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"Not in our water!": Environmental resistance in rural Wisconsin

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ABSTRACT

Concentrated Animal Feeding Operations (CAFOs) are known to have a wide range of negative impacts upon nearby residents and communities. Therefore, the siting of such operations in economically underdeveloped rural communities is an important environmental justice issue. This study explores the environmental conflict that surrounded a proposed CAFO in Bayfield County, Wisconsin. In this struggle, an outside corporation attempted to site a new CAFO in a community that was highly divided on the issue. We draw complementary insights from the environmental justice, stakeholder theory, and rural studies literatures to explain how the opponents of the CAFO were ultimately able to successfully resist the unwanted land use. This theoretical framework treats the formation of environmental inequalities as a process of conflict among diverse parties in which the potentially impacted communities may strongly influence the eventual outcome. Through interviews with key stakeholders and analysis of local and state media sources, we examine the primary points of contention within the local community along with the relative claims making and discursive strategies employed by each side. The findings of this study imply that how rural communities construct their identity and define potential environmental hazards are central to deciding environmental conflicts.

1. Introduction

The Northwestern region of Wisconsin is a remote area, with pristine wilderness spaces existing alongside rural communities. With over a hundred miles of Lake Superior shoreline, the region is an outdoor tourism destination, hosting six federal and state parks. However, outside of the tourism industry, the region is economically underdeveloped, with agriculture and mining industries in marked decline. Both employment and median household income are well below state and national averages (US Census, 2019). In 2014, Reicks View Farms, one of Iowa's largest corporate hog integrators, bought land on the border of Bayfield and Ashland Counties (see Fig. 1) with the goal of building Badgerwood, LLC, a 26,000-head swine farrowing operation. Concerned over potential environmental degradation and public health risks, a number of community members organized to resist the Concentrated Animal Feeding Operation (CAFO). While another faction of community members supported the proposed operation, the opponents were ultimately successful, turning public opinion against the proposal, electing county board members who opposed the CAFO, and passing legislation that essentially blocked the operation from being built. This case study examines how a small, economically underdeveloped community may

still exercise sufficient agency to resist a large, powerful corporation that wants to introduce an unwanted facility. From this, we make the argument that the identity and meanings held by potentially affected communities needs to be better accounted for in our understanding of the origins of rural environmental inequality.

In our analysis, we use the environmental justice literature, stakeholder theory, and the concept of the community as a stakeholder to understand this outcome as the result of a struggle among multiple stakeholders, shaped by the specific socio-historical context of the region and timeframe in which the struggle occurred. Additionally, we draw upon rural studies literature to examine how the specific setting of this conflict influenced its course. Together, this literature allows us to explain how the opponents of the CAFO were able to resist the unwanted land use, establishing definitions of agriculture and community that effectively precluded Reicks from building the proposed operation. This study makes at least three important contributions to the environmental justice literature. First, in an immediate, empirical sense, we deconstruct and analyze the conflict surrounding this proposed CAFO, clarifying how such struggles may unfold and where the fundamental points of contention within a community occur. Second, pulling from three different bodies of literature, we present a unique theoretical framework

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that can be used to better understand the social negotiations and meaning making processes that underlie instances of rural environmental injustice. Finally, in this study, we articulate a model of how small, rural communities, relatively lacking in economic or political power, can use rural-specific discursive strategies to capture public opinion and sway local government in a way that protects themselves from unwanted land uses.

In what follows, we begin with a discussion of the environmental justice, stakeholder theory, and rural studies literatures, highlighting how using the three together provides a robust theoretical orientation for examining the origins of environmental injustices. We then outline our research methodology and present the basic background and framework of the case study being explored. Following this, we describe the primary points of contention associated with this struggle and how the CAFO opponents were able to dominate the discourses in a way that shaped the broader community perception of the proposed operation and eventually led to the project being abandoned by Reicks. We conclude with a discussion of the implications of this research for the study of rural environmental justice and how environmental conflicts in rural spaces can hinge upon which side is best able to leverage rural values and identity to mobilize community residents.

2. Theorizing rural environmental justice

The contemporary examination of environmental injustice has a rich history dating back to the first studies that established that environmental harms were more likely to be found in communities of color (GAO, 1983; UCC, 1987) and the pioneering work of Robert Bullard (1983, 1994). Subsequent literature has firmly documented that racial minorities, low-income communities, and other marginalized peoples are disproportionately impacted by a wide range of environmental hazards (for an overview of this work, see Mohai et al., 2009; Roberts et al., 2018). While this body of work has made important methodological advances in demonstrating disproportionality, as well as provided a wide range of corroborating evidence of unequal exposure, the explanations as to why such disparities exist have relied upon fixed conceptions of macro-phenomena. Additionally, the literature has tended to focus on urban cases of environmental inequality. Those studies that do examine rural incidents have largely focused on racial and class disparities at the expense of examining how the opportunity structure and ideology of rural spaces may constitute a unique axis of inequality in itself (Pellow, 2016).

To understand the formation of rural situations of environmental injustice, we utilize theoretical tools that incorporate process, the

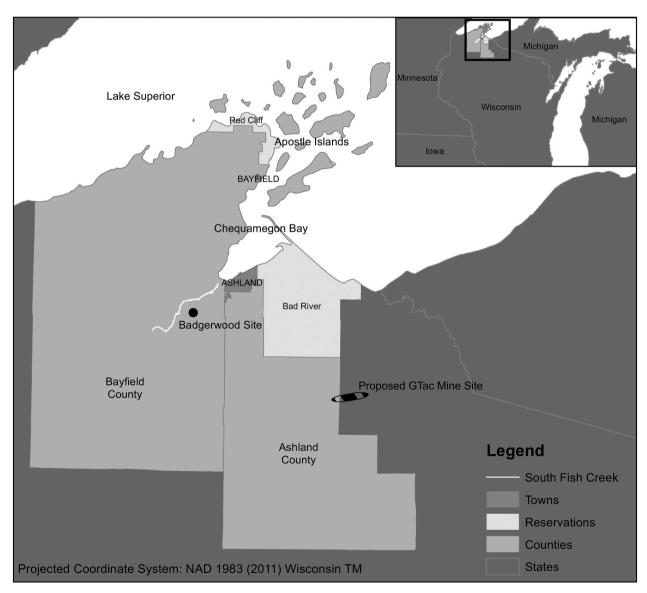


Fig. 1. Map of Northwestern Wisconsin.

motivations and efforts of multiple actors, and socio-historical context. Here we augment existing arguments within the environmental justice literature by incorporating constructivist perspectives from stakeholder theory (Freeman, 1984; Walton, 2007) as well as insights regarding the unique aspects of rural instances of environmental injustice from the rural studies literature (Lichter and Brown, 2011; Ashwood and MacTavish, 2016). Using these diverse theoretical perspectives acknowledges the unique economic, social, and cultural circumstances of rural communities that contextualize the frames used in rural environmental justice discourse.

