

Article

Social Solidarity, Collective Identity, Resilient Communities: Two Case Studies from the Rural U.S. and Uruguay

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Abstract: Worldwide, communities face disruptions driven by phenomena such as climate change and globalization. Socio-ecological resilience theorists have called for greater attention to the social dynamics that inform whether and how communities are reorganized and sustained in response to such challenges. Scholars increasingly stress that social heterogeneities provide resources that communities can mobilize to adapt and sustain themselves in response to disruptions. Utilizing the sociological literature that emphasizes that social solidarities and collective identities are centrally important to community responses to socio-ecological disruptions, we argue that solidarities grounded in collective identities can act as important mediators between social heterogeneity and resilience. Drawing on qualitative data from rural communities in the central United States and southwestern Uruguay, we explore how group solidarity enabled individuals to more effectively draw on their diverse knowledges, skills, and resources to sustain their communities. Linked by a collective identity grounded in rurality, in each setting, individuals effectively worked together to adapt to emerging socio-ecological disruptions. These results suggest that we can better understand how social heterogeneities inform resilience by considering how solidarities grounded in collective identities influence whether and how individuals can successfully cooperate to rearrange and sustain their communities. When working with rural communities, specifically, it will be especially important to account for solidarities and collective identities tied to rurality.

Keywords: resilience; social solidarity; collective identity; adaptation; rural

1. Introduction

Policy makers, development agencies, and researchers have increasingly utilized socio-ecological resilience theory to conceptualize how communities respond to social and ecological disruptions (Walker and Cooper 2011; Brown 2014; Cretney 2014). Proponents of the framework emphasize that interconnections between social and ecological things, beings, and processes impact whether and how communities are rearranged in response to socio-ecological disturbances (Adger 2000; Peterson 2000). Although previous definitions of resilience focused on whether an ecosystem could return to an ideal equilibrium, social theorists drew from new ecology (Holling 1973; Gunderson 2000) to define socio-ecological resilience as the ability to rearrange communities in emergent manners (Adger 2000; Herman 2016). Consequently, socio-ecological resilience is generally defined as the ability to sustain a community by reorganizing the links between social and ecological things, beings, and processes that comprise it (Folke 2006; Berkes and Ross 2013).

Researchers have increasingly stressed that social heterogeneities and inequalities are crucially important to resilience (e.g., Turner 2013; Cretney 2014; Olsson et al. 2014; Biermann et al. 2015). We agree with these findings, but we also contend that social solidarity can act as a crucial mediator

between social heterogeneities and resilience. Utilizing social theory to better illuminate the social aspects of socio-ecological resilience (Berkes and Ross 2013; Fabinyi et al. 2014), we synthesized analyses of responses to industrial pollution (e.g., Messer et al. 2015; Bell 2016) with considerations of rurality (e.g., Cramer 2016; Ashwood 2018a, 2018b)—or the meanings and material conditions associated with rural people and places—to analyze how social solidarities linked to collective identities grounded in positive understandings of rural people and communities informed efforts to reorganize and sustain communities in response to socio-ecological challenges.

Using data from texts, interviews, and participant observations, we compared responses to socio-ecological disruptions in two rural communities in the central United States and in southwestern Uruguay. In both cases, individuals and groups utilized collective identities grounded in their shared sense of being rural people who were disrespected and/or dispossessed by urban government officials in order to work across socially salient dimensions of difference to reorganize their communities in emergent manners amidst socio-ecological upheaval. Combined with others' findings that solidarity and collective identity can sometimes undercut collective efforts to challenge the industrial destruction of communities (e.g., Shriver et al. 2000; Bell and York 2010; Messer et al. 2015; Lewin 2017), our findings point to a complex, context contingent relationship between social heterogeneities, solidarities, and adaptations to emerging socio-ecological challenges.

We begin by reviewing the literature on resilience before detailing the literature on social solidarity, collective identity, responses to shifting socio-ecological processes, and rurality. Next, we focus on the communities in the United States and Uruguay, respectively. After emphasizing the need to incorporate greater attention to social solidarity and collective identity into considerations of socio-ecological resilience, we suggest how to do this more effectively. We conclude by briefly considering how collective identities tied to rurality could inform attempts to reorganize and sustain rural communities as they continue to experience socio-ecological disruptions.

2. Literature Review

2.1. *Social Heterogeneity, Social Solidarity, and Responses to Socio-Ecological Disruptions*

Researchers across the social sciences have increasingly advocated attention to the social dynamics of socio-ecological resilience (Davidson 2010; Berkes and Ross 2013; Clarke and Mayer 2017). The need to incorporate greater attention to social heterogeneities and inequalities has gained particular recognition (Brown 2014; Olsson et al. 2014). MacKinnon and Derickson (2012) contend the resilience framework is fundamentally flawed in this respect and should therefore be discarded, but most conclude that it can incorporate adequate attention to heterogeneities and inequalities (e.g., Cote and Nightingale 2012; Turner 2013; Cretney 2014; Fabinyi et al. 2014; Ingalls and Stedman 2016; Leap 2018; May 2018). Diverse knowledges, skillsets, and material resources can be utilized to rearrange communities in response to socio-ecological disruptions (Berkes and Folke 1998; Berkes et al. 2003; Berkes and Ross 2013), but the beneficial possibilities presented by social heterogeneity can be undermined if particular individuals and groups are marginalized from the formulation and implementation of adaptive responses (Davidson 2010; Leap 2018). For example, May (2018) illustrates how adaptive responses to shifting socio-ecological conditions along the Louisiana Gulf Coast were contingent on government officials, shrimp fishers, and shrimp processors working synergistically to effectively pool and leverage their respective knowledges, skills, and material resources. By utilizing officials' capacities to levy taxes and build public infrastructure; fishers' abilities to utilize their technical expertise and fishing equipment to catch shrimp; and processors' business expertise and industrial facilities, shrimp production in Delcambre, Louisiana, has been reorganized in response to increased international shrimp imports, damaging hurricanes, and the effects of the Deepwater Horizon oil spill.

