

Local food system resilience in discourse and community practice: Findings from southern Wisconsin

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Abstract

This paper examines the discourse and practice of food system resilience through a community-based case study in southern Wisconsin. In response to COVID-19 disruptions, a farm-to-table restaurant

collaborated with farmers, community members, and university researchers to launch the Brix Project, supported by USDA Local Food Promotion Program funding. Using community-based research methods and grounded in a political ecology framework, this study analyzes how resilience was defined, operationalized, and politicized by project collaborators. Although the project's grant framing emphasized market-based economic resilience, community actors envisioned a relational and transformative form of resilience rooted in abundance, flexibility, and stability. The study highlights how grassroots efforts tactically engaged with dominant resilience discourse to access resources,

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Statement on Any Previous Reporting of Data

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Author's Note

The author has a personal and professional relationship with the owners and employees at Brix Cider, LLC, that may be perceived as possible conflict of interest, including part-time employment during the course of the research project. The author also received a Graduate Research Assistantship through the USDA Local Food Promotion Program Grant to conduct Brix Project program activities. The author has pursued methods for maintaining the transparency and integrity of this research to the fullest extent of her ability.

while simultaneously advancing more integrated and politically conscious food system transformation. This work contributes to scholarship on transformative resilience by demonstrating how relational autonomy and community-rooted definitions of resilience can contest and reconfigure conventional food system structures.

Keywords

community-based research, food system resilience, relational autonomy, political ecology, Wisconsin, transformative change

Introduction

In March 2020, just one year after opening a farm-to-table restaurant and cidery in southern Wisconsin, USA, Matt and Marie Raboin closed their doors to protect staff and community at the onset of the global COVID-19 pandemic. Amid extraordinary uncertainty for the industry, the Raboins transformed their restaurant overnight into a community grocery delivery operation. They developed an online grocery platform to sell the food products that would otherwise have stocked their restaurant kitchen. They paid employees to process, pack, and deliver online orders and continued purchasing from local producers. Then, with no end in sight to the lockdown, the Raboins applied for a U.S. Department of Agriculture Agricultural Marketing Service (USDA AMS) Local Food Promotion Program (LFPP) grant. LFPP grants fund projects that “support the development, coordination, and expansion of local and regional food business enterprises that engage as intermediaries in indirect producer-to-consumer marketing” (USDA, 2025, p. 4), increasing accessibility of local foods as well as market development, and are awarded in amounts of US\$25,000–US\$750,000 depending on project type. The Raboins requested a grant to support their own restaurant business, and to develop growth in a regional food economy and build a more resilient food system.

This framing of the application highlights a growing trend in public discourse, policy, and agri-food scholarship that elevates resilience as a principle goal for food system interventions (Boyact-Gündüz et al., 2021; Jones et al., 2022;

Karniouchina et al., 2022; Kubatko et al., 2023; Worstell, 2020). The pandemic, by exposing fragile supply chains, poor working conditions, and disparate access to healthy food along class lines (Anderson, 2020), has amplified these calls. Generally defined as the capacity to respond to change through adaptation and/or transformation (Wood et al., 2023), resilience influences how we think about, interact with, and fund projects to shape a world that is fundamentally uncertain and dynamic (Zimmerer, 1994). These political and material consequences make it worthwhile to investigate how the concept is perceived and enacted—particularly from the communities and grassroots organizers that resilience scholarship and funding is intended to support (Beckwith, 2022).

In fall 2020, in partnership with a team of collaborators that included small-scale farmers, business owners, and university researchers, the Raboins were awarded a USDA AMS LFPP grant for the Brix Local Food Community Hub Project (the Brix Project), which proposed to strengthen both value chain and social connections within the regional food system. These connections would be intermediated by Brix Cider as a local food community hub; that is, the aggregator, processor, and distributor of local food, and the physical space for community to gather. A more connected regional food economy arguably would better withstand shocks and more easily adapt in the face of disruption. In other words, the food system would be more resilient.

This regional food system in southern Wisconsin is a diverse configuration of multigenerational family-owned dairy farms, diversified cropping systems, corn and soy farms, and both industrial and direct market-oriented operations. Farms follow national agro-economic trends of consolidation and corporate control, with the average dairy herd size increasing steadily alongside overall farm loss (D’Andrea, 2024). Although small-scale farmers have carved out niches in local and direct-to-consumer markets, pathways of food production and consumption are highly complex and traverse a local/national divide. For example, as a farm-to-table restaurant Brix Cider sources more than half of its food directly from local producers (Reynolds, 2023), nevertheless the restaurant is embedded in a

national service industry and economy that was vulnerable to the market and labor disruptions of the pandemic. Climate vulnerabilities are also more likely to impact small-scale producers, affecting the supply chain to Brix Cider.

If resilience is ultimately about how we interact with a world characterized by uncertainty and change, to orient toward resilience we must consider how producers and consumers within complex systems envision and enact their interaction. The Brix Project, with its use of resilience to frame food system interventions, provides a useful case study to explore these responses. Though specific to the food system of southern Wisconsin and its community of eaters, growers, and researchers, this case study contributes to broader ongoing discussions about food system resilience in the face of certain uncertainty and inevitable change.

