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Response to Flitcroft *et al*. 2009. “Social Infrastructure to Integrate Science and Practice: the Experience of the Long Tom Watershed Council”

A Community Conversation About a Watershed

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The Flitcroft et al. (2009) article provides an interesting take on the building of a community around a topic like watershed management. I would like to add retrospective details about the creation and role of this neighborhood, called the Long Tom, in creating a community with values, a social code of ethics, and a developing sense of esthetics. I will also highlight the socio-cultural focus of early choices that I, and many others, made to forge the Long Tom Watershed Council (LTWC)'s ability to effectively absorb and use science.

Two ideas that help explain this process are found in defining the LTWC as a "community of practice" and what I term an informational "power factor." I will explain their roles in making the socio-cultural connections that undergird the LTWC.

First, however, I must discuss the creation of watershed councils and the role of the geographical watershed as a neighborhood. Governor Kitzhaber's Oregon Plan for Salmon and Watersheds was the driver and reflected a strong commitment and understanding that smaller regions, and the cultures of these localities, were essential for effective management and communication. I believe that the Oregon Plan reflected an understanding of the existing cultures in Oregon and elements of effective communication. It was clear on the Oregon coast that the endangered species listing of the Spotted Owl created an even deeper division between those in charge of federal lands and those who lived nearby and felt the impact. This experience, carried forward to the larger potential statewide listing for salmon, spelled a train wreck. Governor Kitzhaber took a proactive stance through the Oregon Plan to help avoid this public outrage. From the start, the focus was on education and local communities that were defined, rather loosely, by watersheds. However, the Oregon Plan did not define the necessary attributes and skills for successfully operating watershed councils.

Another aspect of this effort was that science and information were central; therefore, the initial educational plans proposed before the implementation were driven by a sense that if we provided the correct and most current information, i.e., "the answers," then the problem would be solved. One early planner suggested we create an informational website as the educational answer. Given the experiences in the public health sector around topics like healthy eating and smoking cessation, it was abundantly clear that this was not going to work. The kind of cultural "C" change that the Oregon Plan would require was not going to be addressed through science and information alone. In fact, this approach could make things worse.

A critical learning moment came when I was first working with the LTWC (charter team, early steering committee). It was early in the statewide conversations at a presentation given by one of the authors, Court Smith, to an education planning meeting for the Oregon Plan that helped me better define the communications problem. He shared research that noted something I later termed as a "power factor," which we needed to understand when we structured our council. Science findings and information do not hold the same value for audience members based on their perceptions of the deliverer. The origins of this are multifaceted, but it is a measure of trust: How much do I, as the listener, "trust" this information? For example, an environmental activist's power factor changes greatly with the audience. When talking to farmers, we could multiply the scientific information shared by some negative value that reflects the audience's lack of trust, perhaps their seeing a hidden agenda. Otherwise good information gets reduced by this

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factor, so the power of that information to influence action is reduced. A local television station may share the same information with the same audience, yet the power factor increases because the reporter is trusted not to have an agenda. And the highest power factor comes from that of a local, e.g., a neighbor across the back fence. Smith showed in his presentation that word of mouth was one of the most trusted and common ways to share information. He also showed that for many audiences, scientists do not have a high power factor. Therefore, if the goal is to get your point across, you either have to be or become a member of the neighborhood. Conversely, if you are seen as having an agenda, then the quality of the information does not matter, no matter how good the science.

This played out clearly in one of the examples in the article. The people learning and collecting data pertaining to water quality, through the process of collecting the data, begin to see why a single point might be significant. They not only learned locally, they learned globally. The quality of the other's data, and thereby their trust, went up.

The second concept is creating something that, in hindsight, we might define as a community of practice. The goal is to build on a concept inherent in the neighbor of a watershed council and make this meaningful. The working definition for a community of practice that I have adapted (Lave and Wenger 1991) is as follows.

A community of practice can be defined as an intentional learning community with the following shared characteristics:

- A sense of membership exists in a community with a common mission, purpose, values, and vision.
- A common professional language, understandings, and "tools of the trade" are present.
- Each member is defined as a "leader," with a role in fostering the overall community as well as taking a direct role in supporting the overarching mission and defining and refining the knowledge and tools.

