatory and developed in collaboration with local people whose lives are affected directly *(Logsdon 1991; Savoie 2000)*. A recent publication by the National Research Council found that citizen involvement in environmental decision making can be an asset to problem solving, improving the legitimacy and quality of decisions and enhancing the capacity of participants to engage in policymaking *(Dietz and Stern 2008)*. The present case study is an intentional effort by higher education to infuse public dialogue and deliberation into efforts being undertaken by grassroots groups, local decision makers, public policy makers, and professionals associated with natural resource management. Opportunities for the implementation of community-based deliberative dialogue can achieve the goal of establishing the sort of commons, or "enabling settings," that Korten *(1984)* argues are critical to community development. Enabling settings provide the organizational and cultural milieu that communities need to address their own challenges.

Research Methods

Data and findings reported in this article are drawn from interviews, secondary data, and observation in an effort to improve understanding of the use of deliberative dialogue to address issues related to community-deer interaction. During February and March 2008, twelve individuals (six males and six females) were interviewed. Participants were selected on the basis of the role they played in this issue. Interviews were conducted with task force members, leading government administrators, and citizens who had been involved in public dialogue on the issue. A snowball sampling method was used to identify subjects beyond the task force and administrators. These individuals recommended citizens and other stakeholders whom they were aware had attended community forums. These individuals, in turn, recommended others as potential study participants. Citizen respondents were chosen carefully to ensure a variety of perspectives on the topic. Interviews took place in the home of the respondent or local cafés and lasted from one to one-and-a-half hours.

During face-to-face, semistructured interviews, respondents were asked to respond to questions concerning their understanding of the deer issue and its magnitude, their perspective on

the issue, their interpretation of the deer issue from the vantage point of others, their impression of the procedural management of the community forums, and their desired outcome. In addition, respondents were asked to identify their perception of key socio-economic and demographic trends that had taken place in their community over the past decade. The results of the interviews were summarized and common themes identified. Interviews were not recorded, as participants were hesitant to share their positions on this contested community issue on tape. In order to develop trust with participants, I relied upon rigorous note taking. Data was coded by hand.

Documents such as newspaper articles, editorials, and press releases were used to cross-check the interview findings and enhance the validity of the results. These documents provided additional context for the rise of community conflict. Observation was also used to record social processes of interaction among citizens and between citizens and professionals. Observations took place at community forums and task force and county commission meetings. Collectively, interviews, document analysis, and observation data was analyzed by probing for norms of behavior and meaning that exist in this population. All distinguishing characteristics are veiled to protect the identity of participants and the community in question.

Deer Come to Green Port

> "Other communities around here are starting to call us 'Deer Port' instead of Green Port."
>
> —Interview respondent

Nature has long been an integral part of the identity of this small harbor community. Located on the central eastern shore of Lake Michigan, Green Port is a place where relations between the human population and nature have always been essential to the culture and economy of the area. From the earliest days of settlement, water was a prominent asset: Native Americans were drawn to the area for the abundance of fish, and in the early 1800s white settlers capitalized on pine trees and large water resources to develop a thriving lumber industry *(Ewing 1999)*. Buzzing sawmills and lumberjacks have given way to a population who today find Green Port appealing for lifestyle amenities. The new Green Port resident is lured to the area by one of the world's most beautiful lakes, its freshwater shoreline, sand dunes, scenic vistas, and the

culture constructed around these natural amenities, which includes fishing, biking, and boating.

Natural amenities figure prominently in the tourist-driven economy that has replaced the maritime and lumbering industries. During the summer, this small town of 9,000 swells to accommodate 25,000 to 30,000 people. Green Port is neighbored by similarly attractive recreational communities that have helped the region develop a reputation as a highly desirable travel destination. The tourism brand of "western Michigan" has become synonymous with nature-based holiday destinations, with Lake Michigan and the lakeshore as the jewel in the center of the tourism crown. From 1996 to 2005, Simpson County grew by 17.1 percent, making it one of the fastest-growing counties in the state. In 2007 nature ceased being a part of the taken-for-granted thread woven into the tapestry of community life as white-tailed deer were pulled into the everyday consciousness of residents, forcing them to reflect on their values and ask how they would coexist with nature into the future.