Literature Review: Defining and Critiquing Food System Resilience

Today resilience animates broad-ranging analyses of social, economic, political, and environmental systems. It is not just a buzzword but a powerful discursive tool that shapes policy, research, and action in human-environment interactions. Nevertheless, as we have seen with sustainability and regenerative agriculture, this widespread usage has blurred the definition of the term. Broadly defined as the capacity to adjust and adapt to disturbance while retaining the core functionality of the system (Holling, 1973), resilience has been described by scholars as a fuzzy concept (Brand & Jax, 2007) and a “loosely organized cluster of concepts” (Carpenter & Brock, 2008, p. 40). Though some find this vagueness useful (Strunz, 2012), others argue that the looseness weakens the term’s capacity for analyzing change (Cretney, 2014; Davidson et al., 2016).

Definitional ambiguity leads to a vague politics of resilience. As an ecological framework applied to social systems, resilience does not intrinsically incorporate social characteristics such as agency (Davidson, 2010), values (Côte & Nightingale, 2012), and power (MacKinnon & Derickson, 2013). Without clear calls for political analysis, resilience risks reinforcing the neoliberal paradigm of individual responsibility, naturalization of crises

and vulnerability, and maintenance of a dominant status quo (Anderson, 2015; Grove, 2013; Joseph, 2013; Pugh, 2014; Walker & Cooper, 2011). For example, while initially theorized as the adaptive shift forward from disturbance and change, in practice resilience is most often articulated as “bouncing back” to a preexisting state (Davidson et al., 2016; Harris & Spiegel, 2019), suggesting—and affirming—maintenance of the current system.

Centering *transformative* resilience, when systems both reorganize and innovate in response to disruption, offers a pathway to a political analysis (Folke et al., 2010; Gotham & Campanella, 2010; Lyon, 2014). Transformative framing shifts resilience from persistence to intentional, fundamental system change. Few empirical studies, however, show transformative resilience in action. Furthermore, recommendations for food system transformation often ignore power asymmetries and fall short of addressing root causes of systemic problems (Slater et al., 2022). Regional food systems that are characterized by seasonal production, relatively few intermediaries (Marusak et al. 2021), and meaningful engagement with producer, food, and land (Sanderson Bellamy et al., 2021; Trauger & Passidomo, 2012), directly challenge the root assumptions of the industrial food system, and therefore provide a starting place for understanding and implementing transformative resilience.

Food System Resilience

Tendall et al. (2015) define the food system as the multi-scalar ecological, social, economic, and political relationships and processes involved at all levels of food production, processing, distribution, and consumption; food system resilience, then, is the “capacity over time of a food system and its units at multiple levels, to provide sufficient, appropriate and accessible food to all, in the face of various and even unforeseen disturbances” (p. 19). Though this definition depicts the *what* of food system resilience, it does not necessarily address the *how* (Jones et al., 2022), nor a politics of change. Small-scale farmers participating in the global food economy experience economic vulnerabilities due to fluctuations in prices, unreliable demand, and market shocks (Valencia et al., 2019), as well as ecological vulnerability from extreme climate events and bio-

diversity threats (Ericksen, 2008). These vulnerabilities create the political landscape within which possibilities for resilience are shaped and enacted.

The field of political ecology (PE) recognizes that socio-ecological change occurs within political, economic, and cultural contexts and differentially impacts vulnerable populations (Blaikie & Brookfield, 1987; Forsyth, 2003; O'Brien et al., 2007; Peet & Watts, 2004). This commitment to contextual political analysis can enrich resilience efforts with greater equity and fairness (Cutter, 2016). Additionally, the place-based analysis PE offers can help ground resilience within lived experiences and grassroots action (Beckwith, 2022; Brown, 2015). As Hedberg (2021) suggests, empirical analyses of specific places and processes, coupled with analyses of vulnerability and justice, will create a more robust understanding of food system resilience. For example, Cretney and Bond (2014) illustrated how grassroots groups employed resilience to access funding for community projects that created transformative alternatives to capitalism, ultimately re-negotiating the power relations embedded in resilience frameworks. More recently, Ladyka et al. (2022) examine the impacts of the pandemic on small, direct-market farms, arguing that farmer experiences of struggle, vulnerability, and resilience were more nuanced than common pandemic narratives would suggest. These studies illuminate how investigating actions involving resilience, in conversation with power and vulnerability, would do much to resist the term's apolitical trap.

Methods

This community-based research (CBR) recognizes the value of in-depth, place-based investigation (Beckwith, 2022; Flyvbjerg, 2006) that connects, rather than generalizes, to other studies. CBR broadly describes research in collaboration with community partners on community-identified problems directed toward goals of societal change (Boyer, 1990). I situate this research under CBR rather than participatory action research, because, although the study was shaped by community processes, the research was supplementary to other community goals.