Recognizing the significance of social heterogeneities is crucially important, but this focus has often obscured the significance of social solidarities and collective identities. This is a problem

because both are centrally important to mobilizing collective responses to socio-ecological challenges facing communities, such as globalization, climate change, and industrialized resource production (Adger 2003; Bell 2016). Generally defined as individuals' feelings of cohesion and connection with others (Hunt and Benford 2004), social scientists have repeatedly emphasized the dramatic, far-ranging consequences of social solidarity (e.g., Durkheim 1951; Hunt and Benford 2004). Collective identity is closely related to social solidarity, conceptually and in practice. Ranging in scale from the nation-state (Anderson 1983), to socio-economic classes (Thompson 1966), to particular communities (Bennett 2009), a collective identity exists whenever there is a positive, shared sense of self among a group of people (Polletta and Jasper 2001). Collective identities are particularly important to solidarity because they mark boundaries of who does and does not belong to a group (Taylor and Whittier 1992; Gamson 1997). They also help to align individuals' perceptions of who they are and how they ought to respond to particular situations (Polletta and Jasper 2001). Finally, collective identities often facilitate emotion infused obligations to build and maintain connections with others who share an identity (Polletta and Jasper 2001; Hunt and Benford 2004).

Echoing findings from across the social sciences (e.g., Acheson 1988, 1998; Pretty and Ward 2001; Adger 2003; Pretty 2003), environmental sociologists have increasingly underscored that social solidarities and collective identities impact whether and how individuals mobilize to respond to socio-ecological challenges facing their communities (e.g., Messer et al. 2015; Bell 2016). The trust and respect that often flow from solidarity and collective identities can enable individuals to work together in response to shifting socio-ecological conditions (Pretty and Ward 2001; Adger 2003). Research on the use of common-pool resources such as fisheries, for example, illustrates that communities are more likely to regulate the use of such resources in a sustainable manner in cases where individuals trust and feel a sense of obligation towards each other (Acheson 1988, 1998; Dietz et al. 2003; Bryan 2004). Collective identities can also enable individuals to work together in response to challenges by facilitating shared perceptions of problems, as well as solutions, to those problems (Shriver et al. 2000; Polletta and Jasper 2001; Bryan 2004; Hunt and Benford 2004). For example, activists successfully mobilized an anti-fracking campaign in Denton, Texas, at least partly because they successfully constructed a collective identity among townspeople that included attention to their shared exposures to fracking hazards (Auyero et al. 2017).

Solidarities and collective identities can also inhibit collective responses to socio-ecological disruptions. In cases where there is a lack of social solidarity, individuals can have difficulties coping with disruptions and cooperating to respond to them. The communal malaise experienced after the Buffalo Creek flood of 1972 was due, at least in part, to the dissolution of individuals' sense of belonging and solidarity within the community (Erikson 1976). Similarly, a lack of solidarity among residents being negatively impacted by mountaintop removal mining in Appalachia has inhibited collective responses to the negative socio-ecological consequences of this production technique (Bell 2016). Solidarity can also undermine adaptive responses in cases where potential adaptations undermine a dominant or salient collective identity within a community (Shriver et al. 2000; Messer et al. 2015). In Appalachia, a collective identity promoted by coal companies that links regional pride to coal production has undermined attempts to mobilize opposition to coal production in spite of its socially and ecologically disastrous consequences (Bell and York 2010; Scott 2010; Bell 2016; Lewin 2017). A number of studies also illustrate how collective responses to industrial pollution have been undercut by the links between stigma and collective identities. In some cases, individuals have fought against collective efforts to stop pollution because they did not want their community to be stigmatized through efforts that drew attention to its polluted status (e.g., Capek 1993; McGee 1999). In other cases, individuals have shunned collective efforts to clean up pollution because they believed that the stigma of industrial pollution would dissuade newcomers from infiltrating and disrupting their communities (e.g., Wulfhorst 2000).

Buday (2017) research on anti-fracking activism in southern Illinois also illustrates how collective identities can facilitate collective mobilization while simultaneously undercutting activists' abilities to

leverage their diverse skills and knowledges. Many activists were bound by a collective identity that drew on their shared understanding of being grassroots advocates for their communities. However, this shared understanding of what it meant to be a grassroots activist, which included a commitment to “informal consensus” (Buday 2017, p. 585), also dissuaded many group members from contributing to decision-making processes. Even when people are united by a collective identity that enables them to work together, this identity may simultaneously present challenges to leveraging knowledges and skillsets that can enhance resilience.

In summary, social solidarities and collective identities impact whether and how individuals and groups can effectively leverage the social complexities of their communities to rearrange and sustain them. Solidarities and collective identities can facilitate responses to socio-ecological disruptions, but they may also present barriers to resilience. Consequently, granting greater attention to the context contingent ways that solidarities and collective identities inform adaptations will enable researchers, practitioners, and policy makers to better consider how social heterogeneities impact resilience.

2.2. Rurality: A Paradoxical Sense of Place and Identity

Rural geographers and sociologists have repeatedly highlighted the paradoxical material and symbolic positions rural people and towns occupy in (inter)national political-economies composed of laws, administrative policies, and cultural meanings (Clope and Little 1997; Ching and Creed 1997; Young 1999; Flora and Flora 2013). In popular films, music, and print media, rural people are often assigned a positive “mystique” (Theodori and Willits 2018). They are depicted as hard-working individuals who, having inhabited picturesque pastoral settings, have managed to maintain their moral purity in spite of urbanization. The countryside, in such imaginings, promises to be where the moral heart of a nation can be found and maintained (Williams 1973; Bell 1994; Wuthnow 2011).