Deer management scholarship tends to largely focus on objective criteria. Wildlife specialists study the deer population through indicators such as herd health, habitat, movement patterns, and the presence of predators. But these indicators are of less use in helping citizens make decisions that are fundamentally social in nature. Green Port citizens were faced with questions such as "How many deer should we live with?" "How many deer are too many for our area?"[1] and "How do we want to interact with deer?" Such questions are social and ethical judgments that require citizens to probe their own value systems and come to public judgment *(Yankelovich 1991)*.[2] These are questions outside the realm of science.

Residents first asked themselves, "Is this a social problem or a personal trouble facing only a few isolated households?" There are three criteria typically employed to define social problems: social problems represent a worrisome or troubling state; the trouble is widely shared by others; and people believe the situation to be dynamic, that it can be changed *(Loeske 1999)*. Using the objective indicator of incoming telephone complaints to city government, officials concluded that the deer had risen to the level of a social problem for a significant population. They soon learned, however, that this definition of the situation was not uniformly shared. Interaction with the deer looked different contingent upon residents' values and experiences with the animals. As we will see in this case, every deer is more than a deer: wildlife carry symbolic meaning. For some, deer are a thing of beauty and part of the

miracle of nature; for gardeners, a deer grazing hundred-year-old English Ivy is a nuisance or a pest. Naturalists who eye a herd of deer gorging on protected wild trillium think ecological travesty. Hunters spot a five-point buck grazing in a recently harvested corn field and see fresh meat to fill the family freezer. We confer meaning on nature based on our own self-identity, and it is through the filter of individual values and beliefs that the context is created for competing social claims and community conflict *(Greider and Garkovich 1994)*.

Claiming and disclaiming deer

Let me suggest that we think of the role of deer in the community as an exercise in claims-making, or an instance in which one party makes a demand of another "that something be done about some putative condition" *(Spector and Kitsuse 1987, 78)*. Often claims-making activities are intended to arouse public sentiment and concern over an issue, and even mobilize certain parties to action. For example, when one resident of Green Port spoke at a community forum, he claimed, "I have just one thing to say, kill them all!" For this individual and others—whom we will call the deer detractors—the infiltration of the deer was defined as a public nuisance, damaging both public and private property and interfering with quality of life. From the vantage point of this group, the deer were eating the vegetation around homes and in city parks, causing traffic accidents, rummaging through garbage, and spreading *E. coli* and Lyme disease.[3] Some made claims that the deer were causing damage to the wild trilliums and sand dunes that are pivotal to local ecology and an important part of the tourist draw. Others claimed that deer were devouring memorial plants placed by family members on gravesites. The growing domestication of the herd was a reoccurring concern. For example, one citizen complained of a deer that gave birth to a fawn on her patio. As with many social problems, such claims often compete with other domains of our lives (homeowner, gardener, hunter, environmentalist, etc.) *(Loeske 1999)*. Such tension can be seen in this statement by a community member: "I think they're beautiful and I love seeing some of the deer, but this

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has gotten to the point . . . this is just not right. It's not right for the deer and it's not right for the population."

Others made claims of a different variety. The deer supporters viewed the encroaching deer population as an asset, a chance to share a more intimate relationship with wildlife. One man spoke as if living in such close proximity to the deer was a rare privilege. "I grew up in the projects as did my mom. I never saw an eagle fly or a deer run until I moved here. I think that's pretty special." Another woman was drawn to their economic value. "This isn't a city it's a town—a tourist town—we want the things that the deer bring in—tourists who want to visit nature. The tourists who rent my house in the summer write in the guest book how they enjoy the deer." For this group, deer were defined as part of the natural amenities that drew them to the coastal community and help it thrive.

This group often spoke of the deer in anthropocentric terms. A local company and a number of residents were discovered feeding the "wild" deer on their property and, in general, entering voluntarily into a human-deer relationship. These actions broadened the range of bonds humans have with animals by perpetuating an ethic of care. This ethic of care is anthropocentric in that it is based on human definitions of care and regard for the animals, rather than being informed by a wildlife ethic. Wildlife specialists argue that deer feeding "domesticates" a herd and perpetuates the conditions deer detractors view as problematic. By feeding the deer, citizens construct an artificial nutrient-rich haven, removing the need for the animals to forage for their own sustenance. Feeding can enlarge the herd size and create a breeding ground for disease.