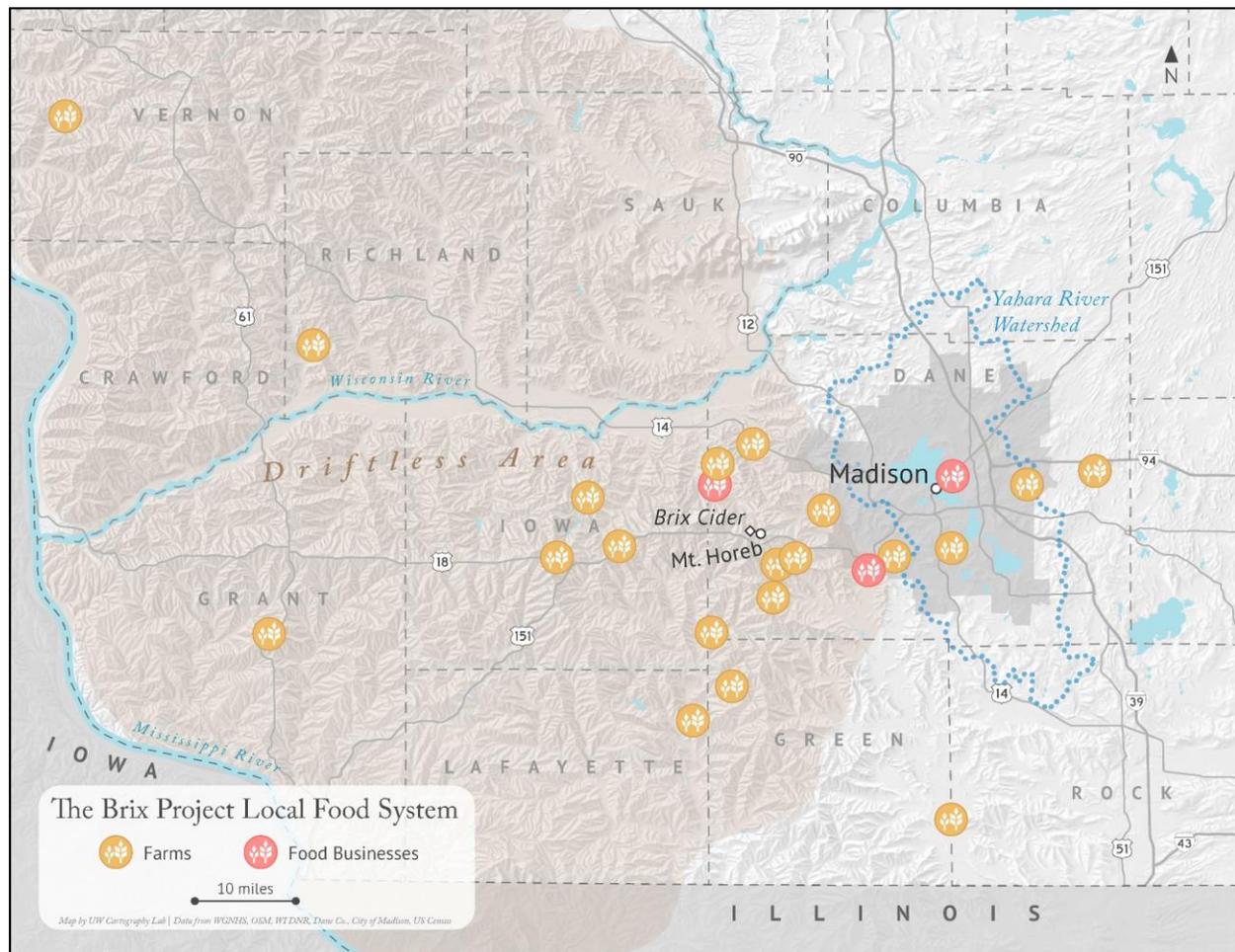
The case study developed from pre-existing relations including my part-time employment at

Brix Cider and the Raboins' relationships with faculty at the University of Wisconsin-Madison. The latter enabled this CBR to take shape with both agility and longevity following the early pandemic disruptions. The research was shaped by the collaborating team, and I conducted the majority of data collection and analysis. I occupied multiple identities throughout this process—researcher, Brix Project coordinator, Brix Cider employee, and community member—which provided different opportunities and challenges. As a Brix Cider employee, I was privy to certain conversations and physical spaces (e.g., the restaurant kitchen). My role as university researcher granted a degree of legitimacy but also generated distance (e.g., when I used a recording device). Ongoing reflection and consistent, transparent communication provided crucial guideposts for navigating partnerships with reciprocity and trust. For example, I discussed these various identities with interviewees and confirmed when informal conversations would be appropriate to include as data.

In this study, I use the definitions of *community* and *local* that coalesced from Brix Project collaborators. *Community* encapsulated project organizers, including the Raboins and food producers who supplied to Brix Cider and developed personal narratives of community engagement. *Community* also captured the network of producers and eaters who attended events, participated in conversations, and connected through shared values about food and sustainability to support Brix Project efforts. The Raboins used *local* to describe the food system of the Brix Project, which incorporated a regional geography of producers and supply chains spanning multiple municipalities and counties that centered in Dane County (Figure 1). Local and community were often entangled together, the two informing and co-creating each other. I note the dangers of conflating local with a “purified category” (DuPuis & Goodman, 2005, p. 386) of food/community or inferring scale as a solution for social, environmental, or economic interventions (Born & Purcell, 2006). In this case study, “local” was not so much the goal as the rough terrain through which visions of resilience were navigated.

Recognizing multiple forms of community

Figure 1. The Food System of the Brix Project in Southern Wisconsin



Map by Will McAllister.

knowledge (Park, 2006), this research drew from the grant documents, grassroots activities, informal conversations, and guiding ideas that emerged from the Brix Project. I organized data around two broad questions: (1) How do people conceptualize/define resilience? and (2) How is resilience enacted in the community? Using inductive methods, I developed a baseline framework for defining resilience from the LFPP grant documents. I then conducted interviews with the Brix Project core team ($N = 3$) to explore explicit definitions of resilience alongside how the team contextualized the project within broader food system challenges and visions for change. I conducted ten formal interviews with Brix Project collaborators (Brix Cider employees and producers) exploring the same

themes. Participants were selected based on participation in project activities and design. Data from these formal interviews were used to refine definitions of resilience and visions for transformation.