Paradoxically, rural settings are also regularly portrayed as deficient in comparison to cities (Ching and Creed 1997; Bell 2007). Nostalgia tinged depictions of rural communities regularly turn to “horrific” (Bell 1997) representations that hinge on rural peoples’ supposed isolation and ignorance (Ching and Creed 1997; Eriksson 2010; Scott 2010; Hubbs 2014). These types of stereotypes are often inaccurate, but they can facilitate the marginalization and exploitation of rural people and communities by outside actors (Williams 1973; Ching and Creed 1997; Jarosz and Lawson 2002). When rural people are conceptualized as uniquely ignorant, and rural places are understood as ecological, cultural, and economic wastelands, it is easier to exclude rural people from resources (Jacoby 2001) and sacrifice rural communities for the purpose of (inter)national political-economic growth (Kuletz 1998; Scott 2010; Voyles 2015). Rural people, communities, and ways of life have repeatedly been sacrificed under the guise of (inter)national development (Scott 1999; Ashwood 2018b). When this occurs, rural people are often depicted as deserving whatever negative things befall them because they are characterized as relics of the past who are expendable and/or too ignorant to act in their true interests (Scott 2010).

Despite the geographic, economic, and sociopolitical marginalization of rural communities, and partially in reaction to it, those living in rural settings often consider themselves to be rural people with values and ways of life that distinguish them from (sub)urban people (Ching and Creed 1997). Though rural communities are incredibly diverse in their socio-ecological compositions (Clope and Little 1997), ethnographers have repeatedly shown that individuals living in such settings often construct collective identities that frame their rurality as a positive attribute (e.g., Fox 2004; Leap 2017). For example, Bell (1994) illustrates how the residents of an English exurb considered themselves to be country people who were morally superior to those who lived in urban settings. Furthermore, shared senses of being rural are often strengthened when communities’ economies rely on specific commodity production techniques that are closely coupled to natural resources, such as mining or farming (Flora and Flora 2013).

Collective identities tied to rurality can promote solidarity among rural residents and have significant consequences for how they go about their lives—including how they respond to socio-ecological transformations. Cramer (2016) and Hochschild (2016) found that rural Wisconsinites

and Louisianans, respectively, often supported politicians promising less government because they believed government officials at the state and federal levels tended to favor urban people at the expense of rural people who were considered more deserving of their assistance. Whenever policies and development programs do not contemplate the needs or desires that are rooted in rural peoples' symbolic and material realities, collective identities linked to rurality can also help challenge rural peoples' marginalization in (inter)national political-economies (Chambers 1983; Ching and Creed 1997). Rural agriculturalists across the globe, for example, have regularly effected political change by drawing on collective identities that draw attention to the respectability of rural people and/or how rural communities are being exploited by urban actors (e.g., Bauer 1992; Creed 1995; Lapegna 2016; Chaves et al. 2018).

We contend that collective identities linked to rurality can facilitate solidarity and enable rural communities to more effectively respond to socio-ecological disruptions. In both places analyzed, efforts to rearrange and sustain community were being impacted, and in some cases undermined, by policies and programs generated by urban-based government officials. Nevertheless, residents in both contexts worked to rearrange and sustain their communities by drawing on collective identities infused with the sense that they were respectable rural people who knew their communities far better than the urban-based officials and policy makers they often derided. Paradoxically, and as we detail in our conclusion, given the stigmas that are often attached to rural people and communities, utilizing collective identities grounded in rurality could also present particular challenges for sustaining rural communities.

3. Data and Analytic Strategy

Data for this analysis come from independent case studies of rural communities in the central United States and in southwest Uruguay: Sumner, Missouri, and Nueva Helvecia, Colonia. Both places were selected for research studies because their residents were responding to shifting trans-national socio-ecological processes that disrupted their agro-ecological based communities. The residents of Sumner were responding to shifting trans-national goose migrations that undermined their goose-based tourist economy, while Nueva Helvecians were responding to the twin processes of economic restructuring and the intensification of industrial agriculture. Comparing communities in different countries that were responding to dissimilar socio-ecological transformations enables us to illustrate how the links between solidarities, collective identities, and resilience may transcend national and geographical boundaries while still being specific to particular socio-ecological settings. Data were generated in Sumner from 2013 to 2015 and in Nueva Helvecia from 2011 to 2013. Similar methodological approaches were utilized in both studies. Like others studying resilience (e.g., Smit and Wandel 2006; Fabinyi et al. 2014), solidarity (e.g., Bell 2016), and collective identity (e.g., Wulfhorst 2000; Messer et al. 2015), we triangulated (Denzin 1978) insights by utilizing multiple types of qualitative data generated at the community level through active engagement with community members. In both cases, engaged research approaches involved interacting with, listening to, and learning from participants who provided insights on solidarity, collective identity, and resilience that can be considered by practitioners and academics working in other rural settings (Chambers 1983).

Semi-structured, audio-recorded interviews that focused primarily on individuals' perceptions of their communities, challenges facing their communities, and strategies developed to respond to these challenges were conducted in both studies. Twenty-one individuals were interviewed in Sumner, whilst 23 were interviewed in Nueva Helvecia.¹ In both cases, the participants were selected through a combination of snowball and theoretical sampling (Glaser and Strauss 1967). Meaning, participants were selected because other community members suggested they could provide valuable information

¹ Interviews from Nueva Helvecia were conducted in Spanish. Selected quotes were translated to English.

on environmental challenges faced by their communities, processes of adaptation, and social aspects influencing local responses.

Historic and contemporary texts produced by members of public and state institutions were collected and analyzed in both Sumner and Nueva Helvecia. In Sumner, texts primarily included official reports and press releases produced by the United States Fish and Wildlife Service (USFWS), pamphlets and magazines produced by community members, and social media posts made by the USFWS and members of the public. In Nueva Helvecia, texts primarily included historic texts and tourist brochures. In both cases, these texts provided valuable information on the histories of the communities, as well as ongoing processes of adaptation.

No participant observations were conducted in Nueva Helvecia, while over 1800 h of participant observation were carried out in Sumner. The three primary sites of participant observation were the town bar, the meetings of various civic groups, and the national wildlife refuge located adjacent to the community. In all three sites, the researcher made jottings while participating and observing (Emerson et al. 2011). At the end of each day, these jottings were expanded into detailed field notes. This facilitated a more in-depth analysis of the mundane processes involved in resilience in Sumner as compared to Nueva Helvecia. However, scholars have repeatedly relied on interviews to consider how solidarities and collective identities inform responses to socio-ecological processes and disruptions (e.g., Erikson 1976; Shriver et al. 2000). Although we are able to assess resilience in Sumner and Nueva Helvecia in slightly different manners, we can still analyze the links between solidarities, collective identities, and resilience in both communities.

