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Activating Neighborliness Frames: Drawing on Culturally-Relevant Discourses of Community to Build a Stronger and More Diverse Environmental Movement

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In this article, I draw on my experience as an environmental social scientist and narrative nonfiction writer conducting research in working class conservative agricultural communities that frequently challenge or reject science communication. Based on my own trial-and-error path as a public intellectual committed to advancing sustainable agriculture, I present a method that I've developed to promote broader and more diverse public dialogue about environmental problem solving. Acknowledging that people interpret the world through socially-reinforced cultural cognition and pre-existing cognitive frames—and also that humans are social animals who thrive in groups I propose that frames can be the science communicator's friend. I have yet to find a community that does not have some connection to ancestral or local knowledge about community interdependence and the importance of being a good neighbor. Indeed, I often find that these "neighborliness" frames are at the very core of people's cultural cognition. Such neighborliness frames, in turn, provide a strong foundation for environmental consciousness. Thus, by being curious about a community's unique history with and knowledge about neighborliness, science communicators can help to build up frames necessary for environmental actions, while also helping cultivate broader understandings of the "neighborhood" within which communities' values and worldviews demand action.

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INTRODUCTION

"You're working where?" my classmate asked, incredulous. In response to a question about my dissertation, I had just divulged that I was collaborating with a group of farmers in rural Montana on a project about transition to sustainable agriculture. "Uh, how's that going?" my classmate stammered, when I affirmed that this was indeed my plan.

Rural Montana, I've found, isn't where most people expect to encounter bold action on environmental issues. And despite the fact that I'm a proud Montanan, I've struggled a bit with how to have environmental conversations in certain corners of my home state. This is, after all, a

state that picked Donald Trump over Hillary Clinton and George Bush over Al Gore, seemingly choosing climate denial and climate inaction over environmental progress.

So as I prepared to ask farmers about soil health and crop rotation strategies for my dissertation research, a deeper question was nagging at me: in a rural area where climate change is going to have serious consequences for agriculture and public health, how can collective action be mobilized in the context of a libertarian conservative political climate in which "big government," climate science, and climate scientists are not widely trusted? At the crux of this looming question was a very immediate practical matter: how should I talk about environmental issues with people who might not self-identify as environmentalists?

THE DILEMMA OF CULTURAL COGNITION

Meanwhile, in the pages of science communication journals, a motley group of linguists, psychologists, political scientists, and concerned climate modelers were debating a similar question: why was the public failing to respond to climate change? For decades, the conventional wisdom was that people weren't taking action on climate change because they were poorly informed about it. On the basis of this belief, massive information and educational campaigns were launched to ensure that all Americans were exposed to basic climate science. Yet massive climate action did not result, and well into the 2000s, polls reported that large numbers of people–both in the US and around the world–either did not believe climate change was real or did not believe that it was linked to human activities (Groffman et al., 2010). So what went wrong?

Just as I was heading off for my dissertation fieldwork, Yale psychologist Dan Kahan was putting the finishing touches on a book chapter that would sum up his findings about this very question (Kahan, 2013). Kahan conducted dozens of studies about science communication designed to fix people's "deficit" of information on climate change, to understand how people responded to and acted on this new information. His conclusion? Kahan found that scientific literacy and concern about climate risk weren't very well correlated– in some cases people had a lot of science *knowledge* but this didn't translate into *concern*–or, presumably, action. To Kahan, these findings suggested that the information deficit theory of climate inaction was not a sound basis for designing effective science communications. In its place, Kahan proposed a different model: cultural cognition.

As deeply social beings, Kahan's theory held, people judge new scientific information according to worldviews they share with their friends and neighbors. These cultural norms powerfully influence who people trust and how they judge or incorporate new information into their existing mental models of the world. If new information threatens the shared identity of the group or an individual's belonging within it, it's likely to be discredited or rejected.

How is it possible for two people to draw such radically different conclusions from the same information? Just as Kahan was developing the cultural cognition model, linguist George Lakoff was helping to shed light on this question by applying his longstanding work on cognitive frames to the dilemma facing the environmental movement (Lakoff, 2010). Our brains, Lakoff argued, need structures for organizing the vast amounts of information they are tasked with absorbing. These structures, which function as templates into which information can be slotted, are what linguists call frames. They help us do things like interpret information in context, connect cause and effect, and recognize relationships. They also greatly impact the conclusions we draw from new information. For example, a "direct causation" frame could yield very different conclusions than a "systemic causation" frame with multiple relationships and feedback loops, leading one person to assume a cold snap is evidence that global temperatures are not rising while another person might see it as a sign of further 'climate chaos." A "personal responsibility" frame might lead one person to blame a farmer for applying fossil-fuel based fertilizer while a "social responsibility" frame might lead another person to blame the agricultural industrial complex.