After formalizing research themes and questions, subsequent follow-up interviews, community surveys, and community conversation supported iterative processes of refining questions and analysis. Two early canvassing surveys of Mount Horeb community members provided baseline information on perceived strengths and challenges within the food system. Monthly project meetings over four years structured ongoing discussion with the core team about definitions of resilience. Informal conversations with collaborators and community members also developed organically during events.

(As Swain & King (2022) point out, informal conversations—which informants participated in with the understanding of my role-as-researcher, but without the constraints of a recorder and formal questions—often result in the richest and most authentic data.) Extensive field notes captured the topics, language, and tone of these conversations.

To address the second question, on the *enactment* of resilience and transformation, I drew from Brix Project films, events, and community-based conversation. I coded transcripts from films to identify producer narratives and relations. Project events, such as film screenings and panel discussions with the farmers featured in the films, served multiple purposes: to advance awareness of producer practices and experiences, to foster conversations and relationships within the community, to provide opportunities to experience local, seasonal food, and to build a sense of community that engages with the food system. Through the four-year project, the core team experimented with a variety of formats, locations, and audiences. Over two hundred surveys, solicited through event programming, offered data on community impacts of programming. Events also fostered community dialogue and iterative analysis, through which specific themes, questions, and reflections inductively materialized over time. I shared these emergent themes with collaborators, and their feedback supported community-driven analysis of local food system experiences.

Results

Resilience Defined in the LFPP Grant

The Raboins developed their definition of food system resilience for the LFPP grant within a complex personal and political landscape: (1) as small business owners during a period of unforeseen economic uncertainty due to the pandemic; (2) as farm-to-table restaurant owners perceiving widespread ruptures of national and global food supply chains; (3) as concerned community members, employers, and friends of producers in Wisconsin; and (4) with the goal of achieving funding through USDA AMS. With no specific verbiage or recommendations around resilience in the call for proposals, the fact that 10 of the 44 LFPP grants award-

ed in 2020 explicitly referenced resilience in project titles or description (USDA, 2020) reflects the prevailing rhetoric of the era.

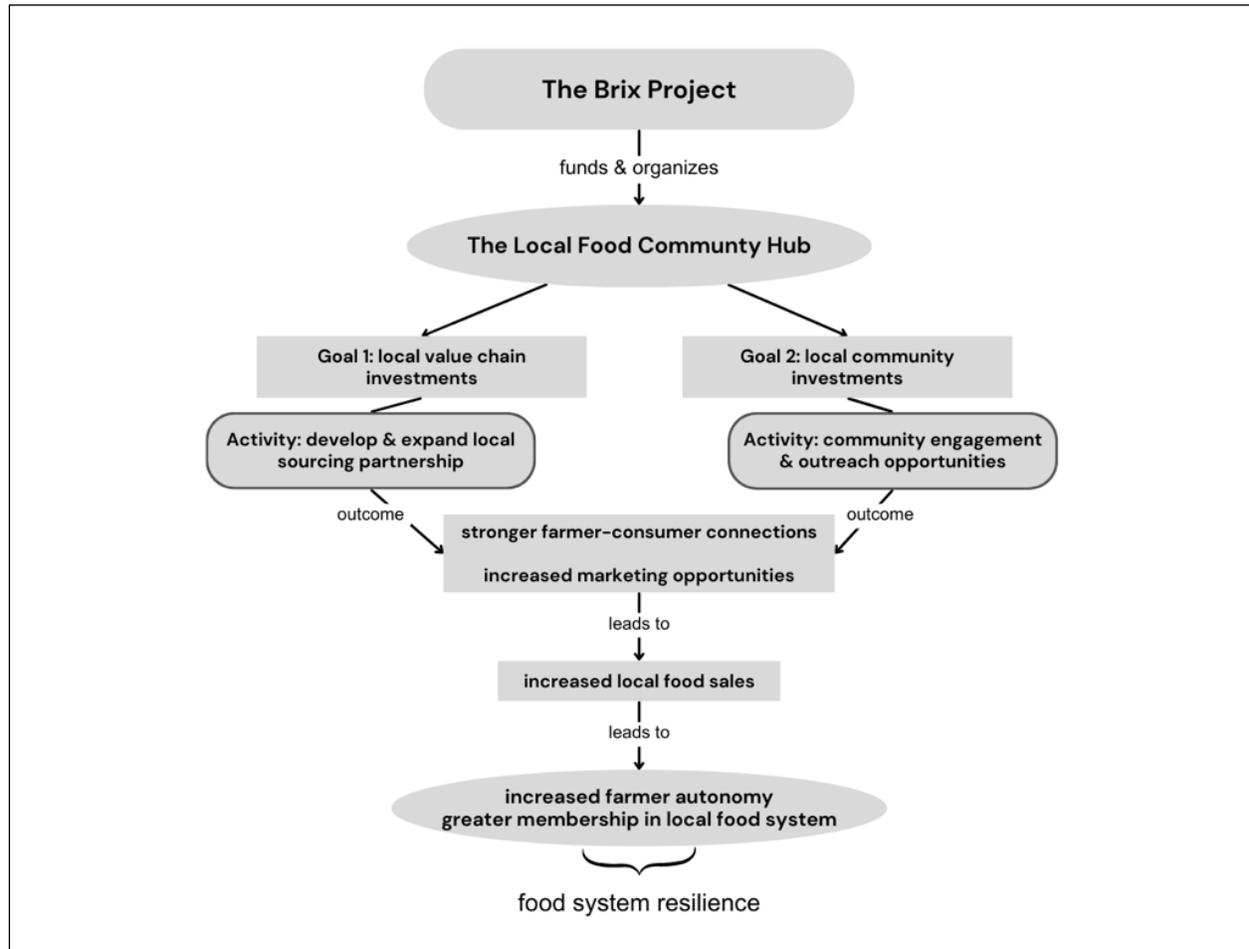
The following passage from the 2020 grant application narrative presents the guiding concept of change for the Brix Project, asserting that a food system based on weak links between producer and consumer could be made more resilient by strengthening these connections:

We need to develop new business models that can better withstand shocks and connect local farmers to local consumers. Through this project, we will advance a “local food community hub” as a model of resilience. A local food community hub, as we are defining it here, is similar to a traditional food hub, in that it aggregates, processes, and distributes local food from multiple producers through relatively short supply chains. As the name implies, the key difference is that a local food community hub is structured around a core concept of community.