Finally, a third and very small group—the naturalists—made claims of still a different type. While the deer supporters of Green Port demonstrated an anthropocentric ethic of care for the deer, this group saw the deer as a natural part of the landscape and claimed it was members of the human community who needed to modify their behavior. The naturalists defined the problem not as a wildlife issue, but as a human problem brought on by intrusive human invasion through urban development into the natural habitat of the wildlife. The problem, they claimed, stemmed from a desire by humans to control the environment, rather than to coexist with other nonhuman sentient creatures. They wanted to "let them just be."

In essence, the battle over deer in Green Port was a struggle over the meaning of how residents desired to coexist with "nature" and a redrawing of boundaries around what constitutes a "wild" and/or "domesticated" deer *(Tovey 2003)*. The different deer claims

Table 1. Six Steps to Urban Deer Management

1. Awareness and Education	Public forums allow citizens the opportunity to voice their concerns, listen to each other, and share ideas. MSU and DNR wildlife scientists will give presentations on best practices for managing deer in urban settings.
2. Task Force Planning and Proposal Development	A diverse group of citizens from the community will be selected to form a task force. They will be charged by the city council to study the issue and create an implementable plan for deer management based on citizen concerns and scientific principles.
3. Submit Task Force Proposal to Public for Input	The UDM plan created in step 2 will be presented to the public. Task force members present the recommendations and invite public comment. Public comment shall be used to review and revise the task force report.
4. Presentation of Task Force Proposal to City Council	The publicly informed and revised document shall be presented to the city council, where it will be adopted as the UDM plan for Green Port.
5. Implementation of the Plan	Implementation of the plan is the responsibility of those with jurisdictional authority. Regular public updates and opportunities for pubic comment about the progress of implementing the plan should be integrated.
6. Monitoring of Actions and Plan Modification	The document should become a "living plan" that can be revised over time to improve performance.

are a reminder that social issues are differentially defined by individuals and social groups and therefore become the basis for community conflict and struggle. A problem for one group is perceived as an asset for another. The crux of Green Port's problem was not so much an increase in the deer population as it was dueling interpretations of the role of deer in the community. Three different ways of seeing nature and defining human-deer interaction constitute the ways in which claims were made about the problem. As we might expect, these differential definitions of the situation informed equally diverse views on what action should be taken. The task before the local government was to find a middle way out of this heterogeneity of claims that satisfied the whole.

From Dissension to Deliberation

Telephone calls to the office of the assistant city manager and weekly newspaper editorials suggested that there was limited time to develop a useful resolution to this conflict. The urgency of the problem could have easily necessitated an expert model of governance, valorizing the use of technical control. Since the complaints were lodged at the city manager's office, it fell to this post to create an organizational space for resolving the issue. There were choices available to the city manager. For example, agencies such

as the Department of Natural Resources (DNR) could have been contracted to design an urban deer management (UDM) plan. However, Green Port officials were hesitant to sacrifice democracy for expediency. They opted to cultivate a framework that valorized citizen-based governance. They embraced a model of dialogue and deliberation, allowing citizens to engage in genuine and thoughtful weighing of public experience and science, taking into account a wide variety of factors and alternative scenarios envisioned by the diversity of norms, values, and ethical arguments available to them. Wildlife science was one of many tools used and recombined with other ways of knowing and interacting with the deer.

The assistant city manager sought the counsel of county extension educators who, in turn, looked to campus faculty for assistance. Parties were generally convinced that opportunities for deliberative dialogue would help address this problem. The partnership between Green Port local government and MSU campus and extension educators was rounded out by inviting the participation of wildlife specialists from the DNR. Collectively, these actors constituted an advisory group.

The process began with meetings of the advisory group to chart a way forward that integrated not only citizen feedback but meaningful leadership on the part of Green Port residents. Recent scholarship has found that American culture does not readily lend itself to public engagement *(Putnam 2000)*. Whether this condition is due to an adversarial tension between everyday citizens and political or economic elites that results in distrust and apathy, a lack of time to commit to public issues, or a sense that others will step up to fill a leadership vacuum is highly debated among scholars *(Yankelovich 1991)*. It is widely agreed, however, that because of the mounting obstacles to public participation in the social and political life of communities, intentional action is required to force open windows of opportunity for important public work *(McAdam 1982)*. In this way, the advisory group proceeded to develop a strategy that would expedite action to respond to the demands of the citizens negatively affected by the deer and purposively turn over decision making to the citizens while integrating a multipronged approach appropriate to the complexity of the issue. The advisory group developed a six-step UDM plan that would accomplish these tasks. The six steps are summarized in table 1.