2.1. Explanations of environmental injustice

The environmental justice literature fundamentally seeks to explain "how inequalities among groups lead to inequalities in access to environmental benefits and inequalities in exposure to environmental burdens" (Roberts et al., 2018:235). While debates among scholars continue, there are three primary explanations of environmental injustice that have been presented in the literature: 1) economic explanations, in which environmental inequalities are seen as the result of normal market dynamics, 2) sociopolitical explanations in which unwanted land uses follow the "path of least resistance" and end up in the communities with the least political capacity to resisting them, and 3) racial explanations which argue that inequalities in exposure to environmental hazards are the result of current, historical, and structural racism (Mohai and Saha, 2007). While these three factors are certainly relevant in understanding how situations of environmental injustice occur, they simplify complex historical processes into a short list of easily tested variables (Weinberg, 1998). Additionally, they tend to rely upon a "perpetrator-victim scenario" in which a powerful corporation or state agency makes a decision that impacts a relatively helpless community (Pellow, 2000). In actuality, instances of environmental injustice are the result of complicated interactions among actors with diverse bases of and access to power, that occur over time in a specific (if mutable) historical and geographic context.

Pellow (2000) presents a more nuanced theoretical perspective on the social processes that generate environmental inequalities. He argues that environmental inequalities are the result of complicated struggles among multiple stakeholders that unfold over time. Such a multi-stakeholder perspective treats conflicts as multidimensional, containing several points of contention. Subsequent work has built upon this perspective and examined a wide range of environmental justice case studies using an in-depth, historical approach that explores the specificities of each case in order to unpack the complex causal processes (e.g. Pellow, 2004a, 2007; Lerner, 2006; Walton, 2007; Harrison, 2011; Bell, 2013; Beamish, 2015; Malin, 2015; Banerjee, 2017). This approach emphasizes the importance of historical and geographic specificities, the role of many people and organizations, and the potential less-powerful communities have for self-determination.

One of the core precepts of this theoretical framework is a firm rejection of the "perpetrator-victim scenario" in favor of a multiplestakeholder approach. A wide range of stakeholders can be involved in the processes that generate environmental inequalities, including the owners of the potential environmental hazard, the state, workers, community members (who may be fragmented into different groups), and social movement organizations (Pellow, 2000). These various agents often pursue competing interests and each one can play a greater or lesser role in creating (or resisting) environmental inequalities. Furthermore, the stances, goals, and involvement of different stakeholders may change over time and must therefore be treated as fluid and malleable (Berry, 2003). Therefore, an accurate theoretical model of the processes that generate inequalities must move beyond dyadic models of conflict and treat the processes of environmental inequality formation as embedded within multiple scales and interests (Pellow, 2004b, 2018). It is important to note that the power and influence that different stakeholders wield can vary greatly. To some degree, stakeholder status is defined by the degree to which an individual or group can harness or build enough power to influence the decision being made. Thus, potentially affected communities possess a degree of agency to influence the conflict. Rather than being viewed as a passive victim, this approach treats the community as a central actor in the process.

A historical approach to examining environmental inequality is important, because it includes an assessment of the immediate struggle, which occurs over the short term, as well as the longer-term socio-historical context in which these contestations play out (Pellow, 2004a). During the period of time in which environmental inequalities can potentially form, there will be shifts in alliances, stances, membership, framing processes, and hazards that all need to be taken into account. Given the importance of these malleable dynamics, an accurate theorization of environmental inequality formation must examine the generation of environmental inequality as a process that occurs over time (Pellow, 2000). That process is influenced by a specific socio-historical background that consists of both cultural and structural elements, either of which can influence the conflict from which situations of environmental inequality arise. Community understandings and perceptions of potential hazards, associated risks, and possible rewards are rooted in the community's past and may shape how the community responds to said hazard (Shtob, 2018). Similarly, a community's geography, politics, economic and industrial past, and their organizational experience may also influence how they receive a potential environmental hazard, and must be taken into account (Beamish, 2001).

2.2. Stakeholder theory

While the environmental justice literature provides a flexible theoretical tool for explaining situations of environmental injustice as the result of competition among multiple stakeholders over time within a socio-historical context, it tends to focus upon the structural aspects of environmental conflicts. Here we extend this literature by engaging stakeholder theory and the idea of the community as a stakeholder. This approach incorporates a distinctly constructivist stance, focusing upon the meanings and values that communities attach to their physical surroundings and potential environmental harms, and the tactics and discourses mobilized to engage those meanings and values (Walton, 2007). In this way, stakeholder theory contributes to environmental justice studies by treating the activist community as a dynamic field in which the meanings and identities that define and shape the conflict are actively negotiated.

Stakeholder theory is based upon the fundamental idea that large organizations or businesses can be influenced by external groups and individuals. Therefore, those firms need to take the goals and capacities of those potential stakeholders into account when making decisions. Freeman (1984:46) defines stakeholders as "any group or individual who can affect or is affected by the achievement of the organization's objectives." The theory has been applied to understanding the formation of environmental inequalities through examining the role of the community as a stakeholder and analyzing the degree to which communities that stand to be affected by environmental hazards influence the processes through which those hazards are sited and developed (Berry, 2003; Walton, 2007). We extend this work by focusing specifically on how a rural activist community strategically mobilizes discourses associated with rural attitudes and identity to forward movement aims.

To theorize the community as stakeholder, it is essential to understand what is meant by "community," a concept about which a substantial amount of disagreement exists as to both meaning and function (see Clark, 1973: Reeve, 1997; Brint, 2001). For our purposes, we follow David Clark (1973) in defining a community as a socially constructed group in which members possesses both solidarity (a sense of shared identity), as well as a degree of significance (a sense of place and role within the group). Such a notion of community is flexible and can encompass groups with a wide range of goals, activities, capacities, and physical dispersions. This understanding also places particular emphasis

on the socially constructed aspects of communities and calls attention to the discursive and symbolic interactions that create and maintain insider/outsider boundaries. Importantly, this conception captures the types of communities that can function as stakeholders in the struggles that may give rise to environmental inequality. Such communities can potentially emerge around a perceived threat or a favorable prospect (e. g., Walton, 2007; Jerolmack and Walker, 2018), play an influential role in determining how the threat is dealt with, and then later dissolve when the threat is no longer present.