Note the pairing of classic resilience framing rhetoric (“withstand shocks”) with the vision of connection. The proposal outlined two key strategies to support the theory of change (Figure 2): supply chain investments to increase market connections, and enhancing customer education through events, storytelling, and other strategies to build social connections. While these connections would be enacted through market channels (specifically, Brix Cider), the second strategy implied broader, community-based approach to change. In the grant, *community* referred to the farmers, processors, marketers, and consumers who share values around food, particularly the understanding that food is more than a simple commodity.

The proposal argues that typical food hubs are often constrained by distribution and marketing structures, but that a local food community hub would create broader community participation that would ripple beyond the Brix Cider market channels, contributing to greater farmer autonomy and deeper economic growth. Thus, the Brix Project’s unique approach to resilience was in building understanding and relationships around food beyond market channels.

Figure 2. Schematic of the Brix Project Activities



Collaborator Definitions

Brix Project collaborators, who included employees and partnering producers involved with designing and implementing Brix Project programming, tended to characterize resilience through three main characteristics: *abundance*, *flexibility*, and *stability*. More specifically, it was the relationship between flexibility and stability from a place of abundance that created the experience and vision of a strong, resilient regional food system. Underlying this conceptualization was commitment to, and respect for, small-scale producer decision-making (e.g., to pursue diverse market opportunities or on-farm conservation goals) within the context of a rigid conventional food system.

Abundance as a characteristic referred to the many farms, markets, businesses, and other organi-

zations supporting regional food economies. Collaborators identified abundance as either an important component of, or a precursor to, resilience. Results from the community canvassing surveys indicated that community members perceived abundance as a core strength of Mount Horeb and the surrounding region. Members of the Brix Project core team suggested that producer abundance enabled greater flexibility and adaptability in market relations. Matt explained: “We’re a lucky place here in southwest Wisconsin, where there are a lot of farms and small farmers. And if [Farm] was like, we just want to focus on the CSA and we’re not going to do [Brix’s] veggies this year, there’s twenty other veggie farmers we could talk to.” Abundance was important for navigating ecological disruption in the food system as well. For

example, a Brix Project employee indicated a strawberry crop ruined by a surge of pests in the region. Brix Cider, she explained, had to purchase from a different producer: “There are certain things you just can't adapt to when it comes to climate change. I mean, things [crops] are just going to get lost, or unexpected occurrences are going to happen... So having resiliency is having a number of backups.”

Abundance enabled flexibility but alone did not define resilience. A farmer collaborator stated:

I feel like we're almost there. Like, the backbone [for resilience] is there. When you Google Map zoom out on what farms are around here, it's insane. There are so many farms—very established, well-known, successful farms in addition to all of these little ones that are popping up. So the resources are there. The closed cycle is not quite there. The continuum is not quite there. The tapping into all of those markets [by the community], that's not there yet. But the potential is definitely there.

For this farmer, abundance helped provide the “backbone” of resilience. However, it was not just the quantity of farms or opportunities available but how these farms integrated into a community-driven circular economy that formed the real metric of resilience.

If abundance helped answer the *what* of resilience, then flexibility helped to answer the question of *how*. For Brix Project collaborators, flexibility, like adaptability, meant the capacity to navigate a food landscape characterized by fluctuation and change. Flexibility was often specifically identified as a response or solution to the central problem of a rigid contemporary food system. For example, Matt framed his definition of resilience by first describing that problem:

Just to compare [Brix Cider] to a typical food hub, I think that's the challenge that a lot of food hubs run into. You create a rigid structure that the farms need to build themselves around. And then you're just stuck with whatever the market is through that structure. It's just kind of rigid and you can get stuck, and a farm can't change without changing the bigger

system. ... I feel like [resilience is] having a looser model with individuality. just gives people freedom to do their own thing and use [Brix Cider] when it makes sense, but not when it doesn't make sense.

Another core team member and farmer described flexibility as embedded in resilient market relations:

[Brix Cider is] flexible and calm enough to work with the producers as their product availability ebbs and flows. If they [the producers] have a huge amount of product they need to move, Brix trusts the kitchen staff to adapt to that. So it's really like a looseness and a confidence that I just don't see that often in restaurants where there seems to be such a grip on planning. But this is nature. And this is weather. And this is food that we're dealing with, which are not static things. ... And so by being flexible, and being a natural organism as well, Brix is able to really mix with what seasons have and what seasons do to farmers.

Flexible purchasing practices, which reflect the dynamic characteristics of a regional food system, allowed the Brix Cider supply chain to adjust to seasonality, unexpected weather events, disruptions to farm management, and the pandemic, all the while maintaining strong relationships with producers. As understood by collaborators, flexibility is a characteristic imbued with trust, care, and the recognition that food system actors are people with a broad set of needs and desires, which the rigidity of the conventional food system does not support.