Public Dialogue and Deer

The six-step UDM plan developed by the advisory group integrated numerous ways for the public to assume leadership of this

initiative. The first was public forums held on three different occasions, allowing residents the chance to voice their views. These forums lasted approximately two hours and were attended by sixty-eight people in total. At each forum a wildlife specialist gave a presentation on the scientific findings regarding deer behavior and the commonly accepted concepts, principles, and strategies of wildlife management. The information also found its way to the broader community through the writings of a local newspaper reporter who covered the forums and the workings of the task force. The primary information conveyed in the presentations communicated commonly employed strategies for managing human-deer interaction. They include public education, habitat modification, increasing social tolerance, and culling or thinning the herd by killing a select number.

During the forums, citizens were urged to consider the long- and short-term impacts of each tactic in their deliberations. Residents were given time to ask questions to clarify key myths and rumors about the biological and social lives of deer. Ample time was provided for citizens to voice concerns regarding their view of the appropriate course of action. Responses were widely divergent, ranging from advocating for no action to pleading for "humanistic" intervention (e.g., contraception or trapping and relocation) to extermination of the animals. Public concerns fell into four categories: social perceptions/tolerance levels; public health (human and animal); ecological damage (public and private); and domestication of deer.

During each of the forums, citizens were given the opportunity to volunteer to serve on a task force charged by the city council to amass citizen response, integrate the most current scientific findings, and develop an UDM plan for submission to the city council (see step 2 in table 1). Five citizens were selected by the city council to form the task force, which met every alternate week from October to February (except for the month of December), facilitated by an extension educator or campus faculty member skilled in deliberative dialogue. The task force began by reviewing the community input from the forums and framing the problem as it was articulated from the citizen input. This effort resulted in organizing the public commentary into the four thematic areas noted above. Local extension educators, DNR wildlife specialists, and university scientists served in an advisory capacity to answer questions and share relevant biological data regarding deer behavior and health.

Deliberation did not proceed smoothly once an organizational structure was in place. As the months passed, task force meetings

became more and more contentious. In the earliest stages, common ground for decision making came easily enough. The citizens readily agreed on the merits of wildlife education for the community; they also agreed upon their preferences for disseminating the information. It was also a fairly benign process to agree on recommendations for habitat management and increasing social tolerance to the deer. The lack of consensus came, however, when the task force deliberated the advantages and trade-offs of managing deer when other tactics failed. The tension entered the task force when the topic of culling, or killing, the deer was put on the agenda.

This is not surprising. Taking the life of sentient creatures is an emotional issue for many Americans. And clearly, human emotions are a normal part of the human experience not to be dismissed by others' ways of knowing or experiencing the world. The citizens agreed that *under certain conditions*, a cull might be necessary, but the sticking point came when they tried to define the conditions. As was to be expected, some wanted to allow a cull to occur only when relatively high thresholds were breached, reducing the likelihood that a cull would occur. Others advocated for a broader definition of when it would be appropriate to cull the deer. Considerable time was spent in meetings, in the exchange of e-mails, and in the production of draft documents outlining possible criteria under which the UDM plan would advise culling the deer. In the end, the dialogue over culling criteria proved so contentious that citizens were unable to come to agreement on the criteria by which deer should be killed. The final UDM plan presented to the city council included a copy of the working document with the caveat that a consensus continued to evade the group (three people in support of culling and two against).

The final document that outlined the citizens' recommendations was presented to the public for feedback and transparency. The feedback received at this final public forum was incorporated into the plan, which was then submitted to the city council during its regularly scheduled monthly meeting. After a brief discussion of the details embedded in the document, the council unanimously voted to adopt the plan (5-0).

It is noteworthy that the public forums began in September, the task force proceeded to develop the UDM plan beginning in October 2007, and by March 2008 the citizens submitted their final report to the city council. Even though some newspaper articles decried the length of time invested in this participatory process, the fact that all of this heavy public work was accomplished within six months is remarkable.

