



Place-making in the Corn Belt: The productivist landscapes of the “good farmer”

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ABSTRACT

Since the end of the second World War, the landscapes of the U.S. Corn Belt have increasingly been dominated by large-scale, industrialized agricultural production. Although not without its benefits, industrial agriculture has been shown to be detrimental to the social and ecological fabric of rural communities and beyond. In response, state and federal policy has encouraged farmers to adopt a limited number of strategies that may reduce the negative externalities of industrial agriculture. However, a growing body of research argues that to achieve transformative environmental and social change, the U.S. must transition to alternative food and farming systems. This study explores the potential of such transformative change by integrating the concept of the “good farmer” within a place-making framework to allow us to examine the shared understandings of place among farmers of an Illinois watershed. Through semi-structured interviews, we analyzed the experiences of 17 farmers, focusing on their management practices, connection to the land, and the centrality of farming to their lives. In addition, we interviewed eight non-farmers whose careers or family life were directly connected to local agriculture. The results of our analysis found that the farmers in our study have incorporated a good farmer identity that goes beyond the highly visible productivist notions of farming. The place-meanings of family legacy, stewarding a viable future, and caring for the land were found to be as important to farmers as profit-making and efficiency of their operations. Our findings suggest that a transition to alternative farming systems would likely align with the identity and shared place-meanings of the farmers in our study. Programs and policies intending to facilitate a transition away from productivist systems of farming in the Corn Belt should be designed to support the farmer-held meanings of family legacy, farm viability, and care.

“Most issues on a farm return to the issue of keeping up appearances. Farmers extrapolate quickly from the farm to the farmer. A farmer looks like himself, when he goes to the café, but he also looks like his farm, which everyone has passed on the way into town.”

– Jane Smiley *A Thousand Acres*, p. 199 (Smiley, 1992)

1. Introduction

Anyone passing through the rural areas of the Midwestern United States is bound to witness the dominance of large-scale agriculture on the landscape. Seemingly endless monocultural fields of green or brown, depending on the season, are broken up only by the occasional town or riverine woodland. Much of this agricultural landscape looks homogeneous due to the widespread focus on corn and soybean production. The area stretching from eastern Nebraska through Iowa, Illinois, Indiana, and western Ohio has become so well-known for its ability to grow corn, it is often referred to as the “Corn Belt” of the U.S. (Green et al., 2018). Even among the Corn Belt states, Iowa and Illinois stand out as

agricultural strongholds with around 80% of each state’s land area classified as farmland (USDA, 2021a, 2021b). The vast majority of those farmland acres are used for the production of corn and soybean that will be sold primarily as feed for livestock, processed as a food additive, or converted into ethanol fuel (USDA, 2015a, 2015b). While there is nothing inherently wrong with growing corn and soybean, the manner in which it is commonly grown in the Corn Belt and elsewhere has led to a variety of consequences that have been detrimental to the functioning of ecosystems as well as to the social structures of rural communities (Vogeler, 2019).

Since the end of the Second World War, the number of farms in the U.S. has precipitously declined while the average size of the farm has steadily increased (Hoppe, 2014). Along with the increase in scale of the average farm came a greater reliance on chemical inputs and expensive new equipment and technology to produce yields high enough to cover the costs of the additional land (Egli, 2008; Hoppe et al., 2010). During the same period, farmers in the Midwest began to reduce the diversity of crops and animals produced until what remained was primarily genetically modified corn and soybean. The transition to corn and more

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recently, soybean, was driven by many factors including post-war policy, federal subsidies, agribusiness marketing efforts, increasing specialization of machinery, soil and climate conditions, market demand, and reliability of the crop (Abson, 2019; Bellemare and Carnes, 2015; Dimitri et al., 2005; Sheingate et al., 2017). The post-war move to industrialized farming practices has dramatically increased crop yields (Egli, 2008), but at the same time has altered the social and physical landscapes of the rural Midwest.

Industrialized farming practices are part of a larger shift of the agricultural paradigm from agrarian values, characterized by many small farms producing a wide diversity of crops and animals, to a productivist-oriented industry (Hoppe et al., 2010). Productivist agriculture is focused on outputs and strives for ever increasing efficiency through more intensive use of fertilizer and pesticide inputs, economies of scale, genetically modified seed, and technological advances (Comito et al., 2012; Dentzman and Jussaume, 2017). Productivist agriculture and related conceptualizations have received widespread criticism from agricultural scholars. A particularly sharp critique from Thompson states that “the industrial model of agriculture embodies a form of cultural and political one-dimensionality that crushes human creativity, and promotes an unsatisfying portrayal of human potential, social purpose, and the meaning of the natural world” (Thompson, 2001, pg 227). The transition to a productivist paradigm is not linear nor universal as farming is a complex place-based endeavor that often defies simple definitions (Wilson and Burton, 2015). In certain areas like the Midwestern U.S. however, a productivist mentality has been firmly established and this has led to significant long-term negative impacts on both ecosystems and rural communities, including (see also Horrigan et al., 2002):

- Conventional tillage practices and overapplication of fertilizer inputs has contaminated drinking water supplies, created toxic algal blooms, and led to sedimentation in rivers, lakes, and reservoirs (Soohoo et al., 2017; Stevens, 2019; Tilman, 1999).
- Conversion of land into industrial monocultures has led to a dramatic loss in biodiversity, reducing the resilience of ecosystems and jeopardizing the services required by agriculture such as pollination of crops (Dudley and Alexander, 2017; Pleasants and Oberhauser, 2013).
- The transition to farming for commodity markets has resulted in massive farm consolidations, soaring farmland prices, population decline in rural communities, and families coping with the loss of land and livelihoods that had been passed down for generations (Bruckner, 2016; Graddy-Lovelace, 2021; MacDonald et al., 2018; Peters, 2019).