Analysis of the data from both case studies was conducted separately by the authors and then compared. In both cases, data were examined through an inductive, iterative process of coding and memo writing (Charmaz 2003). After initially applying codes to the data in an open manner, data were reanalyzed through selective coding to develop prominent codes into categories such as “rural identity”, “collective identity”, “feelings of solidarity”, “state officials and institutions”, and “adaptive responses”. Memos were also written at this stage to help develop categories and assess whether and how they were related. In both case studies, this indicated that social solidarities tied to collective identities informed responses to shifting socio-ecological conditions. The selection of two rural communities facing trans-national socio-ecological transformations, combined with the similarity of the methods used to gather and analyze the data, enabled a comparative analysis of how collective identity and solidarity influenced community resilience in these two cases.

4. Sumner, Missouri

4.1. A Rural Community Transformed by Canada Goose Migrations

A two-hour drive from any major metropolitan area, Sumner is located in a rural region of northern Missouri. Sumner has 102 inhabitants, all of whom are white (U.S. Census Bureau 2010). Men tend to work in agriculture or construction. Women tend to work in the service industries. Fields of corn and soybeans that are planted and harvested annually dominate the predominantly flat landscape in the area.

Like other rural communities (e.g., Bell 1994; Fox 2004), residents generally considered themselves to be rural people who were worthy of respect at least partly because of their rurality. During interviews and casual conversations, individuals associated rural people with generosity, good work ethics, simplicity, honesty, and frugality. In contrast, cities and their inhabitants were regularly associated with violence, greed, and immorality.

Although Sumner was similar to many other rural communities with respect to its residents' understandings of rurality, the community was also unique because of relationships between the residents and geese. Shortly after Swan Lake National Wildlife Refuge (NWR) was established a mile south of Sumner in 1937, the Eastern Prairie Population (EPP) of Canada geese began using the refuge as their primary wintering location. By the early 1950s, well over 100,000 EPP geese were congregating

at Swan Lake annually, and Sumner had become renowned as one of the best places to hunt Canada geese in the United States (Vaught and Kirsch 1966). As a result, tens of thousands of hunters and sight-seers came to the tiny Missouri community each fall during goose hunting season. Beyond adding well over four million dollars annually to the local economy (Henderson 1965), geese and goose hunting were centrally important to how individuals organized their relationships with each other and thought of themselves. In the pamphlet created to commemorate the community's installation of Maxie, which is still the world's largest inanimate goose, Manke (1976), who managed Swan Lake NWR throughout the 1970s, wrote:

By late October geese are everywhere. On the water, in the fields, in the air no matter which direction one looks. Small wonder Sumner calls itself the "Wild Goose Capital of the World" . . . Already thousands of visitors have come to view the geese, and now the "Sumner Fall Goose Festival" and hunting season are at hand. The population of Sumner swells to twenty times its normal 300 inhabitants . . . It is homecoming. It is a time for renewing acquaintances and making new . . . Geese touch the lives of everyone in the community. They permeate the thoughts, talks, plans, actions, and economics of its people.

In short, the economic, social, and cultural organization of Sumner rested squarely upon relationships between people and geese.

EPP migration patterns then shifted throughout the 1980s. Instead of travelling to Sumner from their Canadian breeding grounds like they had since the 1940s, the geese increasingly wintered north of Missouri in Minnesota, Iowa, and the Dakotas (Sheaffer et al. 2004; Raedeke et al. 2006). This northward shift in EPP migrations was very likely facilitated by a combination of fluctuating climatological conditions and human landscape uses that made these more northern latitudes suitable wintering locations for the geese (Leap). After goose numbers peaked at over 180,000 geese in 1977, annual numbers at Swan Lake NWR fell over the next three decades. By 2013, numbers peaked at less than 2,000 birds. Since the geese were centrally important to Sumner, residents were adapting to their absence in order to sustain their community.

Community members implemented a range of strategies to respond to the shifting presence of geese. Men began hunting ducks (Leap). Women reorganized the town's annual festival to cater to families instead of hunters (Leap 2018). As we focus on throughout this analysis, local residents also rearranged the meanings and uses of Swan Lake NWR. By leveraging solidarities and a collective identity tied to positive understandings of rural people and communities, they effectively worked together to repurpose the refuge so that they could sustain their ties with each other and a place they valued.

4.2. Repurposing the Refuge: Cooperating to Sustain Community

Public uses of the refuge revolved around geese when they utilized Swan Lake in large numbers. Thousands of individuals came to the refuge every fall to observe and hunt them. In 1979 alone, over 11,000 people hunted geese at the refuge (Seek 1980). Such uses of Swan Lake NWR decreased dramatically as goose migrations shifted. By 2013, just eighteen individuals hunted geese on the refuge and practically no visitors came to observe Canada geese. Beyond the economic impacts of the dissolution of the goose-based tourist economy, substantially reduced public use of the refuge was especially concerning to many local residents because hunting and observing geese at the refuge was a key way they built and sustained ties with each other.

In the mid-2000s, a civic group called The Friends of Swan Lake began working cooperatively with refuge staff to repurpose Swan Lake. Instead of uses that depended on geese and goose hunters, the refuge was redefined as a place where community members could gather for events with environmental education components. First Fridays at the Refuge, for example, invited families in the area to come to the refuge on the evenings of the first Fridays of summer months. Featuring a range of stations operated by refuge staff and volunteers, individuals could learn about reptiles and

pollinators, try archery and canoeing, and see presentations about injured eagles that had been rescued and rehabilitated. The Friends also teamed with other community groups to provide attendees with a free meal that typically included a hotdog, side dishes, and a drink. By 2012, 3,812 individuals attended such events annually. An impressive number considering the population of Sumner is roughly 100 and the population of the county in which Sumner is located is just under 8,000 ([U.S. Census Bureau 2010](#)).