The competition in living space between humans and deer in Green Port will most likely never be resolved, but the strength of this case study is that the residents have crafted an approach to reducing or "managing" this tension in a way that is open, transparent, and collaborative. Throughout the process, participants adopted a management plan that valorized the role of public engagement which, in turn, catalyzed local capacity building. They did not rely on public institutions such as the land grant for the answers, but acted as partners in the discovery process, utilizing the resources available from these institutions to inform citizen governance. Public institutions, such as MSU and DNR, were able to contribute assets in which they excel such as scientific scholarship in the domains of public deliberation and wildlife biology, but decisions were made and acted upon by local citizens. This process allowed the public to influence decisions by the city council, with emphasis on thoughtful and public consideration of multiple perspectives; however, ultimate responsibility remained with the council throughout. Moreover, citizens did not rely on the city council to solve social problems for them. In this way, they owned their own process, which was designed to bridge the divide between residents who saw no problem, those concerned about the welfare of the deer population, and those who believed the only option was to eliminate the deer.

Results

How should we consider the role of deliberative dialogue in addressing a community-based natural resource problem? Is this a positive tool to be added to land-grant college tool kits, or does it present challenges that make it inappropriate? Our data suggests that deliberative dialogue is a useful addition to university engagement, yet a tool not without challenges. In this section, I will highlight three of the primary lessons learned from community-based deliberative dialogue: receptivity to context, learning, and the role of science. As might be expected, the opportunities inherent in these lessons also present unintended consequences and are not, therefore, without challenge. If community-based deliberative dialogue is to help communities address social tensions and help land-grant universities fulfill their civic mission, our challenge is to harness the positive attributes identified in this action-research initiative while reducing or negating the prospect for further dissension or unforeseen dilemmas.

The starting point

One of the significant findings from the analysis of this data is the "contingent character of starting points" *(Rorty 1980)*: that dialogue and deliberation as a problem-solving tool must be grounded in the historical and material realities of individuals as well as the situated character of local knowledge. When respondents were asked about the utility of deliberative dialogue to manage deer tensions in their community, each noted a sense of urgency. Some described a city government on the edge of a crisis of confidence. Pockets of the community were clamoring for immediate action; the immediacy of this problem created a context in which the local government had to take action lest it be accused of failure to fulfill its administrative duties.

We can imagine an alternative scenario, for example, where an UDM plan could have been conceived and designed by the citizens on a more leisurely timeline. Residents could have organized their own citizen forums and sought the counsel of their neighbors without local government leadership. We can picture situations where citizens developed their own plan of action rather than adopting the six-step strategy recommended by the advisory committee and conducted their own research without the aid of MSU or DNR. We can envision a completely citizen-designed and -orchestrated initiative, but the reality was that residents were demanding the city take action. Grievances were mounting, newspaper editorials were turning ugly, and the citizens were not self-organizing to bring about change; their agency was confined to telephoning city hall and demanding that the *city* act.

This suggests that one key to successful public deliberation around natural resources is crafting strategies for public leadership that fit the circumstances at hand: situated in the local context, embodied by those actors who show up, and thus partial rather than universal and ideal *(Haraway 1991)*. We cannot assume the context in which natural resource problems arise will be homogeneous and uniformly expressed. This sounds like an obvious observation, yet time and time again universities problem-solve with a one-size-fits-all template. In contemporary colleges of agriculture, "best practices," dissemination, and translation research retain a cachet that evidences the lingering dominance of the adoption/diffusion paradigm in spite of the documentation of its analytical weaknesses. The hegemony of positivist science that rests on the back of universal knowledge claims misses the dynamic and negotiated view of social reality.

Moreover, Piven and Cloward *(1971)* remind us that mobilizing citizens to action can succeed only once we understand the capabilities of individuals. To ask of individuals something they are ill-equipped materially, socially, or psychologically to deliver is a recipe for failure. In this case, a citizen-driven approach sans local government was unlikely given the lack of grassroots organization and the insistence on the part of the aggrieved public that the city act. This may be a by-product of a culture of representative democracy. Citizen participation must become a culturally accepted part of local governance that will take time and repeated exposure to the process before it becomes part of settled culture *(Swidler 1986)*.

"Participants reported improvements in their ability to critically reflect upon and articulate their own values and ideals and to understand those of their neighbors. . ."

As a result of this cultural void, the elected course of action was to mobilize available resources to aid in problem solving. These assets included local extension educators, land-grant faculty, DNR, and other local scientists who contributed time and research to support the effort. This suggests that capacity for deliberative dialogue is due, in part, to the ability to mobilize resources *(McAdam 1982)* and to draw on integrated partnerships as a community development tool *(Logsdon 1991; Pigg and Bradshaw 2003; Savoie 2000)*. The exclusion of these networks in which the community was embedded would have been counterproductive and inefficient. Drawing on "weak ties" *(Granovetter 1973)* to other public institutions, Green Port was able to marshal diverse and extensive networks to address this community issue.