According to stakeholder theory, any community that can potentially be impacted by an environmental hazard qualifies as a relevant stakeholder with some degree of influence on the decision or practice that may generate or site the hazard (Freeman, 1984). Therefore, using stakeholder theory to examine the generation of environmental inequalities requires an explicit focus on how these communities socially construct their definitions of themselves, their boundaries for defining outsiders and insiders, their goals and visions for the future, and the potential consequences of the land use in question. These meanings and understandings form the basis of the communities' actions and their capacity for influencing corporate or governmental decision makers (Walton, 2007). Additionally, these processes of meaning construction cannot be assumed to occur in a vacuum. The socio-historical background of a community is key to understanding the position that a community adopts (Beamish, 2015).

Here, stakeholder theory parallels arguments within the environmental justice literature that environmental inequality needs to be understood from a historical perspective. A community's socio-economic make-up, geography, and history (both recent and distant) are all important elements in how a community constructs its definitions of self and perceived threats. Rural communities exhibit distinct cultural attitudes, constructing community identity and membership in ways that may be different from urban spaces. Building on previous research that centers the cultural toolkits of communities in resisting unwanted land uses (e.g., Banerjee and Steinberg, 2015), stakeholder theory illuminates how activist communities negotiate meanings in relation to government and corporate entities, as well as non-activist locals who may or may not support the movement. Thus, stakeholder theory lends insight into how frames are contested, understanding environmental conflicts as discursive struggles between actors.

2.3. Rural studies and environmental justice

Rapidly evolving information technology, broad globalization trends, and an increased urbanization of the United States population have all served to intensify the degree to which rural and urban areas are integrated, both culturally and economically. This trend has many scholars questioning the relevancy of the rural-urban distinction and the need for a separate body of theory and research on rural spaces (Hoggart, 1990; Bell, 2007; Krannich, 2008). However, important distinctions between rural and urban settings persist, both in terms of material circumstances as well as matters of identity and ideological meaning (Lichter and Brown, 2011; Ashwood and MacTavish, 2016). Regarding material conditions, there are a number of trends that distinguish rural from urban. Despite rural spaces making up 97 percent of the country's land area, they contain less than 20 percent of the U.S. population and that number continues to decline. Rural areas tend to have lower rates of household poverty than urban, but also lower median household incomes. Rural communities have a higher median age (51) than urban (45) and adults living in rural areas are less likely to have obtained bachelor's degrees and are more likely to have served in the armed forces (U.S. Census, 2016). Rural areas also tend to face a wide range of health disadvantages relative to urban settings (Taylor, 2019). This brief array of demographic differences are only surface indicators of the underlying fact that individuals living in rural spaces face a very different opportunity structure than individuals living in urban settings.

The structural differences between rural and urban spaces can create

marked cultural distinctions in the way individuals think, feel, identify, and respond to social issues. According to one national survey, most urban, suburban, and rural Americans characterize rural people as hard working, possessing strong family values, having strong religious beliefs, and being highly patriotic (Kellogg Foundation, 2002). This characterization implies some degree of differentiation, in which rural people are viewed as a group that is distinct from the rest of society. Katherine Cramer (2016) has described the awareness of this distinction among rural individuals as a "rural consciousness," a sense that rural people are fundamentally different than urban folks in terms of lifestyle, values, and work ethic. This consciousness can also contain a strong "us-versus-them" mentality and feelings of exclusion or resentment against perceived "urban elites" (Cramer, 2016; Masterman-Smith et al., 2016). Resentment of urban elites is buttressed by distrust of government and corporations, who are seen as dispossessing rural land (Ashwood, 2018). This sense of rural solidarity can be mobilized as an ideological defense against any perceived outsiders, whether they be an external corporation, big government, or an influx of new residents.

Another important part of the rural identity is a strong sense of agrarianism, in which farming is viewed as a public good and a source of moral virtue. Despite U.S. agricultural production being dominated by corporations and farmers making up less than 2 percent of the U.S. workforce (McMichael, 2012), the constellation of values associated with agrarianism are still a critical element of the rural identity. Farming and agriculture is regarded as more than just an occupation or an industry. Instead, it is viewed as some manner of noble pursuit, generating a positive impact on society as a whole (Woods, 2010). Therefore, in environmental conflicts rural communities are more likely to align themselves with farmers and agriculture activities. Any land use that is viewed as threatening to farming as an occupation or way of life will tend to be viewed as antithetical to the rural way of life.

One consequence of the structural reality and ideology that characterizes rural areas is that they become targeted for unwanted land uses. Environmental justice scholars have documented how rural areas are particularly vulnerable to toxic waste sites (McKinney et al., 2015), coal waste impoundments (Greenberg, 2018; Liévanos et al., 2018), hydraulic fracturing (Malin and DeMaster, 2016), pesticide drift (Harrison, 2011), uranium mining (Malin, 2015), and extractive industries as a whole (Freudenburg, 1992). With less people and more space, utilitarian logic can lead to the conclusion that rural communities are the ideal repositories for hazards and wastes (Ashwood and MacTavish, 2016). Additionally, rural regions are often viewed as possessing less capacity for resisting unwanted land uses. Notions of exclusion and neglect can leave rural communities more amenable to the possibility of economic development. Indeed, polluting industries or government agencies can use the incentive of providing needed jobs and infrastructure as a leverage point to convince rural areas to accept unwanted land uses (Kelly-Reif and Wing, 2016). Rural communities may also possess a "community economic identity" through which individuals view potentially dangerous or hazardous industries more favorably due to historical associations with those industries (see Bell and York, 2010). Furthermore, the intersection of rurality with other dimensions of injustice (e.g. race, class, gender) only exacerbates environmental injustices, creating greater inequalities (Gedicks, 1993). Rurality comprises an important, if understudied, dimension of environmental justice and the unique material and ideological nature of rural spaces needs to be taken into consideration when explaining the formation of rural environmental inequalities.

Drawing from these three literatures provides us with a multidimensional theoretical tool for understanding how communities negotiate environmental conflict, both internally as well as with external corporate and government entities. This framework stresses that environmental inequalities form over time as a result of struggle among multiple stakeholders, all of which possess varying degrees of power and influence. In many struggles, local communities can become an important stakeholder, possessing a great deal of influence over the final

result. To fully understand the struggle and its outcome, it is necessary to understand how these various stakeholders construct and negotiate their understandings and definitions of the struggle. That construction process is shaped by the socio-historical context and background against which the struggle occurs. Stakeholders in rural spaces will be particularly influenced by both the specific material conditions that accompany rural settings and the associated place-based identities and values. Therefore, we need to explore the meanings stakeholders in rural communities develop and attach to potential environmental hazards and the conflicts that surrounds them, as well as the socio-historical backdrop against which that construction process occurs to sufficiently contextualize the role that rural communities play in determining whether they will house such a hazard.