In the LTWC, these considerations drove decisions for the initial structure through the charter and planning for the council, with which I was involved as a member of the charter team. We recognized the need for a decision-making model built on consensus, and for honoring all voices as valued members of the community. One of the clear choices made was to have the council inclusive and the steering committee serve at the behest of the council, to assure that the community and council's needs were the primary focus. This was based on our collective experience of interacting with many boards, distant from the community, whose roles were simply representative. These boards heard testimony that they took under advisement, but the communities never heard back from the boards. This distance could not foster the kind of community that would create real and sustained learning and changes in behaviors of large groups of stakeholders.

This initial capacity-building focus directed a number of decisions early in the council development process. For example, during the initial sharing of the watershed assessment, each section was preceded with an educational session that supported the audience's understanding of the science and therefore the data. The sense was that there is no point in sharing hydrology with an audience that does not understand the concepts or have the ability to ask significant questions. In fact, this might simply put people off, reducing the number and quality of participants. Therefore, presenters had a considerable learning curve as they often did not see their roles as educators but as scientists, and there were many conversations about how to best support the learning of the Long Tom community. Central to success of the community of practice is that the learning community asks for information that meets their needs, inviting education based on their community needs and values. In many cases, this includes inviting presenters into the community.

Another goal was for all meetings to foster the sense of a common mission and vision. This not only creates trust and builds a sense of community, but it also serves the mission by increasing the power factor of neighborliness. If your common goal is to improve water quality, then you can build on that. One thought from an early participant was that the council was "like church," which we took as a compliment and a sign of success.

Another aspect of this was that, as the council grew and the number of projects increased, an explicit connection developed between landowners who were working on projects and education. Nothing

is more powerful than a neighbor seen sharing a fencing project.

This leads to another guiding principle: there isn't enough money and resources are limited. Individuals who make a choice to change in practice will do most of the good work. For each grant, the council expected that the landowner would allow tours, education, or even council meetings on-site.

One central element was the shift in frame from "science as the answer" to "science as a tool to get somewhere significant." The community members wanted to learn because they saw the understanding of stream function as integral to their abilities to achieve what they wanted to achieve. This shift is important. Think of the difference in dynamics of listening to someone tell you the answer, their answer, and the best practice. What we often heard early on was some variant of the following: "You used to tell us to take the wood out of streams and now you tell us to put it back. Make up your mind." When an audience is ready, asking for help, and wants to better understand, the dynamics shift. We had a presentation on the role of riparian vegetation in relation to stream health, a pretty matter-of-fact situation. One of the attendees asked later, "Is this important? Will this make a difference? I've always mowed the banks because I thought it was better. It looks nicer." And the essential nature of the exchange is that the science/manager is now a neighbor. The power factor is on the plus side.

In working toward the council's goals, there must be changes in culture, esthetics, and community expectations. This context provides for rich and ongoing conversations. Two ideas shared by landowners come to mind. One asked the following: "Restore to what? Are you talking about removing all the flood control dams on the Willamette? I rowed a boat (some ten miles) across the valley when it was flooded. Is this what you want?" In this context, the question "restore to what?" creates a rich and fruitful learning environment, honors their experience, and reflects an intelligence and concern that goes beyond just science or management. It matters; it's leadership. "Don't treat us like we're stupid!" was commonly heard in response to conversations with stakeholders. They want to be members, to be valued, and to be seen as contributing.

In Flitcroft et al. (2009), there is allusion to conversations, recruiting, and the long and hard work of getting people to attend meetings. The coordinator is central and essential in this function; this is necessary and difficult work. Too often outreach is passive. We preach to the choir. Information is sitting in dusty plastic holders waiting for people to arrive. In the case of Long Tom, the effort was clear, directional, and intentional: get the most resistant, most cantankerous, most socially connected person to show up and we will welcome them with an open, honest place to do good work. One farmer said, "We're here to make sure you aren't doing anything stupid." And, for the most part, we did right by them.

Responses to this article can be read online at:
http://www.ecologyandsociety.org/vol15/iss3/resp2/responses/

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