Learning

One of the most inspiring aspects of this experience in citizen governance was the learning that informed this public work. Participants reported improvements in their ability to critically reflect upon and articulate their own values and ideals and to understand those of their neighbors, thereby breaking down walls that divide and constrain alternative ways of knowing and that incite conflict.

Participants stressed the value of the presentations made by wildlife specialists during the public forums where they learned about current scholarship in deer health and management. "I never knew deer were such complex creatures," said one respondent.

Citizens were exposed to new knowledge, but they were also encouraged to share the ways in which they interacted with and "knew" deer, creating a bidirectional flow of information. Future research should explore the degree to which wildlife specialists take in this information and use it to inform future academic endeavors. In the development of the UDM plan, task force members were required to sift through scientific data, management options, and the output from public testimony gleaned from the community forums. This was a time-consuming and arduous process, but a task necessary for participatory governance. Such a commitment is critical in a knowledge society where new ideas, information, and ways of knowing take on elevated significance within a context of thoughtful deliberation. This workload suggests that individuals must be prepared for the time and energy investment if deliberation is to bridge the divides that exist in local community settings.

Many reported that they understood the values of others more fully and started to think in terms of "we" or "us" as an integrated community rather than households located in close proximity to each other with individualized "problems" with the deer. This change in orientation was cultivated in the hours of negotiation and compromise that were required to come to public judgment on the UDM recommendations. "We were all willing to compromise and shift our beliefs and attitudes toward deer," summarized one task force member. Most were able to move beyond single issues and look toward their public work together as supporting the common good of Green Port. This suggests that the opportunity for deliberative dialogue created the context for social capital formation.

Social capital refers to those features of social organization that facilitate cooperation for the greater good. It is a quality of social interaction organized around networks and groups evidencing mutual trust, norms of reciprocity, and collectivity. Communities with higher degrees of social capital work together more effectively, plan their shared futures as partners rather than adversaries, and invest in their future. As a result, they are more resilient and able to weather external challenges when they arise. Communities that have low levels of trust, do not engage with individuals or groups outside their own close network, do not work well together, compete for scarce resources, or in general foster an "us versus them" mentality, are considered to have low levels of social capital.

Task force meetings gave members the opportunity to discover and examine their own personal values. One member summarized this transformation by stating, "I have learned that the deer will always be here. I can't get rid of them. I can't order the

flower garden out of the catalog I want and plant it in my backyard. I have to live with the deer." This is no small feat on the part of this citizen. The task force meetings created the context for the deer to become visible—no longer hidden or a part of the taken-for-granted landscape—and perceived as an elemental part of the human-wildlife connection, not simply a landscape-destroying nuisance. Admitting that he is now willing to entertain a routinized relationship with the deer suggests that this citizen has adapted his worldview to accommodate nature and is willing to broaden the scope of the interaction he has with wildlife. This does not necessarily foster regard for the deer, but it does acknowledge a shared planetary existence *(Tovey 2003)*.

Members were given the space to probe even more deeply into wildlife science to implement the new knowledge as they saw fit into their development of UDM recommendations. The multiple task force meetings were organized so scientists and specialists sat side by side with the citizens, who then could easily turn to the scientific advisors for clarification when deliberations revealed a technical question. The usefulness of this collaboration is that it ignited a creative tension among those who came to the effort equipped with different ways of knowing and valuing knowledge.

Science as collaborator

All of the task force members reported that the scientific research made available to them by MSU and DNR professionals was a valuable contribution and facilitated their decision making immensely. They repeatedly complimented the faculty, specialists, and extension educators for their dedication and willingness to contribute untold hours to the deliberative process and serve in this advisory capacity. Such contributions are especially commendable given the general perception in the scientific community that interaction with the public will "put the brake" on adopting the lessons from scientific discovery *(Wilsdon, Wynne, and Stigloe 2005)*. Recent research by the National Research Council also confirms that scientists are weary of public participation in environmental decision making *(Dietz and Stern 2008)*. In this case scientific evidence was challenged by citizens, and perhaps more interestingly, the manner in which it was presented proved even more problematic. Scientist-citizen interactions during task force meetings provided useful tensions for probing context-specific management options, but from time to time they also became obstacles to productive dialogue.