3. Method

We used two main sources of data for this study. First, we performed a systematic search of local and state online newspaper articles covering the proposed CAFO and associated conflict. Second, we conducted semi-structured interviews with some of the key actors involved in the struggle. The media coverage provided a timeline of the key events of the conflict and helped identify the relevant stakeholders, as well as presenting a background of the socio-economic context of the Bayfield area. However, our analysis was primarily based upon the in-depth interviews, which provided insights into community members' motivations and understandings of the proposed CAFO and the associated conflict.

For our media analysis, we conducted a comprehensive LexisNexus database search (2014–2017) using the following keywords: Bayfield CAFO; Badgerwood Hog Operation; Bayfield Reicks, Ashland CAFO, Bayfield Hog Farm. We then identified three newspapers (*Ashland Daily Press, Duluth News Tribune*, and *Wisconsin Public Radio*) that were covering the story, and performed a search in their respective archives using the same keywords. This process resulted in 178 articles, dating from September 30, 2014, to August 11, 2017. We confirmed the results of these searches by conducting identical searches on Google, which yielded no new articles.

Initial interviewees were chosen from the media articles. Snowball sampling was then used to gain access to other residents, activists, and government officials. We conducted a total of 22 real-time interviews and three online conversations via e-mail and Facebook. In addition, we transcribed four public comments from online videos of the Bayfield County Board Meeting on February 18, 2015 to bolster the representation of the supporters of the proposed CAFO. Representatives of Reicks declined to be interviewed for this project. Interviews were conducted from October 2016 to July 2017. Toward the end, the data generated from the interviews started to reach saturation, indicating that the main arguments had been captured.

We used a responsive approach for our semi-structured interviews, treating the interviews as conversations to interact and engage with our interviewees (Rubin and Rubin, 2012). The length of the interviews ranged from 15 min to nearly two and a half hours, with most interviews lasting about 45 min. All interviews were recorded and transcribed verbatim. Following transcription, interviews were coded by both investigators. Themes inductively drawn from the interviews were cross-checked and discussed to bolster reliability. In total, seventeen themes were identified, after which interviews were re-coded separately by each investigator. Primarily, we were interested in identifying the discourses used by the resistance to frame the struggle in a way that fends off the operation, such as environmental and public health concerns, differing conceptions of agriculture within the broader community, and how individuals and groups were labelled as insiders and outsiders from relative perspectives. While most of the interviews were conducted with resistors to the CAFO, the themes identified in the interviews were also found in the public comments of supporters as well, bolstering analysis reliability.

Our data analysis approach to the interviews focuses on the discourses surrounding the environmental conflict. Our approach emphasizes that discourse can be leveraged into strategies, creating social realities amenable to organizational goals. Specifically, we draw upon Hardy, Palmer, and Phillips's (2000) framework of critical discourse analysis, emphasizing discursive activity that can act as a strategic resource to move from rhetoric to practice. Through analyzing our discussions with respondents, the discourse and meaning constructed in regard to the contested concepts of "community" and "agriculture" were illuminated within the region's sociocultural context. The two oppositional groups in the struggle - CAFO supporters and resisters - not only articulated competing arguments, but also different definitions and identities. The interview process provided key themes that codified these arguments, meanings, and identities. In short, our data analysis emphasized the discursive elements of the struggle employed to result in activist mobilization, influence local public opinion, and ultimately to become a force in local politics.

4. Reicks View Farms and the Bayfield region

4.1. Bayfield and Ashland Counties, background

The setting for this study was Bayfield and Ashland Counties, Wisconsin. Located on the shores of Lake Superior (see Fig. 1), both counties have characteristics that are unique for the region and relevant to the ensuing environmental conflict. Both are exceedingly rural, with population densities of 10.2 (Bayfield) and 15.5 (Ashland) people per square mile. The city of Ashland, with approximately 8000 residents is the largest urban center in both counties (US Census, 2019). Both counties are predominantly white. However, with a Native American reservation located within each county, Native Americans make up over 10 percent of the population. The area's natural attractions have led to tourism being its main economic driver, displacing agriculture and manufacturing. As one public official observed, "Bayfield County, a huge part of its economy is tourism. You know, it's tourism and timber, and dairy agriculture. Large-scale agriculture is now a minor part of it if you actually look at the numbers these days". Indeed, every year tourism supports 3775 full-time equivalent jobs and brings in over \$71 million in business sales to Bayfield County alone (Bayfield, 2005; Wisconsin Department of Tourism, 2019).

The median household income for Ashland County in 2016 was \$40,297, while Bayfield County's was \$48,132, both well below the median for the state of Wisconsin (\$54,640) and the United States (\$57,617) (US Census, 2019). The perception of the region's economic situation by its residents is one of hardship and decline. As one public official characterized the area, "there's tons of poverty here, we have the Indian Reservations, we have a bunch of people that have no jobs, everybody's on food share, you know, we have huge numbers of people on welfare and state Medicaid programs". This perception of vulnerability is vital to understanding how this case study unfolded, as county residents' actions and attitudes were shaped more strongly by their impressions of economic need than by actual economic circumstances.

4.2. Land purchase and initial resistance

Reicks View Farms is an industrial hog integrator headquartered in Lawler, Iowa. Reicks is a significant agricultural corporation, marketing over 600,000 hogs annually (Iowa Pork Producers, 2016). Its co-founder, Dale Reicks, sat on President Trump's Agricultural Advisory Committee. Most of Reicks' facilities are in Iowa, the top hog producing state in the nation. However, in 2013 Iowa suffered from an outbreak of Porcine Epidemic Diarrhea (PED), a disease that can be 50 to 80 percent fatal in suckling pigs (USDA, 2013). To avoid piglets being exposed to PED, Reicks sought to build a new farrowing operation in an area geographically removed from Iowa. In December 2014, Reicks purchased over 550 acres in Bayfield County for this purpose. According to

their initial application for a Wisconsin Pollutant Discharge Elimination System permit, the site would house over 26,000 hogs, producing more than 8.5 million gallons of manure per year (DNR, 2015). At the time of the application, there were no CAFOs located in this part of northern Wisconsin.

