# What's the problem? How 'industrial culture' shapes community responses to proposed bioenergy development in northern Michigan, USA

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A B S T R A C T

Why do two similar places respond to the same renewable energy technology development proposal in contrasting ways — as a problem in one community, and a non-problem in the other? In response to William Freudenburg's call to examine the role of ideologies in the social construction of both environmental problems and non-problems, and drawing from Ann Swidler's concept of cultural resources, this paper develops and applies an integrative framework the author calls industrial culture. The paper examines how industrial cultures — the stories, discourses, orientations, and practices around industrial development and accompanying environmental degradation that are commonplace in particular locales — shape community responses to proposed future development by both constraining and providing opportunities for new trajectories of action. This process is illustrated with a comparative case study of two adjacent and outwardly similar industrialized northern Michigan communities with legacies of environmental degradation that encounter the same bioenergy development proposal but respond in contrasting ways. Findings suggest community residents construct industrial cultures around both a) past industrial development and environmental degradation and b) the imagined future impact bioenergy development would have on the community. The paper extends the literature on environmental non-problems by showing how the social construction of non-problems is driven not only by explicitly articulated ideologies, but also by unquestioned common sense.

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## 1. Introduction

In the United States, retail-scale renewable energy technologies (RETs), including wind turbines, solar installations, and bioenergy facilities, are proposed as solutions to the environmental problems accompanying the extraction and combustion of fossil fuels for energy production, including the build-up of greenhouse gas emissions in the atmosphere, air and water pollution, and environmental degradation and corresponding human health implications. Scientists, policy-makers, engineers, and other experts envision an alternative energy system where renewable resources (those that can be replenished within a human lifetime rather than over geologic time spans) increasingly replace non-renewable resources. While public support for renewable energy is high, responses from communities of place where new RET developments are proposed for siting are mixed (Eaton et al., 2014).

In some locales, RET proposals are responded to as unnecessary impositions on the community by outsiders (McLachlan, 2009). Residents may emphasize risks over benefits, contest technology design, or take action to prevent local siting (Hess, 2007; Upreti, 2004). In other places risks are downplayed or unarticulated — drowned out by discourse on potential benefits. In short, RET projects are identified as problematic in some places, while in others they appear to raise few if any concerns. A growing body of scholarship has provided important insights into how and why individuals and communities *resist* local RET development (Upreti and van der Horst, 2004; Devine-Wright, 2007, 2011; Van der Horst, 2007; Wüstenhagen et al., 2007; Walker, 1995). However, less attention has been devoted to the question of why other communities *do not resist* development projects that would have significant implications locally, and that others have identified and responded to as problematic.

To address this puzzle, I join Freudenburg's (2000; 2005) research on the social construction of environmental non-problems with Swidler's (1986) "cultural toolkit" framework to investigate

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how what I call the *industrial culture* of a community both provides for and constrains mobilization. Freudenburg (2000:106) calls for sociological research on not only public contestations, but also "systematic analysis into the ways in which certain conditions come to be defined as nonproblematic". In response, I ask why outwardly similar communities respond to the local siting of a RET development in contrasting ways — as a problem for some, but non-problem for others. Freudenburg (2000) argues uncontested or "privileged access" to natural resources is made possible through powerful ideological beliefs that serve to legitimize or "naturalize" potentially destructive environmental practices. This in turn confers access to resources for one group at the expense of others. Attention to non-problems moves analyses of power beyond articulated, publicly recognized exertions of power to include how issues are written out of the agenda, or why potentially controversial actions fail to be recognized as public issues of concern (Foucault, 1977; Lukes, 1974; Crensen, 1971).

Equal attention to the social construction of environmental problems and non-problems requires following the approach called for by sociologists of scientific knowledge who examine "true" and "false" knowledge symmetrically rather than developing different methods (Barnes and Bloor, 1982; Latour, 1987). Drawing from Swidler (1986), I develop the synthetic industrial culture framework to examine how communities and individuals define and respond to both environmental problems and non-problems. Swidler (1986) argues social action cannot adequately be explained by examining the values, preferences, or tastes of individual actors. Instead, shared experiences and practices provide the "cultural toolkit", or repertoire of cultural resources, available to members of a community. Individuals and communities draw from collectively available cultural resources to assemble "strategies of action" — a term meant to downplay conscious decision-making and emphasize "a general way of organizing action … that might allow one to reach several different life goals" (1986:277). It is in this way that culture both constrains and provides opportunities for action. Moreover, culture shapes action differently in more "settled" versus "unsettled" phases of social life. Unsettled times are periods of greater change in the social life of a community, where new ideas about everyday realities gain a potent influence on action. Such may be the case when communities that have historically responded to the extraction or development of natural resources as non-problematic break this pattern by instead resisting plans for future development. However, culture's influence is more opaque during more settled periods or spaces of social life, where courses of action merge with what appears as little more than the normal way of doing things.