For example, some of the citizens viewed the empirical evidence offered by the wildlife specialists, and others perceived as

experts, with suspicion. This misgiving about the advice of specialists can be seen in the citizen who stated, "We could see most had clear agendas. The big game specialists wanted to kill the deer, the botanist wanted to protect the wildlife so they wanted the deer killed. There were lots of agendas in the room." This comment reveals that task force members could see the highly interpretative nature of scientific inquiry. Just as the local citizens held differing interpretations of the deer situation, so too did scientists and extension educators. Beyond the perceived bias, citizens also reported that the experts failed to limit their role to advising and often took an explicit position stating their opinions about which course of action should be adopted. One task force member said, "They don't get it! They're here to *advise* us; they don't get that science is not everything." Such advocacy by experts was typically coupled with the use of science to reinforce their position, creating the boundary work necessary to give legitimacy to their point while constructing the barriers that would continue to divide citizens and specialists. One task force member referred to this behavior as "pulling the expert card." This unsolicited lesson in the politics of science was articulated as problematic, divisive, and burdensome, as it created unnecessary tensions among the citizens and specialists and prolonged the deliberative process.

When asked in interviews about the approach specialists used in communicating research findings to the task force, members recounted interaction scenarios that produced frustration and tension. Some of the "experts" failed to demonstrate what was considered an appropriate amount of reserve and humility, thus leaving the citizens alienated from the science being offered and creating the context for them to dismiss both the messenger and the message. "He was so condescending, I could not even look him in the eye when he spoke," said one task force member. "He always treated us as if he had the answer and we were just dumb. Oh, I really didn't like him. After that first meeting, I could not look at him anymore." For this individual and others, science was interpreted as a tool to manipulate thought and actions, a dominant force to which they responded with tacit forms of resistance (indirect eye contact). James Scott *(1985)* refers to such adaptive behaviors as a "weapon of the weak," a tool available to those who are relatively powerless and feel they have little other recourse. It should be noted that "experts" relied upon a conventional approach to disseminating validated knowledge. There was no recognition that facts could be contested, that the process of making knowledge was fundamentally social and therefore dynamic and open to interpretation.

This should not be interpreted as a science-bashing exercise. On the contrary, science and its messengers are only one half of this interaction. Such cultural practices run far deeper than the relatively shallow pools of science. They are part and parcel of the fabric of Western society—so firmly woven into the tapestry of our identity that we tacitly reinforce and even exalt these patterns of interaction. This occurs in the ways we value and reward science and scientists as well as the ways we fail to unmask power or find it difficult to look intimidating scientists in the eye and challenge both their presentation of self and their "facts." This suggests that we need a more thorough understanding of the culture of science and scientists with their attendant norms, values, and modes of interaction. What are the "codes, values, and norms that govern scientific practice" *(Wilsdon, Wynne, and Stigloe 2005)*, and more importantly, are they settled in the normative practices of the ways in which we structure our work within land-grant colleges or can they be changed?

Conclusion

I have stressed earlier that citizen-led governance through deliberative dialogue is clearly not the prevailing approach in professional, institutional, and community affairs. There is a growing scholarship detailing how institutional epistemologies and ontologies emerged as a hegemonic force in Western society *(Busch 2000; Jasanoff 2002; Latour 2004; Wilsdon, Wynne, and Stigloe 2005)*, yet there is little research available that details what will be required to unsettle the conventional approach to knowledge construction embedded in the land-grant college identity, along with its attendant approach to outreach through knowledge transfer. Moreover, it remains unknown whether the land-grant college complex as partner can become the normal approach. This study has shown that communities can use deliberative dialogue to address community-level natural resource conflicts, and land-grant universities can be instrumental in realizing this objective as partners and resources. But it has also shown that standing in the way of this transformation is a host of interactional impediments that require further action-oriented research.

After highlighting the process of how Green Port came to public judgment, I identified three primary lessons that were gleaned from this work: receptivity to context, learning, and the role of science. Collectively, these findings highlight the importance of interactional factors given little attention by other studies concerned with the land-grant college complex's fulfillment of its

civic mission. One exception is Bridger and Alter *(2006, 170)*, who advocate an interactional approach to university engagement, theorizing that "the engaged university works in partnership with local people to facilitate the broad range of community interaction that fosters individual and social well-being." It embraces an integrated view of community relationships among all stakeholders. In this view, the university is one of many actors with important roles to play in problem solving, yet—even though it possesses significant intellectual and material resources—it is no more or less important than other domains of social life, such as citizens, natural resource specialists, or local government administrators.