Quickly after the proposal was announced, a number of community members organized against the proposed operation. Residents concerned about air and water pollution, the preservation of the emerging sustainable agricultural economy, and the dangers posed to Lake Superior mobilized into an activist organization, Farms Not Factories (FNF). FNF served as the focal point for the resistance movement, organizing community actions and meetings, disseminating information and updates regarding the dangers of CAFOs, and encouraging political participation to block Reicks' proposal. However, as FNF hosted events aimed at mobilizing locals against the operation, Reicks also made efforts at quelling resident concerns. For example, Reicks invited community members to their facilities in Iowa for tours intended to reassure the public of their commitment to sustainable farming and local integration.

The back and forth between FNF and Reicks contributed to the issue's prominence in local politics and its divisiveness among the broader community, manifesting in crowded and controversial county board meetings. At the meetings, the majority of attendees voiced their concerns about the proposal and a smaller number of attendees appealed to the agricultural history of the area and Reicks' role in modernizing agriculture. Not only were county board meetings well-attended and heated, but the local division and discussion extended into social media. Several Facebook groups were created to discuss the proposed hog operation, where online "flame wars" about the implications of the hog farm reinforced and intensified in-person discussion. The resistors' efforts came to fruition in early 2015, when the Bayfield County Board passed a year-long moratorium on CAFOs and organized a Large-Scale Livestock Study Committee (Mullen, 2015).

4.3. Political mobilization

Following the resistance's success in temporarily blocking the CAFO, they refocused their efforts on local politics. The momentum gained from the moratorium was propelled into the formation of local ordinances to eschew the proposed CAFO from being sited in Bayfield County. Consistent with the recommendations of the Committee to Study the Effects of Large-Scale Livestock Production on Water Systems, the county board passed two ordinances in January 2016 designed to permanently prevent the CAFO from being built. The first, the South Fish Creek Watershed Animal Waste Storage and Management Ordinance, placed stringent restrictions on animal waste management for farms with more than 1000 animal units within South Fish Creek watershed. Among other limitations, it required that the waste storage systems for CAFOs must be capable of holding 18 months' worth of manure, compared to the state requirement of 6 months (Bayfield County, 2016b). The second, the Large Scale Concentrated Animal Feeding Operations Ordinance, required CAFOs to obtain a permit by Bayfield County and intensified the process through which the permit is obtained (Bayfield County, 2016a). Through these two ordinances, the county board effectively preempted Reicks from being able to build a CAFO in Bayfield County.

A number of Bayfield County residents who opposed to the CAFO decided to run for local government offices. The local elections of April 2016 revolved almost singularly around the proposed CAFO. Reflecting the fact that the majority of the community opposed the CAFO, those candidates who spoke against it were elected. As one of the officials elected during the April 2016 put it, "I knew a lot of people and they said, 'you've got to run because we need someone who will speak against the pig farm,' so that's why I got elected ... And I, I tried to make it clear during my election, I, I'm actually very interested in a lot of other things besides the CAFO, but that was the thing that everybody was talking

about at the time." Since the April 2016 elections, Reicks has essentially stopped their efforts in Bayfield County. At the time of writing, Reicks was said to be putting their land in Bayfield County up for sale, and the DNR had closed their file on the original permit application due to inactivity, signaling the success of community activists in repelling the unwanted land use (DNR, 2018).

5. The construction of resistance: discourses of contention

5.1. Socio-historical context: the Gogebic Taconite mine conflict

Sociology in general and environmental sociology in particular stress the idea that context matters (see Dietz and Jorgenson, 2013). Within environmental justice research, it is understood that resistance movements do not occur in a vacuum, but in a specific set of socio-historical circumstances that shape the formation of communities of resistance, the meanings individuals construct regarding the issue, and the ultimate resolution of the struggle (Pellow, 2000; Beamish, 2001). Northern Wisconsin has a strong history of environmental conflicts and resistance efforts (Gedicks, 1993). In this section, we describe the most recent environmental fight that shaped the conflict over the proposed CAFO and analyze the nature of its influence.

The recent conflict that surrounded the proposed Gogebic Taconite iron mine, commonly referred to as the GTac mine, was a strong influence on the struggle over the CAFO. Sixteen of our twenty-two interviewees mentioned the struggle over the GTac mine as being an important precursor to the fight surrounding the proposed CAFO. Plans for the \$1.5 billion open-pit iron mine on the border of Ashland and Iron Counties (see Figure One) were announced in 2010. While the Floridabased company presented the project as one that would bring jobs and revenue to the region, the proposal was met with immediate organized resistance from local and state environmentalists, as well as both the Red Cliff and Bad River Ojibwe tribes, who were concerned over potential impacts of the mine on the Bad River watershed. In 2015, the project was abandoned due to a range of factors, including negative publicity associated with the company's dramatic reaction to resistance efforts (Bergquist, 2015). While the proposed iron mine would have been on the opposite side of Ashland County as the proposed CAFO, it was close enough for the residents of Bayfield and Ashland Counties to consider it a local issue. Many residents participated in the resistance movement and their perceived success in fighting the mine provided an important backdrop for the struggle over the Bayfield CAFO.

The fight over the GTac mine shaped the fight over the CAFO in three important ways. First, the fight over the GTac mine provided a strong activist community with a cohesive sense of identity and experience with organized resistance. While the anti-CAFO resistance had its own membership, organization, leadership, and identity, there were quite a few individuals who were active in both conflicts. Additionally, within the existing pool of potential activists that the GTac fight had created, there was an extant network and infrastructure that could be reactivated to connect individuals with one another, share information and advice, and provide a sense of cohesion and common identity to the resistance. As one respondent put it: "So, because those relationships were already put in place, there was so much ... it was sort of like this activist infrastructure that was already there. People had friended each other on Facebook and people were on the same email list and everybody knew each other."

The second manner in which the conflict over the GTac mine influenced the anti-CAFO movement was that the victory over the GTac mine provided the CAFO resistance with a vital sense of momentum and confidence. When Gogebic Taconite withdrew their proposal, the activists saw it as a victory that they had earned through hard work and perseverance. "We kept those sons of bitches out, and I am glad!" noted one of our more passionate interviewees. The optimism and sense of empowerment was at a peak level when Reicks announced their intentions to site a CAFO in Bayfield County and that energy helped

galvanize the resistance.

Thirdly, the fight over the GTac mine shaped the fight over the CAFO rhetorically, in that it gave the community of resistance an existing discourse in which to frame their resistance to the proposed CAFO. The struggle over the GTac mine was eventually defined within most of the local community as a "David vs. Goliath" battle between "we locals" who lived in the area and cared for it as their own, and a powerful, outside corporation that did not share the area's interests. The resistance to the CAFO was able to tap into that existing frame and rally support among the broader community, successfully leveraging sentiments from the GTac mine struggle into a new environmental resistance.