A fuller portrait of resilience emerges when flexibility is enacted in tandem with stability. To the collaborator above describing resilient market relations, it was not just flexibility but the capacity to be “calm” and confident through change that enabled strong market connections. The dynamism of flexibility was important insofar as market movement was paired with support: “I think it [resilience] looks like two things, it looks like being able to be flexible, but also being able to be solid. And combining those two—it's like

moving. It's a constantly moving target." Another core team member explained, "You can still have structure in resilience. Not to say that structure is always bad." The intended structure here was not that of a rigid or fixed system, but of trust, accountability, and security in the strength of relations along the supply chain. Perhaps most importantly, as depicted in the interviews, resilience was not a predefined state to achieve but a process, or that "constantly moving target" that is enacted through relations.

Core team leaders understood that ensuring market stability allowed small-scale producers to better navigate agroecological decisions, such as what to plant and how often, based on their specific farm conditions. Decisions could be directed toward improving soil health or crop diversity (or, as one farmer noted, out of personal curiosity) rather than dictated by external market demands. In this way, market stability and flexibility correlated with agroecological stability and flexibility, although the former was not structurally guaranteed. In an interview toward the end of the Brix Project, Matt reflected that purchasing was at the discretion of Brix Cider, not the farmer. The Raboins still need to consider price, convenience, and product consistency when purchasing ingredients for their restaurant. Though maintaining stable relationships is a priority, these decisions are still influenced by profit margins and restaurant operations.

For collaborators, resilience was not necessarily the desired goal of Brix Project interventions. When describing their visions for a healthy food system, collaborators mentioned sustainability education, community health, inclusivity for dietary diversity, and protection of ecological biodiversity. Participants used the language of resilience to weave together connections between these diverse elements of agri-food systems. One farmer considered such systems-level thinking to be an important outcome of Brix Project programming: "I think it puts stuff into perspective for folks who are like, Oh, I'm hungry, if I go to Brix and buy this— as opposed to Culver's—that support those guys [Brix] *and* these guys [Farm]. ... It's just interconnected. It's community in action."

Demonstrations of Resilience Throughout the Brix Project

Drawing from the above discussions, a community-based definition of resilience begins to crystallize as the capacity to be flexible yet stable within a context of abundant, community-oriented relations. This definition holds little traction, however, if it is not consistent with or support the perspectives and behaviors of the broader set of food system actors (producers, business owners, consumers) within the Brix Project network. Attending to the processes of resilience ("how it works") rather than simply cataloging its elements ("what is there") shifts resilience from persistence to transformation (Jones et al., 2022). Therefore it is crucial to recognize resilience-in-action, what Pugh calls "adapting and navigating our way through the precarious nature of complex life" (2014, p. 318). The following vignettes describe several beliefs and practices of food system actors as they navigate the precarities and politics of the regional food system. These actions occurred and/or were documented through Brix Project interventions.

Reorganization of Brix Cider through the Brix Project

Just days after closing their restaurant doors in March 2020, the Raboins created an online platform where community members could order the food items that would have been produced in the Brix kitchen. Employees organized and packaged these orders and delivered them to households in a no-contact delivery service. Most obviously, this strategic shift created a pathway for revenue as local food economies navigated turbulent times. The Raboins also wanted to maintain market outlets on which their local producers depended and provide employment for their staff. In the following weeks, the Raboins assembled a multi-organizational team to shape ideas around developing resilience and applying for the LFPP grant.

Though the application was clearly an immediate response to the pandemic, it also represented strategic positioning to face long-term uncertainty. The proposed project would not be funded (or denied) for months down the road. The process of assembling the grant proposal included reaching out to potential community partners, identifying

mutual needs, conversing about the possibilities of a multi-year project, and writing a complex grant application. Establishing the university collaboration itself required navigating an entire subset of meetings, bureaucratic procedures, and subaward agreements. Although the process relied on pre-existing relationships, grant writing skills, and knowledge of government funding, it required an intensive investment of time and energy. These processes were implemented without the immediate guarantee of reward or financial respite from the disturbances at hand.

Responding to climate variability: Brix Cider purchases apples for cider production from a variety of small orchards, often five acres or less, many planted by settlers in the late 19th century when southern Wisconsin agriculture shifted from grain production to more diversified systems. In 2021, a late spring frost destroyed apple blossoms around the state and devastated the fall harvest. The small-scale family-owned orchards on which Brix Cider relied were not equipped with technology like frost fans to mitigate the unexpected weather event. As Matt recounted:

[Brix was] so understaffed all summer, I was just working really hard and not thinking about apples. And then apple season came, and I started calling and emailing, and orchard after orchard after orchard just said, we don't have a good crop for you. As a cider maker, it just means we [need] to do something different. It means another pivot. I mean, we're tired. We're tired of pivoting.

In this pivot, Matt called a hermitage to which he had donated an old apple press that Brix Cider no longer used. He explained that earlier in the year, "They wanted a press so we just donated it to them on kind of a good-faith idea that they'll then use it to press juice for us. ... We had no idea at the time we were going to have a crappy apple year." Without firm purchasing arrangements, Matt did not know how much apple juice the hermitage could offer. Matt continued, "Getting into November, we were still a couple thousand gallons short of where we needed to be. I just kept waiting and waiting on the hermitage—and they followed

through. ... You give something to the community and the community gives something back." The hermitage pressed enough apple juice for Brix to meet their quota for cider production.