This study showed that tensions erupted and new challenges to successful deliberation emerged when scientists and extension educators functioned as knowledge authorities with the "answers" rather than partners with resources to contribute to supporting the decision-making process. In other words, when interaction between the parties became more formalized and boundaries between citizen and scientist/specialist emerged, dialogue became more acrimonious. The retreat of the actors to their traditional roles suggests the need for more investigation into how such action-research on community-based social problems aligns with the professional identities of scientists and extension educators. Is the identity of scientists and educators so closely aligned with their professional roles that modifications to those roles are interpreted as a personal affront or a threat to their status? Do prevailing notions of professional obligations and expectations block transformative change? It is well known that one's occupation plays a critical role in identity formation; therefore, our challenge is to encourage scientists, specialists, and extension educators to discard outdated or problematic values and behaviors that create unintended dissension and replace them with new, more democratic values and norms while maintaining personal and professional identities.

While resocialization is called for within the land-grant system, this study also suggests that it is also needed among everyday citizens long trained to value representative democracy and distinctive boundaries between government and citizenship. Hence, the context at which individuals entered the dialogue in this instance was shown to be based on the expectation that local government would resolve the dilemma. Stoker *(1997)* and others have advocated a shift from government to governance to describe such transitions in which a centralized government charged with policymaking gives way to a pluralist regulatory process whereby government in partnership with other stakeholders becomes the norm. If

citizens are to participate in their own governance at the community level—in matters of natural resource management or otherwise—they must develop deliberative capacity. They must adopt new values and norms that facilitate collaborative deliberation among various parties to the extent that it becomes part of their taken-for-granted worldview, an approach automatically adopted for problem solving and the primary line of action open to citizens. This reinforces the need to establish the norms of engagement Fear et al. *(2006)* advocate if a culture of trust necessary for deliberative work is to emerge.

There are systemic limitations in qualitative studies, and this one is no exception. This article has detailed findings from a case study. More research is needed to explore how this case resembles or differs from other community-based deliberative dialogue initiatives. Moreover, we must ask ourselves whether a natural resource problem, such as deer management, is less complex than other social problems where a community might apply deliberative dialogue, like housing, transportation, or the closure of a local school. In most communities, environmental concerns take a back seat to other social and economic issues perceived to be more pressing in the short term.

What started as a relatively innocuous issue facing certain segments of a Michigan coastal community has become a case study in democracy, surely one of the challenging exercises of our time. How communities deal with unwelcome wildlife or other everyday phenomena that are registered in the telephone logs of city hall or fill the op-ed pages of local newspapers demonstrates their commitment to authentic citizen engagement and broader democratic ideals. The task of an adaptive land-grant university is to partner with communities to transform today's hard work into tomorrow's custom. We must help cultivate new cultural meanings of democracy that include citizen governance through public deliberation to the point where they become tradition and common sense, part of the tapestry of social life. Until such a time as new beliefs and rituals become firmly rooted in the quotidian, they must become conscious, highly articulated tools available to each of us *(Swidler 1986)*. As Busch *(2000, 148)* concludes, "no amount of debate, discussion, or dialogue will ensure that our conclusions and subsequent actions are right and just." But the historical record shows that we are capable of learning from our mistakes and that mindful citizen deliberation will continue to provide opportunities for learning about how we can expand the scope of the land-grant mission to address twenty-first-century social problems.

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Endnotes

1. A helicopter deer count was conducted to gauge the number of deer in the area. On February 14, 2007, 156 deer were counted. Michigan Department of Natural Resources (DNR) estimated that this amounted to 30 deer per square mile in Simpson County. DNR recommends 17 deer per square mile for this region.

2. The scholarship of wildlife management incorporates "a social dimension" and encourages citizen participation to determine core community values for decision making on the subject. The perpetuation of "a social dimension" is part of the broader problem, as it continues to fragment knowledge into discrete categories (i.e., "social" vs. "biological"). Since human relations and nature are known only through the lens of the socialized individual, they are all social phenomena, and such constructed categories are arbitrary. This is evidenced by the fact that community conflict resurfaced around this topic, as citizens remain divided about the appropriate relationship desired with the deer.

3. There were no documented cases of *E. coli,* but two cases of Lyme disease were identified. It was determined that the Lyme disease was not contracted in Simpson County.

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