5.2. Mobilizing concern

Moving past the socio-historical context that shaped the resistance against the CAFO, we now begin to analyze the discursive strategies that were used in the struggle over the proposed operation. During the period in which the proposed operation was being debated at county board meetings, on social media, and in the community at large, those who supported and opposed the CAFO presented very different definitions of Reicks, the local community, the operation itself, and the impacts it would have on the local community. This debate process constituted a protracted negotiation of the meaning of the proposed operation to the local community and that meaning shaped how local residents perceived and acted toward the operation. Rather than a debate over economic and environmental implications, the struggle over the CAFO was ultimately a process of constructing a shared understanding of who the greater Bayfield community was and how this operation aligned with that identity. The resistance ultimately shaped the discourse surrounding the CAFO to create the understanding that it was a dangerous operation that would primarily benefit outsiders and do little for local residents. A key strategy used by the resistance involved informing and educating residents about the wide range of harms the operation could cause to the local economy, environment, and citizenry.

The economic impacts were central to the debate over the CAFO, as the allure of potential jobs and increased tax base were one of the strongest arguments in favor of the operation, particularly given the relative lack of economic opportunities in the region. As one public official stated, "the idea that twelve low-paying jobs at a pig farm can lure people into a financial and ecological disaster says a lot about the poverty of the area and an epidemic of hopelessness." Other local farmers expressed hopes that the operation would provide indirect economic benefits by buying feed and other inputs from local operations. The resistance never challenged the perception that the area needed economic development, openly admitting the need for more employment opportunities. As one respondent said: "I mean, there's not many jobs up here to begin with, so, any job, I mean, is better than no job for some people." Instead, those who were opposed to the operation were able to create significant doubt as to the degree to which the CAFO would provide economic benefits to the local community as well as generate concern over how the operation might impact the local tourism industry. A number of resistance members presented a wide range of popular press articles that described how large-scale animal operations are rarely an economic boon to rural communities. The arguments and evidence that the economic benefits of the CAFO would be minimal were ones that resonated within the local community. "Maybe there's a few ancillary jobs it would generate, but certainly not very many. And I think that's one reason why, you know, it hasn't gotten much public support up here."

The other way in which the resistance was able to frame the proposed operation as lacking in economic merit was to evoke the concern that the CAFO would negatively impact local tourism, widely acknowledged to be the area's leading industry. By demonstrating the current economic benefits of the tourism industry and presenting all of those businesses and jobs as potentially threatened by the proposed operation, the resistance was able to frame the Badgerwood operation as an economic

liability, rather than a potential economic benefit. Fifteen of our interviewees mentioned the threat to the tourism trade as an important factor in turning public opinion against the CAFO. "They learned that tourism, hunting, fishing, recreation, that things that really depended on a robust, healthy environment, that these things were very critical for their economy and all of the things that go with that, the restaurants, the hotels, you know all of those other factors." Presenting the CAFO as a threat to the local tourism industry defused the "economic versus environment" argument, as the resistance implicitly coupled economic development with environmental sustainability.

The resistance also created a discourse around the potential environmental impacts, framing the operation as an industrial, ecologically dangerous facility as opposed to a traditional family farm. Given rural communities historical relation to agrarianism and the view of agricultural operations as clean, healthy, environmentally benign farms, the resistance's campaign to inform residents of the ecological risks and harms associated with industrial-style animal agriculture was central to framing the proposed operation as dangerous and undesirable. Those who supported the CAFO continually downplayed its negative impacts, arguing that it would just be another farm, like others in the area. Meanwhile, in online forums, Op-Eds in the local papers, and public testimonials at county board meetings, those who were opposed to the CAFO continuously stressed the environmental risk associated with such operations and presented examples of accidents, spills, and contaminations that had occurred at similar operations throughout the country. The primary resistance organization chose the name Farms Not Factories to further reinforce the framing of the CAFO as industry, not agriculture.

In particular, those opposed to the CAFO focused a great deal of attention on potential impacts to local water quality. In their "Words for Water" project, FNF created an online photographic journal of local residents, often posing in front of Lake Superior or its tributaries, holding chalkboard signs that described what water meant to them. This project was just one piece of a much broader campaign to raise awareness and concern over how the proposed hog operation might impact local water quality. The resistance continually stressed how the proposed CAFO would invariably pollute the region's waterways with animal wastes and corresponding elevated levels of nutrients. As one activist stated, "I've been in too many rivers and creeks that are devastated by crappy environmental standards, you know, exploitative uses of the landscape, to think that what a CAFO would do to the creeks and rivers that all that runoff would flow into would be anything other than completely destructive." Framing the CAFO as an industrial polluter and a threat to water quality entrenched the sentiment that large-scale agricultural operations were antithetical to the greater community's understanding of agriculture.

In addition to environmental threats, the resistance also stressed the public health and nuisance risks associated with the proposed operation. The resistance emphasized the danger posed to Chequamegon Bay, the inlet of Lake Superior directly downstream from the proposed operation, which provides drinking water to the city of Ashland and a number of smaller towns. The threat to people's drinking water was a particularly salient risk to evoke, as it constituted a direct impact on residents' health, rather than the more abstract apprehensions about ecosystem health. As one public official stated, "the concern is that we will be another Kewaunee County, will be another Flint, Michigan that just has to be drinking bottled water."

The discussion about dangers posed to human health went beyond contamination to drinking water. While supporters of the operation presented it as just another farm, posing no more risk than those already present in the area, those in opposition frequently stressed how industrial animal operations pose a distinct health hazard to nearby residents. The resistance continually referenced a number of articles and studies that linked the aerial spraying of manure to asthma, bronchitis, and other chronic obstructive pulmonary diseases. As one activist stated, "I think when you have as much manure being put out on the landscape as CAFOs do, you are introducing a massive scale of human health threats

in addition to environmental threats." The resistance would also play on the sympathies or concerns of the local community by focusing on the risks posed to local children. As a public official observed, "it can make our children with airborne diseases very, very sick with allergies and asthma and all the rest of it." The resistance framed the proposed operation as a threat to already vulnerable populations, like children, thereby entrenching the link between the operation, pollution, and human health.

5.3. Differing definitions of agriculture

Community debate as to what does or does not constitute agriculture distilled the environmental struggle into a conversation about community identity. Given that the Bayfield region is a rural area with a rich agricultural history with which many local residents strongly identify, any arguments or stances that are understood as anti-agriculture were relatively unpopular: "Clearly, there's a lot of support for agriculture in the area. We all eat. We like to eat local. We like to support the local businesses. So we're supportive of agriculture." Therefore, both the opponents and supporters of the Badgerwood CAFO used proagricultural rhetoric. However, the definition of agriculture presented by each group differed. The negotiations between the groups in terms of defining agriculture largely reflected the different group interests and identities.