This vignette reflects the interconnectedness of multiple disruptions within a local food system: ecological/climate (late spring freeze at small-scale orchards); socio-political (labor disruptions within the restaurant industry); and market (value chain disruptions between producer and restaurant/distributor). For Matt, the experience demonstrated how disruptions could create new connections and opportunities: "And in some ways, having to scramble a bit, identifying these new orchards and working with them—I think sets us up well for the future. ... You learn stuff when you do things different."

Food System Collaborations

Brix Project programming included crafting short films to capture farmer stories, and fostering community conversations to explore these narratives through film screenings and panel discussions. In one event, two business owners (of a bakery and a tortillería) sat alongside two producers (beef and grain), in front of a crowd of about forty, to discuss their experiences with and perspectives on the regional food system. Though none of these panelists were Brix Project collaborators or were interviewed for this study, their reflections aligned closely with collaborator perspectives on resilience.

The owner of the bakery Origin Breads, which purchases regionally grown grain, stated that the experience of food system abundance was a factor in committing his business to the Madison area: "I had lived here 12 years prior and I just knew it was a food-friendly town, and I knew the market scene was pretty vibrant... The fact that there was a local mill here, and there [are] farmers growing grains all around brought the puzzle pieces together." For him, as with the grain farmer panelist who described the many small markets he sold to on a weekly basis, abundance was a central pillar of a strong food system.

In the abundant food scene, many producers sell similar products at local markets. The owner of Origin Breads participated in a nearby farmers market, where multiple local bakeries offer freshly

baked goods Saturday morning: “Technically we’re in competition with each other, when there are people coming to the market who are either going to spend their money on your stand or on someone else’s stand.” However, he reflected that the idea of competition is a story told by the industrial food complex—one that is not true to his experience. To his mind, if a customer goes to a different bakery, there is still a positive outcome for the community and the regional food system. This sentiment was echoed by an orchardist featured in one of the Brix Project films: “Having a [cider] product that is made from our fruit, by friends nearby, is just fantastic. We’re boosting each other. So we’re lifting everybody up by having these kinds of partnerships.”

Like many other farms that supply to Brix Cider, Seven Seeds Farm is located in the undulating ridges and valleys of the Driftless Region of southwest Wisconsin. The farm sells grassfed beef, pork, and chickens. To manage soil health on the highly erodible hillsides and provide shade and food to their livestock, the farmers planted over one hundred acres of perennial fruit and nut trees. For these farmers, the market relationship with Brix Cider provides an invaluable outlet for their products:

Brix is great to work with because they’re so flexible and easy going. They’re not always needing one cut [from the animal] and they’re really receptive to change on the menu. As a farmer, as a producer that’s selling whole animals or pieces of whole animals, it’s so nice to work with people like Matt and Marie who know the struggles we have and know how to use the whole animal.

Cooking with lesser-desired cuts of meat, such as beef hearts, often takes more creativity and education for chefs in the Brix Cider kitchen. In a community conversation, Marie Raboin acknowledged that this practice requires more education to consumers to explain why chicken breast or bacon does not always appear on the menu: “If I raise my hogs to two hundred pounds, and from that maybe only get twenty pounds of bacon, there’s still a lot of pork left to do something with.” This practice

elevates the understanding that farmers do not just produce bacon or chicken breast for purchase but are raising whole animals that are an essential part of a healthy ecosystem.

Discussion

Resilience has been critiqued for its “fuzziness,” for its lack of political acuity, and for implying support for preserving the status quo. While these critiques are crucial for highlighting potential consequences of resilience discourse and policy, the results of this study demonstrate community definitions and enactments of resilience that are useful in their fluidity, maintain political motivations, and fundamentally orient toward transformation. When writing the grant application, the Raboins utilized resilience to situate their project within the post-pandemic rhetoric and thus gained access to financial resources. The market emphasis within the LFPP grant application, and the related prominence of economic resilience, is understandable given the USDA program requirements to fund local food businesses and market development. Nevertheless, in nodding to a broader vision of food system change, this definition was still malleable enough to satisfy LFPP grant objectives while creating opportunity for broader conversations and interventions. The acknowledgement that food is “more than a commodity” firmly placed the Brix Project within a food system politics, motivated to transform the underlying dynamics of the industrial food system.

Furthermore, the Raboins’s decision to apply for the LFPP grant demonstrates reorganization of resources and relations in response to change. The application process prompted the core team to organize within Brix Cider’s network, exchange ideas, envision change goals and mechanisms, and identify community resources. The LFPP grant proposal was submitted in the spring of 2020; the award was not confirmed or received until the fall. Though an immediate response to the pandemic lockdown, the grant application was more realistically a long-term strategy for mobilizing change within the community. This process presents an empirical demonstration of transformative resilience, illuminating the capacity for renewal, regeneration, and re-organization of a system

(Gotham & Campanella, 2021) rather than “bouncing back” to a previous state.

Interviews clarified and situated this vision for transformation within a specific politics of resilience. Brix Project collaborators contrasted resilience with an industrial food system characterized by commodified food, rigid market structures, consolidation, and competition. They conceptualized flexible yet stable market relations which functioned within the inherent dynamism of the food system. They also prioritized cooperation through abundance. It is worth noting that as a farm-to-table restaurant Brix Cider is uniquely both flexible and stable. As producers themselves, the Raboins’ possess deep knowledge of farming and the fluctuations of production within southern Wisconsin. They know their partnering farmers and view their business as contributing to positive change. Their knowledge and values shape their interactions with producers—such as purchasing lesser-desired cuts of meats—which enable farmers to center their own needs rather than the demands of a monolithic food economy. It is Brix Cider’s specific positionality within southern Wisconsin’s abundant food system that creates this pathway for transformative resilience.