Although Friends members and other local residents noted an array of reasons why they wanted to repurpose the refuge, they repeatedly emphasized they sought to rearrange its meanings and uses so that they could build and maintain solidarities with other residents. For example, after being asked why she started volunteering with the Friends, Sheryl explained during an interview:

I think it was just to make that connection. You did that years ago with your family. It was kind of a family thing that we'd come over and see all the geese. You know, in the fall that was always one of our outings. We'd used to go buy watermelons, and on a Sunday afternoon one of [our stops] was Swan Lake to go see the geese that would come in.

Recalling a more recent memory, she added:

We brought our grandson with us and encouraged our daughter to bring her boys over a few times. It was just a connection that we wanted to reconnect.

Like other community members, Sheryl emphasized she wanted to use Swan Lake for something other than observing geese so that she could continue building solidarities with others through shared uses of the refuge.

Redefining the meanings and uses of the refuge in response to the lack of geese is a clear example of individuals utilizing their diverse knowledges, skills, and resources to rearrange and sustain their community. Friends members drew on their extensive networks throughout Sumner to acquire funding for events, arrange volunteers, and promote event attendance. Complimenting these efforts, the refuge staff maintained the infrastructure necessary for events, ensured events complied with United States Fish and Wildlife Service (USFWS) regulations, and drew on their contacts within various conservation organizations to arrange presentations by conservation experts. By working together to repurpose the refuge to cater to a group of people other than goose hunters, the Friends and refuge staff tapped into the social heterogeneities of Sumner to sustain their community in spite of a lack of geese.

This adaptation strategy was increasingly undermined by new regulations being implemented at Swan Lake from 2013 to 2015. Because the refuge is at the end of a chain of command within the USFWS that stretches from Washington, D.C. to Sumner, refuge staff frequently implemented new regulations generated by officials working at higher levels of the organization. From 2013 to 2015, new regulations consistently undercut strategies the Friends and refuge staff utilized to adapt to the lack of geese. A new requirement to have a USFWS approved standard operating procedure for cooking and serving hotdogs at events restricted the Friends from serving hot meals, and a ban on fundraisers that included raffles also undercut a key strategy they utilized to generate funds to support events. As regulations increasingly restricted how the Friends and refuge staff could utilize their diverse skills and resources to adapt, the number of individuals who attended public events dropped from 3,812 in 2012 to 856 in 2014. A decrease of greater than 75 percent.

Like other contexts where public support for conservation organizations was undermined when policies were implemented that contradicted locally accepted ways of utilizing landscapes (e.g., [Grigsby 2012](#); [Kreye et al. 2017](#)), Friends members became increasingly frustrated with the USFWS. Chris summarized the growing tensions when, during an interview, he said:

I feel that the Fish and Wildlife Service creates roadblocks along the way and it's hard to handle . . . It really frustrates me because we really want to do good things and it feels like every time we turn around we get hit with something. We're not trying to abuse anything. We're not trying to cheat anything. We're just trying to bring people to the refuge.

Nevertheless, in spite of growing anger towards the USFWS, Friends members and refuge staff continued working cooperatively to promote public uses of the refuge. Consequently, this represents resilience. Although visitor numbers declined, resilience is not characterized by returning to a previous, ideal state. Community members kept working creatively to rearrange the meanings and uses of the refuge in an emergent manner so that they could sustain their ties with each other and a place they valued.

Solidarity and collective identity were centrally important to why and how the Friends and refuge staff continued working together to adapt. Trust is centrally important to how members of the public and conservation agencies work together (Hoffman 2009), and the considerable amount of mutual trust and respect that existed between Friends members and refuge staff enhanced their ability to continue working cooperatively. Friends members regularly emphasized that staff were committed to promoting public uses of the refuge even though USFWS higher-ups did not seem concerned with whether community members utilized Swan Lake. Repeatedly, Friends members noted that refuge staff seemed to be “committed to getting people on the refuge” in spite of regulations that were described as “roadblocks” and “handcuffs”. This enhanced Friends members’ willingness to work with refuge staff to try to continue repurposing the refuge in spite of increasing regulations.

At a First Friday event that took place after the new hot dog cooking regulation was imposed, Becky and Mary Anne, both Friends members, explained to another man who lived in the community why they did not abandon their efforts to repurpose the refuge.

“Where’s the hot dogs? I always look forward to having a hot dog while I’m here”, the man said.

“There’s a lot of people disappointed there aren’t any hot dogs. It’s just too bad”, Becky replied, annoyed by the new food service policy that prevented serving hot dogs.

“Why don’t you say more [to the USFWS higher-ups], or just do what you want and serve hot dogs?” the man asked.

“We don’t want the refuge manager to lose his job”, Becky explained.

“Yeah, he’s done a lot for this refuge, and we don’t want to lose him”, Mary Anne agreed, emphasizing his commitment to promoting community events and Friends’ commitment to the manager.

Refuge employees also tried to generate strategies to promote public events in spite of new regulations because they felt a sense of obligation to local residents. As one staff member explained to another, “The reason we’re doing the limited amount we are is because the Friends group is so interested in seeing it happen. They put their time and energy into the refuge and I really appreciate it”. Staff felt an obligation to continue cooperating with community members to promote public uses of the refuge, in other words, because of a sense of solidarity with these individuals.

However, solidarity is not a static property that cannot slip away once achieved. It must be actively (re)built (Polletta and Jasper 2001; Hunt and Benford 2004). Refuge staff and the public maintained solidarity in spite of growing tensions, in part, by constructing a collective identity grounded in rurality. By drawing on the understanding that rural people were worthy of respect and emphasizing their shared sense of being rural people, members of the public and refuge staff built trust and the feeling that they were part of the same group of rural people facing the same challenges.

Similar to individuals’ characterizations of federal bureaucracies in other rural contexts across the United States (e.g., Cramer 2016; Hochschild 2016; Ashwood 2018a), members of the public often emphasized that the officials in the USFWS who created new regulations were urban bureaucrats that neither understood nor cared about rural people or their communities. Higher-ups in the USFWS, especially those who worked in the regional office just outside Minneapolis, were regularly described as people who “spent too much time in their offices” and who did not understand or care about refuges “out here in a small town like Sumner”. Don, another Friends member, explained during an interview,

“You know, they’re trying to tell us in Minneapolis how to run our refuge. And they haven’t ever even seen it!”