For many science communicators, these insights from Groffman, Kahan, and Lakoff felt deeply discouraging. Didn't facts matter? Couldn't people be persuaded with data?

For another group of scholars, however, the conversation about cultural cognition felt promising and familiar. Beginning in the 1980s, feminist philosophers of knowledge like Donna Haraway and Sandra Harding had been making the case that people filter information through social experience. As made clear by the term Harding chose to describe this process, "strong objectivity," feminist philosophers of science saw great possibility in acknowledging and drawing on socially mediated knowledge (Harding, 1995). We might in fact get a more accurate picture of the world through these "situated" forms of knowledge, these scholars argued, so long as we put them in dialogue with one another and didn't allow one group's version to dominate the conversation (Haraway, 1988).

Buoyed by this feminist analysis, which I was fortunate to have encountered in graduate seminars, I headed off to the northern great plains with great curiosity about how situated knowledges might inform a robust response to environmental challenges facing farmers in rural Montana.

NEIGHBORLINESS FRAMES

Three important themes returned again and again in my interviews with Montana farmers, two of which didn't appear to have anything to do with the environment.

One theme that came up frequently was the cultural practice of mutual aid, which had often made a major impression on farmers in their early years. People recounted childhood experiences helping out at barnraisings and sharing equipment with other farmers nearby, and they taught me a new verb that encompassed these practices and others: "neighboring."

A second theme that emerged from my interviews was early exposure to cooperatives, which helped farmers get better prices for their grain by marketing their harvests collectively. The group that promoted most of the early cooperatives, the Farmers Union, hosted camps that many of my interviewees had attended as kids, further deepening their understanding of cooperative principles and relationships with other families participating in the Farmers Union.

The third theme, which begin to move into more familiar environmental territory, was an observation that many farmers made about the relationships among elements of their farming systems. As farmers transitioned to organic farming systems reliant on ecological relationships, they were struck by the way in which lentils left behind residual nitrogen in the soil for next year's grain crop, and the way rhizobia bacteria set up shop in lentil roots and converted nitrogen into a form available to plants. They begin to notice a pattern that characterized *both* these ecological communities on their farm *and* the human communities they belonged to: interdependence. When I asked one farmer about the greatest lesson he'd learned about sustainable farming his response was "that you can't do it alone" (Carlisle, 2015).

As I continued hearing similar stories from farmers (of all political stripes) who were transitioning to sustainable agriculture, I began to think of these stories, in Lakoff's parlance, as the building blocks of neighborliness frames. Through a series of experiences that emphasized or revealed interdependence, farmers had learned to see the world as a neighborhood, in which residents relied on one another and flourished through cooperation. Childhood values told them that being a good neighbor was important: in both moral terms and practical ones (when you get a flat tire in the middle of nowhere, you better hope you've built up some goodwill with the folks close by). They were thus primed to recognize this "neighboring" behavior in their cropping systems, and their experiences with ecological symbiosis further reinforced their "neighborhood" model of human relationships.

This robust circulation of neighborliness frames appeared to be happening among Montana ranchers as well. Just a few years earlier, sociologist Jill Belsky and forestry professor Laurie Yung, both of the University of Montana, uncovered a "community approach to private property," among ostensibly libertarian ranchers on the Rocky Mountain Front. When new amenity buyers arrived in the neighborhood and restricted hunting and trailing of cattle through their property, these ranchers began articulating what Yung and Belsky termed "community claims to public goods on private lands," including the obligation to manage weeds and a culture of "helping activities," in addition to social norms of hunting and trailing access (Yung and Belsky, 2007).

Looking beyond Montana, I began to see examples of neighborliness frames everywhere, from the ahupua'a system in Hawaii (Vaughan et al., 2017) to the "peoplesheds" of the U.S. Corn Belt (Atwell et al., 2009). Might such neighborliness frames be a critical piece of our biocultural evolution as humans? Might we then hypothesize that most people carry some form of ancestral knowledge concerning the importance of community?

If so, we may have a way forward for environmental communication. Rather than trying to *overcome* cultural cognition with more "facts," we can *amplify* neighborliness frames that function as culturally embedded models of ecological connection.