The importance of flexibility, diversity, and autonomy are consistent with other post-pandemic examinations of agroecological and food system resilience (Jones et al., 2022; Ladyka et al., 2022; Perrin et al., 2020). For example, in their study of the experience of small farms in Washington, Ladyka et al., (2022) find that flexibility and autonomy were important attributes of resilience, and that farmers with greater operational flexibility also reported higher levels of autonomy within market channels. Jones et al. (2022) reported flexibility and social capital—related to the concept of social connection in the Brix Project—to be key characteristics of local food system resilience following the pandemic. However, diversity rather than abundance is often named in this literature. While collaborators of the Brix Project certainly referred to diversity, it was usually within the context of abundance. In other words, the *quantity* of producers, market channels, or food businesses and organizations was more often considered the crucial precursor to resilience rather than *variety*.

A core thread throughout the grant proposal, interviews, and community conversations and actions was the importance of elevating farmer autonomy through food system intervention. Although emphasizing autonomy would seem to perpetuate an individualistic ideology based on neoliberal values, participants repeatedly positioned autonomy, or, as one collaborator defined it, “freedom to do your own thing,” within the context of acting within an integrated web of community. These findings align with the notion of relational autonomy (Mackenzie, 2008, 2019), the capacity to act *within* networks of interdependencies. In a Netherlands case study of local food networks, Goris et al. (2025) demonstrate that increased local market opportunities boosted relational autonomy for both farmers and consumers, although it is still shaped by the institutional and regulatory limitations of a multi-scalar food economy. Autonomy, then, can be experienced at the same time as vulnerability.

Autonomy is increasingly recognized as a core component of resilience within a politics of food production (Ladyka et al., 2022; Schneider & Niederle, 2010; Valencia et al., 2019). Schneider and Niederle (2010) describe autonomy as the broad capacity to act, both materially and symbolically, within a landscape of possibilities. They outline strategies for farmer resistance in Brazil to shape autonomy through livelihood diversification. Building on this work, Valencia et al. (2019) demonstrate how farmers develop autonomy through increased reliance on internal resources such as land and knowledge, and thus can shield themselves from market shocks and uncertainties. They find that stronger farmer autonomy in Brazil builds agro-ecological resilience through farm diversification strategies, a correlation explicitly identified by Brix Project farmers as well. For them, as for the Brazil farmers, the drive for autonomy reflects local struggle within the rigid political economy in which farmers and restaurants are situated: a system which has “trapped” farmers and rendered small-scale businesses vulnerable. Highlighting autonomy illuminates flows of power and the desire to create new structures within the food system. Relational autonomy moves resilience into the realm of transformation.

This case study has grounded transformative resilience in lived experiences and community processes, though such grounding should not suspend critical investigation of transformation. As with resilience, transformative processes should be examined for (a)political traps and attended to for vulnerabilities, equity, and justice issues. Davis et al. (2022) caution against reallocating vulnerabilities within the food system onto the rural poor in our haste to restructure and transform. Kokorsch (2022) questions transformative resilience for lacking an exit strategy, or the end point at which a system or community no longer needs to be resilient. This critical scholarship offers imperative guideposts for inquiry into transformative resilience in food systems, and suggests that critical transformation must involve community inclusion when identifying transformation agendas and goals.

Although this study has focused on the discourse around food system resilience in the wake of the pandemic, calls for other types of resilience—for example, ecological resilience through soil carbon sequestration—also pervade agricultural research and policy. For food producers embedded in the food economy, whether local or not, efforts for resilience must be supported by suitable market structures. It would be shortsighted, however, to suggest that resilient market relations, such as the connections that facilitated stability through the pandemic, always lead to other types of resilience. It is the context and scale at which we assess resilience that matters. Producers and business owners experienced disruption and vulnerability variably across the four-year Brix Project, such as contending with industry-wide labor shortages or extreme climate events. Interventions that focus on market relations and supply chains within short timelines might interpret Brix Cider's flexible, abundant, and stable farmer relationships as a complete picture of resilience. Yet these frameworks may not take into account the interconnected struggles within the food system that extend into longer timeframes or broader economic contexts. This study highlights the need for long-term, place-based research providing empirically driven

analyses of relational autonomy within food system transformation.

Conclusion

This paper explored the discourse and practices of resilience within the connected food system of the grassroots food system initiative, the Brix Project, in southern Wisconsin. Common critiques of resilience point to its definitional and theoretical ambiguity and the apolitical bedrock of the term. However, as demonstrated by this qualitative case study, the very ambiguity of resilience proved valuable for the grassroots organizers of the Brix Project. These organizers leveraged the post-pandemic rhetoric of resilience to gain access to resources from the USDA. While framing their funding goals loosely around market interventions, they also imbued the grant narrative with a broader vision for change that was firmly situated within a political critique of the conventional food system. Interviews with Brix Project collaborators, combined with conversations among and actions by food system actors within the Brix Project network, built on this vision to reveal a politically driven understanding of resilience based in flexible yet stable relations within a context of abundance, relational autonomy, and collaborative community. These results indicate that resilience, when grounded in the grassroots food system organizing of the Brix Project, ultimately supported transformative change. This case study also illuminates the specific characteristics of resilience that emerged from the particularities of the Brix Project food system. The ambiguity of resilience is valuable only insofar as there is room for context-specific definitions and interventions to emerge, which should ultimately build a food system embedded in place. 

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