Refuge staff sometimes emphasized that they understood and cared about rural communities. By doing so, they built solidarity with community members in spite of the fact that they were repeatedly responsible for implementing the regulations local residents found objectionable. For example, one day a Friends member came into the refuge visitors center and indicated their displeasure that the USFWS would not provide funding to replace deteriorating signs on the refuge. Referencing the USFWS’s Urban Wildlife Refuge Program, which seeks to bolster refuges within twenty-five miles of a city with at least 250,000 people, a staff member explained, “It’s all about urban refuges it really seems like. Like this year they’re going to give out a \$1,000,000 grant to an urban refuge”. By acknowledging the significance of rurality, such statements enabled staff to better navigate the frictions that emerged as they implemented regulations community members found especially objectionable.

Tensions continually ratcheted up from 2013 to 2015 due to new USFWS regulations that undermined adaptations to a lack of geese. Nevertheless, the public and refuge staff continued working cooperatively to promote events at Swan Lake in a more limited respect. Though public uses of the refuge declined, emphasizing a collective identity grounded in rurality enabled the Friends and refuge staff to continue working cooperatively. Refuge staff maintained the refuge infrastructure whilst trying to find new ways to work within the regulations, and the Friends leveraged their social networks throughout the community to promote events and acquire funds, supplies, and volunteers. Solidarity and collective identity were centrally important to mobilizing social heterogeneity to promote resilience.

5. Nueva Helvecia, Colonia

5.1. A Rural Community with a History of Adapting to Agro-Ecological Disruptions

Nueva Helvecia is a very diverse rural community composed of descendants of native Uruguayans and immigrants from Switzerland, Germany, Austria, Spain, Italy, and France, among other countries. The community is also known as ‘*Colonia Suiza*’ (Swiss Colony). It has approximately 10,630 inhabitants ([Instituto Nacional de Estadística INE](#)), and its economy is based primarily on agriculture. Historically, the community has been recognized as diverse, innovative, and technologically progressive—characteristics attributed by local residents and outsiders to the knowledges and skills brought by its immigrant founders. For example, in the second half of the nineteenth century farmers from Nueva Helvecia introduced the first steam threshing machine and mill in Uruguay.

Residents have repeatedly mobilized heterogeneous knowledges, skillsets, and resources to collaborate to respond to socio-ecological challenges. Local organizations and institutions have even garnered a reputation for their ability to effectively mobilize individuals from diverse ethnic backgrounds. For example, after the settlement of the first European immigrants, the community created a Consejo Comunal (Community Council) composed of local elected officials. After droughts decimated wheat production in 1863 and 1864, the Consejo Comunal built a common storage bin to store agricultural reserves in case of future droughts ([Fischer 2012](#)).

Today, most farmers specialize in dairy production, especially cheese, butter, and dulce de leche (caramel), but other agricultural crops such as wheat are still grown. This has kept local farms diverse, despite recent trends toward the intensification of agriculture and expansion of monocrops across southwestern Uruguay. Following the country’s financial crisis in 2001–2002, the Uruguayan government cut taxes on large agricultural investments and foreign direct investments. As a result, the use of genetically modified soybeans (e.g., Roundup Ready Soybeans) and eucalyptus plantations expanded dramatically across the region. This has produced significant socio-ecological consequences for rural communities. Small farmers were displaced, air and water quality deteriorated, soil erosion increased, and biodiversity was reduced, among other consequences ([Thompson 2014](#)).

Although Nueva Helvecia has experienced some of these socio-ecological changes in recent years, it is still described as a “place without problems” because its residents have creatively utilized their diverse skillsets to respond to these broader regional shifts in agricultural production (Thompson 2014, 2015). The community has even garnered attention from outside policy makers and governmental institutions because its residents have developed solutions that have been implemented by federal governmental institutions in other communities (Fischer 2012). We argue that Nueva Helvecians’ abilities to adapt have been contingent, at least in part, on the strong sense of solidarity and collective identity in the community that were both linked to residents’ understandings of rurality.

5.2. Responding to Agricultural Intensification: Cooperating to Sustain Community

Like Sumner, people in Nueva Helvecia regularly emphasized that solidarity informed their responses to emerging socio-ecological challenges. Residents noted that participating in the large number of local civic organizations enabled them to build trust and cohesion among individuals from a variety of ethnic backgrounds. During an interview, Dario, a local farmer, explained, “When the community gets together for a common goal we go ahead regardless of the discrepancies that we may have”.

Committees and commissions composed of local residents, such as the Movimiento de Nuevas Generaciones por la Unidad y el Progreso (New Generations Movement for Unity and Progress (MNGUP)), were particularly significant. MNGUP, along with Fuerzas Vivas (a local NGO) and three farmers’ cooperatives (Sofoval, Colaveco, and Sociedad de Fomento Rural de Colonia Suiza), often promoted shared senses of belonging and collective identity in Nueva Helvecia. Especially with regards to topics related to land ownership and family diversified farms. In an interview, a MNGUP official stated:

We try to tell [young people] to be aware of what we have, because here there are plenty of civic organizations that have a sense of belonging. It is very important not to lose that, and we pass that from generation to generation along with that idea [about farming and institutions]. We have to promote this good work and get people involved. Here you go to any elementary or high school and it is in excellent condition. Here, we have internalized that need of looking after everything we have.

During an interview, another resident drew attention to how festivals arranged by local organizations helped promote solidarities and collective identity in the community:

It is a very rich community culturally, because . . . We have to keep our historical roots and this has led all of us to be involved in local issues . . . For example, August 1st is the feast of Swiss independence and each weekend in August we celebrate parties in different locations, both in the city and in rural areas . . . And that has strengthened the sense of the unity of the community . . . For example, by bringing people together in committees for the organization of festivities.