Many of the residents who supported the CAFO and opposed the ordinances designed to regulate the operation framed their stance as a broad defense of agriculture and the rights of farmers to do as they see fit on their own land. They argued that the CAFO represented a modernization of agricultural practices, which was necessary to be competitive in a tightening market. These individuals tended to interpret any arguments or regulations targeting the CAFO as an affront to agricultural activities and producers altogether. "I think a lot of the folks that were defending the hog operation were more so defending agriculture and defending all scale and sizes of agriculture." As one local farmer clearly stated at a public forum debating the one-year moratorium on CAFOs, "I am even more concerned about the impact a moratorium would have on other farms, even if they want to build a new facility." By taking the stance that any regulations targeting the CAFO were against agriculture as a whole, CAFO supporters were implicitly including the proposed CAFO within the sphere of agricultural operations. The defenders of the operation were drawing a broad circle around all food-growing activities and defining a 26,000-head hog operation as simply a larger, more modern version of a small family farm, necessary to survive in today's economy. By doing so, the supporters of the CAFO characterized themselves as the defenders of agriculture and the resistance as antiagriculture.

The counterargument presented by the opponents of the CAFO was that the operation was more accurately classified as industrial than as agricultural. Many of the arguments that framed this operation as such focused on its size, drawing a distinction between farms (small enough for a family to run) and industrial operations (large enough to require substantial hired labor). For a number of residents, a facility that houses 26,000 hogs violates their mental construct of a family farm. "I think just the sheer size and scale of it, that sort of crossed the line for so many people." Those who were opposed to the CAFO were able to play upon this disparity, constantly contrasting imagery of huge buildings, intense mechanization, and animals that never saw the outside world against the bucolic nostalgia of small, family-run farms. As one public official noted, "there's support in the community for the fruit and berry industry that is in the northern part of the county, and for [] what we would call family farms, where it's truly a mom and pop operation with maybe some children and a couple of hired hands working." By making appeals to an idyllic, traditional version of agriculture that the proposed CAFO violated, the resistance positioned themselves as defending the rural way of life.

The resistance also aligned themselves with the local, organic food

producers in the area, embedding definitions of agriculture into an idiosyncratic local context. The Bayfield region has a highly visible community of small-scale, sustainable food producers. As one public official noted, "we have made great strides in creating a local food economy, a regional food economy that's got a lot of organic farms. You know, we have a pretty hefty co-op that sits on our main street that went through a big expansion a few years ago, that's a great supporter of our local farmers." By including pro-local-food arguments in their anti-CAFO rhetoric, those opposed to the CAFO positioned themselves as defenders of traditional farming.

However, detractors pushed against the inclusion of small-scale organic farms into the local agricultural scene. Supporters of the CAFO were quick to dismiss sustainable farming as niche, elitist, and in some cases, outright devious. As one local resident opined, "some of them organic farms, I believe 'em about as far as you can throw them. That ain't very far." Another challenged, "what would you rather buy, \$8.99-a pound organic, grass fed pork, or \$2.99-a pound finished pork? I personally think grass fed pork taste like crap!" This hostility toward the region's sustainable farms represents the strength and personal nature of some residents' feelings regarding the correct definition of agriculture. This division in the local community's definition of what constitutes agriculture is key to understanding how two groups can both claim to be supporting agriculture when taking completely opposite stances on the desirability of the proposed hog CAFO.

The conflict over the local community's definition of agriculture was an important dimension of the larger debate over whether or not the proposed CAFO aligned with the community's identity. Those who supported the CAFO presented it as merely a modern form of agriculture, deserving the same respect as a small family farm and fitting in well with the area's agricultural history. However, those who were opposed to the CAFO presented it as an industrial operation, not an agricultural one. Therefore, they were able to argue that the CAFO was incongruent with the region's agricultural identity. While the greater community was not unified in this understanding, the voices presenting the industrial definition were eventually able to dominate the discourse and the majority of local residents came to view the CAFO, not as a farming operation, but as a "hog-factory." This understanding was key in both generating opposition to the CAFO as well as defusing arguments that supported the CAFO as part of supporting agriculture in general.

5.4. Insider/outsider dynamics

In the Bayfield area, like many rural regions, residents attached credibility and trustworthiness to those deemed "local." As an extension of the "us-versus-them" mentality that can accompany rural consciousness, voices and arguments that are defined as coming from the area are viewed as more valid than voices and arguments that are defined as coming from "outsiders." Parallel to both sides of the conflict over the CAFO assuming a "pro-agriculture" stance with competing connotations, both groups also claimed "local" status. The CAFO supporters and opposition defined "local" in different ways, using insider-outsider dynamics to achieve their goals. Therefore, the debate over the proposed operation carried an underlying dispute over who could claim "local" status and assume the legitimacy associated with being "from around here." The contention over whose voices should be validated as representing the greater Bayfield community was instrumental in shaping and resolving the broader conflict over the desirability of the CAFO.

On one hand, supporters of the CAFO argued that the resistance, FNF in particular, were outsiders and transplants, and therefore not qualified to represent the views of the local community. Instead, only individuals with a family history in the region "belonged" and could speak on the community's behalf. As one resident put it, "You can live here 30 years and still be classified as an out-of-towner. If you are not third-generation Finnish or third-generation Native-American or third-generation German, well, to hell with you." In the view of CAFO proponents, the opposition consisted of outsiders from Chicago and Madison who were

coming in and telling farmers what they could or could not do. As one local supporter of the CAFO stated, "the ones that are hollering about it are not even from here. That's the part that bothers us." Interestingly, while supporters of the CAFO never claimed insider status for Reicks, they did tend to frame the CEO as a fellow rural farmer, sharing more in common with the local farming community than those in the resistance. There was a degree of cultural resonance that led the CAFO proponents to cast Reicks in a sympathetic light and classify him as "one of their own" in terms of identity, if not origin. As one activist noted, "I would say that was definitely a large piece of it ... they resonated with that multigenerational, more agriculture vibe, and so there were a number of outspoken people, pro-CAFO, that weren't from here, but they were so deeply entrenched with that culture, it didn't really matter."