Swidler's work complicates Freudenburg's (2000) argument that powerful ideological beliefs naturalize industry's environmentally destructive practices. For Freudenburg, ideologies can be both naturalized and publicly visible. Not so for Swidler (1986:279), who argues ideologies are always articulated and "coherent because they must battle to dominate world views, assumptions, and habits" of fellow community members. Instead, ideologies that gain saliency during unsettled times evolve into "tradition" and, finally, "common sense", where they become indistinguishable from the existing cultural repertoires of a community. I locate environmental problems and non-problems along Swidler's ideology-tradition-common sense continuum, rather than Freudenburg's static conceptualization of ideology, in order to attend to how not only the privileged accounts of powerful actors shape (non)responses, but also to how a common sense specific to particular places can prevent certain issues from reaching the public agenda.

Joining these literature, I propose a framework for analyzing how the industrial culture of a community of place influences possibilities for mobilization around RET development. Industrial culture refers to the reservoir of cultural meanings and practices actors construct around existing local resource extraction/development, and then draw upon in response to proposed future development. Industrial cultures are both past and present oriented in that actors construct more or less critical interpretations for both the legacy of previous and implications for future development. During settled periods of social life, the industrial culture of a community is closely aligned with normalcy, thereby constraining possibilities for new trajectories of action. However, during unsettled times, latent negative interpretations within a community's industrial culture can find new life, opening opportunities for courses of action that had otherwise seemed impossible.

In this paper, I apply the industrial culture framework to a comparative case study of two outwardly similar northern Michigan communities that responded differently to the same proposal to construct a wood burning bioenergy facility. I begin by reviewing the literature on cultural resources and mobilization around environmental issues before discussing the industrial culture framework. Next, I examine each community's legacy of environmental degradation, the meanings and practices community residents and others attribute to these legacies, and how each community's industrial cultures shape their distinct responses to proposed bioenergy development.

## 2. Cultural resources, natural resource development, and environmental non-problems

Swidler's (1986) reformulation of culture as a "toolkit" reinvigorated research into the role culture plays in protests and other forms of resistance to contested development projects. This research draws attention to the way communities construct meaning around industry, place, and natural resources, and how community residents draw upon these meanings to defend their ways of life (Banerjee and Steinberg, 2015; Wright, 2005).

For instance, Wright (2005) draws on Swidler's "toolkit" approach to demonstrate how farmers caught up in contemporary political debates defend their traditional practices. She asks, why do farmers continue to produce a crop they themselves avoid consuming? Applying Swidler's argument about how ideologies operate differently during more and less "settled" phases of social life, Wright argues the historic, settled nature of tobacco production is less visible, whereas new (1990s) ideologies concerning personal risks of consumption are more visible in shaping farmer action. Rather than there being one dominant ideology of tobacco farming, interviewees are selective about the cultural framings they find useful: "they use the culture of tobacco for its economic and cultural relevance to their lives, yet at the same time distance themselves from its negative properties" (2005:474). In this way, tobacco farmers "maintain dignity in their work and sense of self while negotiating between" their everyday realities of farming tobacco and "new cultural definitions" of tobacco consumption as a threat to personal health (2005:474).

Environmental justice scholars draw attention to how marginalized and often resource dependent communities draw on cultural resources to contest extractive or industrial development projects they identify as problematic (Schlosberg, 2007). This scholarship draws attention to how communities and individuals use culture, including how the cultural meanings people ascribe to land persist even after that land has been irrevocably destroyed by extractive development (Pasternak, 2010), how the shared and contested meanings individuals construct for a place can constitute a politics of place that link with larger political struggles (Yung et al., 2003), as well as the potency of storytelling for transforming personal emotions and experiences into publicly visible knowledge.