Consistent with research highlighting the links between understandings of the past and collective identities (Messer et al. 2015), residents in Nueva Helvecia built a collective identity through allusions to the community’s immigrant heritage and a shared sense of place. During an interview, Ana noted:

The strengths of this community are the commissions that take care of the community . . . People get together to work . . . And this is how the community keeps the roots of our ancestors.

Community members repeatedly emphasized that the solidarities and collective identities expressed and built through local organizations have made Nueva Helvecia better prepared to face possible socio-ecological stresses. In an interview, an official with one of the local cooperatives explained:

There is a difference in this community from others in this region of the country. Here, there are many institutions and organizations . . . Because there is everything you can imagine. Here, the cooperatives of farmers were formed by immigrants a century ago with a partnership interest because they realized they could be stronger and more successful together.

According to interviewees, the difficulties that European settlers faced in Nueva Helvecia created a common sense of place and facilitated the development of agricultural techniques based on the socio-ecological resources available in the region. Practices such as preparing and saving fodder for dairy farms remained useful for contemporary farmers. Mario, a local resident, described how community members effectively responded to droughts. He explained:

When the settlers came from Europe they had a drought so big that the streams and lagoons were dry. Then we have always had droughts every 50 or 80 years. In the 2008–2009 drought, the community did not stop producing because of the drought, everything went well.

Although diversifying agricultural production practices may not always enhance resilience (Cochrane and Cafer 2017), residents contended that the diversity of agricultural techniques developed over the previous centuries made their community better prepared to deal with unexpected socio-ecological disruptions. As Mario stated, in this community “diversification has always been very important to mitigate risks”.

Beyond a generic immigrant collective identity, though, collective identity in Nueva Helvecia was mainly linked to Swiss immigrants. According to interviewees, this improved the community’s reputation and facilitated access to external financial and political resources from departmental (Intendencia), national (ministries), and international (e.g., Swiss government and European) governmental institutions. Residents also highlighted that this collective identity had been used to diversify the local economy by promoting heritage tourism and events. As a local historian highlighted during an interview, the selection of Swiss Colony as the predominant identity, “Has given many results from the point of view of marketing the community”.

In addition to drawing attention to a collective identity tethered to understandings of the community’s immigrant heritage, and similar to Sumner, individuals in Nueva Helvecia also built a collective identity tied to rurality. Community members repeatedly stressed that they were self-sufficient, rural agriculturalists that did not need to depend on bureaucrats from Uruguay’s capital, Montevideo. During an interview, Juan said, “The strength that we have in this community is that people work collectively and we don’t depend on governmental institutions”.

This collective identity linked to rurality was centrally important to how local residents responded to socio-ecological challenges. For example, multiple community groups created the Sub-Mesa de Desarrollo del Este (local Round Table for Rural Development) as an alternative to region wide programs created by the Uruguayan government for rural areas in 2007.² Unlike other communities from this region, which mostly relied on outside resources provided by recently implemented rural programs (Thompson 2015), in Nueva Helvecia local residents believed federal authorities could not generate viable and effective development strategies for their rural community. Jorge, one of the organizers, described:

We created our own Round Table for Rural Development because like everything that is created by the State and is sent here, nobody pays you attention, and clear objectives of these programs were missing and it was a mixture of actors with different interests and we felt we were wasting our time. Then we said we wanted to do something and we analyzed what resources we had . . . We decided to see how those things that were not happening could be done here in the community.

² Law N° 18.126 (2007).

Again, emphasizing that solidarity must be built and rebuilt (Polletta and Jasper 2001; Hunt and Benford 2004), community members noted that unlike other local organizations, a key advantage of the local Round Table for Rural Development was that it helped maintain a sense of unity grounded in rurality as residents resisted “inefficient responses coming from the capital”.

Similar to state officials at Swan Lake NWR, local governmental officials in Nueva Helvecia positioned themselves as belonging to the community by distinguishing themselves from government officials stationed in cities. Maria, a local resident, stated during an interview:

Here is this culture of immigrant “gringos” . . . We don’t ask authorities, it is provided . . . The [governmental authorities] always tell us the same thing; that we bring the problems but also the solutions. The culture here is to organize social networks and have commissions under [the local NGO] . . . The social fabric makes that and in the case of problems we are always prepared. If something unexpected happens in a natural way everyone communicates and works as a team.

In 2012, members of the local Round Table for Rural Development collaborated to create the “Plan Estratégico de Desarrollo Rural del Este de Colonia”—a sustainable development plan for the community and its agro-ecosystems. The plan included several strategies to adapt to socio-ecological challenges that had emerged from the intensification of agriculture, as well as climate change. In particular, the plan incorporated a recycling program, the construction of a large irrigation system that the community could use to better mitigate the consequences of droughts, and strategies to expand the use of alternative energies.

6. Discussion: Integrating Solidarity and Collective Identity into Resilience Theory

Social heterogeneities impact resilience (Turner 2013; Cretney 2014; Olsson et al. 2014; Biermann et al. 2015; Leap 2018), but social solidarities and collective identities are equally significant because they inform whether and how individuals work cooperatively across salient dimensions of difference to develop adaptive responses to socio-ecological transformations. In Sumner, members of the public and state institutions built and utilized a collective identity grounded in rurality to respond to shifting goose migration patterns and increasing bureaucratic regulations. Similarly, in Nueva Helvecia, local residents emphasized that a collective identity grounded in immigrant heritages and rurality allowed different local groups and organizations to collaborate to better respond to socio-ecological challenges linked to the increasing intensification of agriculture. In both cases, community members drew on the shared sense of belonging, trust, and respect to work together to better leverage the social heterogeneities in their communities. By constructing and drawing on collective identities, individuals and groups effectively utilized their diverse skillsets and knowledges to rearrange and sustain their communities.

Researchers have also explored communities in which solidarities and collective identities undermined responses to socio-ecological disruptions (e.g., Messer et al. 2015). In some cases, state-corporate actors have even purposefully facilitated the continued exploitation of marginalized populations through the construction of collective identities that are contingent on this exploitation (e.g., Bell and York 2010; Scott 2010; Lewin 2017). Although we draw attention to cases in which solidarity and collective identities facilitated adaptations and resilience, we acknowledge that the opposite can also occur.