On the other hand, the members of the resistance contended that they were locals themselves, with every right to represent the local community. While there did seem to be a disproportionate number of individuals who were not born in the region participating in the resistance, many of them had lived in the region for decades and considered themselves every bit as much a "local" as those with multi-generational roots in the area. As one activist illustrated, "I mean, the joke here is that you're not a local even if you're born here, you know." While casting themselves as entrenched community members, the resistance defined Reicks as a corporate outsider whose primary interest was to house a potentially hazardous facility in the area, with no concern, investment, or stake in the local community. Those opposed to the CAFO emphasized the outsider nature of Reicks, who was planning on building "a facility that's owned by somebody who doesn't live here, and virtually all the workers would be employees rather than family members." The resistance framed Reicks as a corporate outsider who not only would be dispassionate toward the Bayfield community but would also not share its identity and values while undermining the conditions that made life and work in the region so meaningful and enjoyable.

The significance and weight of the outsider argument was best demonstrated by the resistance's choice not to oppose another local farmer who was, at the time, expanding his operation to CAFO-size. While that expansion had the potential to generate the same battery of negative impacts on the region that motivated the opposition to the Badgerwood operation, the resistance was very conscious of the loyalty local farmers possessed toward each other. Therefore, standing in opposition to a local farmer modifying a farm that had been in his or her family for multiple generations would alienate a large portion of the local populace and potentially affirm the insider-outsider arguments of CAFO supporters—that the resistance consisted of anti-agriculture outsiders. "We knew early on that if we lumped [farmer's name] in with Reicks, we're going to lose, because we're going to muddy the waters, and our message was Reicks is from Iowa. He's bringing a dirty business up here." Instead, the resistance avoided discussing the local farm and maintained their focus on portraying Reicks as a corporate outsider whose financial interests superseded community stakes in land use.

While the two sides to the conflict presented very different definitions of what constitutes "local," the resistance successfully framed the struggle over the CAFO as one in which the local community was fighting off an unwanted outsider. Their many arguments and testimonials about having lived, worked, and raised families in the region established and secured their "local privilege." Additionally, their rhetoric painted Reicks as a corporate interloper: "It's an outside company. It's an Iowa company coming into our area." The success of the resistance's definition of the situation directly manifested itself in the aforementioned 2016 elections, in which a number of outspoken opponents of the CAFO were elected to the Bayfield County Board. Aside from the direct political authority this granted the resistance, the election also represented a public referendum on whose voices spoke for the local community. The greater community firmly established that the resistance was "from around here" and that Reicks was not.

6. Conclusion

While environmental justice research has examined rural environmental inequality, the focus has largely been along racial and class lines without examining the unique axes of inequality that surround the social, cultural, and political experiences of rural people (Pellow, 2016). This paper integrates the literature on environmental justice with stakeholder analysis and rural studies to examine environmental inequalities in rural spaces. Specifically, we analyzed discursive strategies surrounding a proposed CAFO in Bayfield County, Wisconsin, to further understand how rural communities embroiled in environmental struggle employ specific narratives to fend off unwanted land uses. Essential to the discursive field in Bayfield County were debates concerning which side was "pro-agriculture" and which side could be considered "local." The supporters of the CAFO presented Reicks as the modernization of agricultural practice, while the resistors framed Reicks as an industrial operation, in stark contrast with the environmental stewardship associated with small-scale sustainable farming. Similarly, both sides claimed "local" status. While the supporters pointed to the resistors as largely transplants who were not "from around here," the resistors presented themselves as deeply embedded in the local community and framed Reicks as a corporate outsider who did not share the local community's interests. Both discourses worked in tandem to promote movement success, as seen through the conscious choice by the activist community to not resist a local farmer upscaling their operation to CAFO-size. Ultimately, the resistance was able to establish their definitions of both "agriculture" and "local" in the greater Bayfield community, ensuring that residents would not accept Reicks' proposal.

This research makes a number of contributions to the environmental justice literature. By drawing complementary insights from three distinct bodies of work, we construct a theoretical framework for rural environmental inequality that treats rural culture and community action as essential to understanding how such processes unfold. Following the work of Beamish (2001, 2015), Berry (2003), Walton (2007), and others, we extend the use of the community as a stakeholder concept for conflicts over environmental injustice. The incorporation of stakeholder theory into our analysis explicitly emphasizes how the activist community negotiates identity and social issues in relation to non-activist residents, corporations, and local government. In so doing, this research illuminates the agency that local communities wield in environmental conflicts and highlights the importance of how those communities negotiate their definitions of the proposed environmental hazard as well as their own identity. This study also contributes to scholarship on the rural dimensions of environmental justice (Ashwood and MacTavish, 2016; Pellow, 2016). We examine how the social, cultural, and political background of rural environmental injustice issues are distinct from urban cases, largely due to a limited economic opportunity structure (Tickmeyer and Duncan, 1990) and the distinctiveness of rural culture. Rural regions possess a unique set of cultural values and identities that shape discursive strategies in environmental conflicts. In many ways, these conflicts revolve around which side can successfully position themselves as best representing and protecting those values and identities. The unique circumstances of these conflicts necessitates a direct examination of the intersections between rurality and environmental justice; an examination that must extend into the realms of discourse and how individuals collectively negotiate meanings in rural contexts.

The findings and discussion in this study are intended to foster further theorization and research on rural instances of environmental injustice and the role of discursive strategies in deciding said conflicts. Rural communities can leverage their agency into effective political mobilization against unwanted land uses, but only when they are effectively unified in their opposition to the land use. While economic considerations matter to rural people, social and cultural attitudes also carry considerable weight in decision-making. Because of this, individuals in rural spaces construct environmental justice frames that,

contrary to dominant framing (Taylor, 2000), are not centered on inequality. Instead, conflicts over rural environmental spaces revolve around (among other factors) collective regional identities, community boundary distinctions, and the maintenance of "rural consciousness" (Cramer, 2016). Future research that explores rurality as an axis of inequality needs to focus upon the social negotiations and processes of meaning making that underlie conflicts over potentially unwanted land uses and how environmental justice frames are constructed in rural contexts. While prior research emphasizes the political and economic drivers of environmental inequality, we posit that focusing on the systems of meanings rural communities construct within socio-historic contexts grants activist communities' sufficient agentic power while acknowledging the limitations imposed by structural factors. The definitions people hold of community, place, and land use influence their mobilizations; environmental conflicts are not only structural but are also fought on the discursive field. Potentially, it is on this front that communities can most effectively shape eventual outcomes.

CRediT authorship contribution statement

Adam Driscoll: Conceptualization, Formal analysis, Investigation, Writing - original draft. **Nicholas Theis:** Conceptualization, Formal analysis, Investigation, Writing - original draft, Visualization.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.jrurstud.2020.08.018.

The two authors cooperated and shared the majority of the work that went into this process with both contributing to all stages, with the exception of Fig. 1, which was crafted by Nicholas Theis.

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