NEIGHBORLINESS FRAMES AT WORK

In rural Montana, I found, such amplification of neighborliness frames had powered significant environmental action. The rise of organic farming, which now covers over 437,000 acres in the state (second only to California) (Lavey, 2018), begin in the 1980s with a scrappy rural NGO called the Alternative Energy Resources Organization (AERO). AERO explicitly drew on mutual aid customs and "neighboring" norms both to get its work done and to describe the function and benefits of ecological farming systems. They adopted organizing practices honed through Farmer's Union meetings, and celebrated the neighborliness of farm communities at a time when rural morale was low (Carlisle, 2015).

The centerpiece of AERO's organizing efforts was a network of Farm Improvement Clubs modeled on the corn and beef improvement clubs sponsored by agricultural extension offices in the 1940s. AERO staffer Nancy Matheson had a hunch that these 1940s era neighbor-to-neighbor clubs focused on "improvement" for the regional agricultural community (a cultural cognition approach to science communication) may have done more to spread the industrial model of agriculture than showy postwar demonstrations at agricultural colleges (a knowledge deficit approach to science communication). If farmer-to-farmer efforts focused on community improvement had been successful in spreading the science and technology of industrial agriculture, she reasoned, perhaps this same method of communication and organizing could be successful in spreading the science and technology of sustainable agriculture.

Matheson, who had grown up in a Farmers Union family in rural north central Montana, infused the Farm Improvement Club program with the tone and flavor of Farmers Union meetings. The application for club funding invited teams of farmers to come together to work on a common challenge, in the spirit of mutual aid. Many former club members I interviewed told me that they were even more committed to "not letting my fellow farmers down" than they were to the specific farming challenge that brought them into the club in the first place. At the end of each year, AERO convened all the clubs to share their results, bringing together the geographically disparate network of participating farmers into a community that felt like a neighborhood.

Though not formally trained in science communication, Matheson understood that the biggest barrier to changing a mental model could be the risk of being out of step with your "tribe" or even losing friends. Indeed, many early organic farmers did lose friends when they stopped using chemicals on their farm: one farmer described his wife's devastation when they were no longer invited to the neighborhood Christmas party. At the center of "cultural cognition," Matheson intuitively recognized, is a culture. Thus, the Farm Improvement Club program worked to build a robust culture and community that offered farmers a sense of continuity and connection with longstanding norms and values, so that they could confidently incorporate new agricultural practices into this social framework.

At the same time, AERO used neighborliness frames to build more expansive mental models of the "neighborhood," to include

partnership with urban eaters of farmers' crops and larger-scale ecological citizenship within a common watershed and even a common atmosphere. In this way, climate change entered the discussion not as new and threatening information, but as the extension of a familiar conversation.

During its decade-long tenure over the course of the 1990s, AERO's Farm Improvement Club Program grew to 120 clubs, with over 500 participating producers. The model was so successful that USDA funded AERO to train its extension agents and soil conservationists—not just in Montana, but across four other states as well (Carlisle, 2015).

DISCUSSION

In my own research and writing–from my dissertation forward– I've tried to learn from AERO's example. Before proposing sustainable agricultural practices or climate mitigation and adaptation as new ideas, I've tried to start by asking some fundamental questions. How do people here understand their connection to each other and the natural world? What sense of obligation do they feel to one another, and perhaps to the land? I've uncovered some surprising answers to these questions, as ostensibly recalcitrant tough guys turn out to be incredibly tender caretakers of their cattle and fiscal conservatives shell out serious money to restore watersheds that have been part of their family history for generations. Such commitments form the foundation of the "new ideas," "shared norms," "participation processes," and "common vision of place" that

scholars cite as the keystone of successful collaborations that have overcome seemingly intractable difficulties and differences by forging new alliances and shared governance (Weber, 2009; Sprain et al., 2016). Ironically, perhaps, it is often by digging a bit deeper into communities' complex political and social histories that possibilities for novel political configurations emerge. This may not get us all the way to successful collective action on climate, but such hopeful examples from agricultural communities suggest a good start. By being curious about a community's unique history with and knowledge about neighborliness, science communicators can help to build up frames necessary for environmental actions, while also helping cultivate broader understandings of the "neighborhood" within which communities' values and worldviews demand action.

AUTHOR CONTRIBUTIONS

The author confirms being the sole contributor of this work and has approved it for publication.

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