Whether solidarities and collective identities facilitate or undercut resilience, they still impact whether communities are rearranged and sustained in response to socio-ecological disruptions. As a result, it will be important to account for the context contingent ways that solidarities and collective identities impact resilience. We argue that the following three strategies are useful for accomplishing this end.

First, the ability to learn, innovate, and create is especially significant to resilience (Davidson 2010, 2013; Westley et al. 2013; Cretney 2014; Clarke and Mayer 2017; Leap 2018; May 2018). Accordingly,

neither solidarity nor collective identities should be conceptualized as static properties. Both are built and undone through creative (inter)actions (Polletta and Jasper 2001; Hunt and Benford 2004). In Sumner, members of the public and state institutions drew attention to a collective identity centered on rurality as a way to ease tensions that arose because of the implementation of new regulations. In Nueva Helvecia, local residents facilitated adaptive responses to emerging socio-ecological challenges by recalling immigrants' experiences with environmental struggles and creating their own civic organizations. Solidarities and collective identities must be conceptualized as having emergent relationships with resilience, because both are constructed and potentially torn apart through creative (inter)actions.

Second, by drawing attention to the significance of social solidarity and collective identity, we do not mean to distract from how social heterogeneities impact resilience. Instead, our findings indicate that it is necessary to consider the tensions between social heterogeneities, social solidarities, and resilience. Although solidarities and collective identities do not always facilitate cooperative efforts to respond to socio-ecological challenges (e.g., Messer et al. 2015), in the communities we studied, solidarities tied to collective identities enabled individuals and groups to work effectively across socially salient dimensions of difference in order to cooperate to sustain their communities. To be able to account for such complexities, it will be essential for practitioners and academics using community engaged approaches to consider the multifaceted relations between social heterogeneities, social solidarities, and collective identities within particular communities.

Third, instead of simply considering whether solidarities and collective identities facilitate resilience, it is important to consider how they impact the ways in which individuals and groups cooperate to rearrange and reproduce their communities. Collective identities impact how individuals go about their lives and arrange their communities, because they are often based on shared ways of perceiving and acting (Shriver et al. 2000; Polletta and Jasper 2001; Bryan 2004). In both Sumner and Nueva Helvecia, individuals and civic groups often resisted governmental institutions that existed outside their communities because they shared collective identities based on common symbolic and material senses of place that included a distrust of urban actors. The solidarities and collective identities that underpinned Sumner and Nueva Helvecia informed how residents rearranged and sustained their communities.

These three points highlight a complicated relationship between solidarities, collective identities, social heterogeneities, and resilience, that is both emergent and particular to given communities. Beyond just informing whether a community can be reorganized so that it is sustained in response to socio-ecological disruptions, solidarities and collective identities also inform how community members work cooperatively to rearrange and sustain their ties with each other and the environments in which they live.

7. Conclusions: The Potentialities and Perils of Rurality for Resilience

We stressed that solidarities and collective identities informed whether and how members of rural communities in the United States and in Uruguay leveraged the complexities of their communities to respond to socio-ecological disruptions. We also suggested how to better incorporate solidarities and collective identities into future considerations of resilience. Both are emergent, context contingent, and may not necessarily promote resilience.

Our findings, combined with the findings of others who emphasize that understandings of rurality complicate rural peoples' lives and communities (e.g., Bell 1994, 2007; Ching and Creed 1997; Cloke and Little 1997; Scott 2010; Cramer 2016), highlight the need to consider how meanings associated with rurality can inform resilience. In Sumner and Nueva Helvecia, collective identities tied to positive conceptions of rural communities enabled efforts to adapt to emerging socio-ecological challenges. By emphasizing their shared rurality, individuals and groups were able to effectively work across salient dimensions of difference to reorganize and sustain their communities.

Collective identities linked to rurality could also present some challenges when trying to sustain communities in response to socio-ecological disruptions. Given that negative stereotypes of rural people have repeatedly been utilized to exploit rural settings (Ching and Creed 1997; Scott 2010), the utilization of collective identities tied to rurality to try to sustain rural communities could further marginalize such settings in (inter)national political-economies. Furthermore, if we recognize that resilience and sustainability can be enhanced by trust and cooperative relationships between members of the public and state institutions (Acheson 1988, 1998; Dietz et al. 2003; Bryan 2004), it is troubling that members of both communities portrayed state institutions as dubious because they were associated with urban people and places. Such misgivings can be warranted given the long history of state institutions perpetuating the exploitation of rural people and communities (see Scott 1999; Ashwood 2018a, 2018b), but this could also preclude cooperative efforts between members of the public and state institutions that could have the potential to benefit rural settings. For example, cooperative, engaged scholarship between members of rural communities and urban-based academics and practitioners could easily be undermined if rural residents are unable to trust such researchers and officials and/or if practitioners are unaware of the significance of being associated with an urban institution. As Chambers (1983, 1994) highlights, researchers and practitioners working in rural communities who are not from these settings must try to understand and learn from local people's skillsets and knowledges because they are often essential to responding to shifting agro-ecological conditions.

Researchers, policy makers, and practitioners need to account for how meanings associated with rurality can inform efforts to reorganize and sustain rural communities. These meanings can be used to work collectively to promote resilience, but they could also undermine collective efforts to adapt to shifting socio-ecological conditions. When rural residents conceptualize state officials working outside their communities as urbanites who neither understand nor respect rural communities, conflicts between rural residents and such officials seem likely. This could encourage rural communities to develop their own spaces for decision making, such as in Nueva Helvecia, but distrust of urban officials does not necessarily preclude cooperative relationships between rural residents and state institutions. In both communities, the residents built trust and maintained solidarities with state officials working with their community to continue cooperation even though they sometimes did not trust the institutions these officials represented. Whether and how rural individuals and groups are able to leverage the complexities of their communities to promote resilience will be informed by the context contingent arrangements of solidarities and collective identities tied to understandings of rural communities.

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