Many farmers are aware that industrialized farming practices can negatively affect the health of the land and those who inhabit it, but still these practices remain widely adopted and well-supported in the U.S. agricultural system (Carlisle, 2016). Prior research investigating the lack of adoption of sustainable farming practices has often focused on individual farmers’ attitudes towards participation in federal and state conservation programs (Ranjan et al., 2019). These studies have advanced our understanding of the motivations of farmers who adopt conservation practices on their farmland by highlighting the role of environmental values (Lincoln and Ardoin, 2016) and identity (Lequin et al., 2019), among other contributions (Farmer et al., 2011; Reimer et al., 2012). Other lines of research have focused more specifically on analyzing the behavior of farmers in relation to adoption of sustainable practices. A recent review of this literature identified important commonalities in character traits, interpersonal relationships, and knowledge that are found in farmers who adopt sustainable practices (Dessart et al., 2019). This literature has deepened our understanding of farmer decision-making and highlighted the various motivators that drive the adoption of sustainable practices. However, the studies focused on the psychological and behavioral factors that contribute to land use

decisions made by individual farmers often do not address the greater societal structures and institutions that influence the land management practices of farmers.

When viewed as an attitudinal or behavioral problem, it is natural to see the reason for the continued use of destructive farming practices as a lack of awareness of their negative effects and a need for greater financial incentives to adopt sustainable alternatives (Blesh and Barrett, 2006; Brummel and Nelson, 2014). However, these viewpoints present the problem and potential solutions as a burden solely on the shoulders of the individual farmer while ignoring the ongoing role of society and the collective system of American agriculture (Seethaler et al., 2019). In contrast, a growing body of literature has moved away from looking at the adoption and effects of adding sustainable farming practices to industrial systems and instead identifies a need to transition to agricultural systems that restore ecosystem functioning while producing food and maintaining rural livelihoods (Carlisle et al., 2019; Garibaldi et al., 2017).

Transitioning to non-productivist agricultural systems in the Corn Belt is no small task as it would require a significant paradigm shift across the entire spectrum of the U.S. food system. Agricultural research, corporate business models, food distribution systems, and even consumer expectations will need to change for the viability of alternative farming systems to improve (Delonge et al., 2016; Mier Y Terán Giménez MierGiménez Cacho et al., 2018; Prokopy et al., 2020). This is not to say that change is not occurring in parts of the Corn Belt, but the vast majority of arable land remains firmly entrenched in industrial practices to produce corn and soybean (Wang et al., 2020). Even as agreement grows among researchers that a systemic change to agriculture is needed (Wezel et al., 2020), farmers have not yet embraced such changes in large numbers. The reasons for this discrepancy are not entirely clear as farming is a practice that is embedded in a network of social, economic, and political systems that are constantly changing (Carolan, 2022). As such, more research needs to be done to understand the potential of Corn Belt farmers to pursue a shift towards more sustainable agricultural systems.

Though the circumstances around farmers’ transitions to alternative systems of agriculture are multi-faceted and complex (Ong and Liao, 2020), it is important to consider the meanings that farmers hold about their livelihood and practices. Many scholars have underscored the importance of meaning and identity when examining adherence to certain farming practices (Salamon, 1992; Wilson et al., 2003). If a transition to a new way of farming contradicted the identity and core understanding of what it means to be a farmer then substantial change will be difficult to achieve. For this reason, it is critical to explore the meanings that exist among farmers in the Corn Belt in order to judge their potential compatibility with a shift towards more sustainable farming systems. While the early use of the analytical concept of the ‘good farmer’ was to show how farmers adhere to symbols of success as a way to reinforce their social status (Burton, 2004), it has the potential to highlight the range of meanings of farming among communities of producers. Through an integration with the concept of place-making, an ultimate goal of this research is to expand the meanings associated with a good farmer and assess how these meanings may be compatible with a shift to alternative agricultural systems in the Midwest.

In order to better understand the potential for a transition away from productivist systems of farming in the Corn Belt, this study seeks to:

1. Identify major themes among farmers’ understandings of their livelihood and practices
2. Further develop the good farmer concept as an analytical tool through an integration with a place-making framework

2. Conceptual framework

2.1. *The good farmer*

When one farmer refers to another as a “good farmer” they are likely acknowledging how well that farmer’s practices conform to a socially constructed ideal (Burton et al., 2021). The ideal farmer manages their land in a certain way, uses specific machinery and technology, and conducts themselves both professionally and socially in the “appropriate” manner. The details of what constitutes a good farmer are not universal, but instead are dependent on place and the specific group of farmers that construct the ideal (Sutherland and Darnhofer, 2012). For example, what constitutes a good farmer by organic fruit producers of southern California may be quite different than that of the conventional cotton growers of the Texas panhandle. However, as will be discussed later, there are some common characteristics found in many notions of the good farmer. Besides being a useful measure of a farmer’s ability among his or her peers, the good farmer concept is a useful analytical tool to question the culture and practices of farming.

The good farmer concept has been utilized by many scholars in a variety of disciplines, but perhaps none as convincingly as Burton’s (2004) seminal work that explored the participation of English farmers in an agri-environmental program. Burton, initially at least, viewed the good farmer through the theoretical lens of symbolic interactionism (Blumer, 1986). Burton was most interested in how the symbols and performances of an individual establish and reaffirm their identity and standing in a larger social group. This approach shed light on why many attempts to alter the way farmers manage their land ultimately fail. Although new management practices promoted by governance institutions are commonly paired with monetary incentives, Burton argues that the symbolic value of maintaining the practices targeted for change can outweigh any financial gain for farmers (2004). In many conservation programs designed for farmers, policy makers are often looking to alter methods of farming that have been practiced by generations of farmers and are now codified in the social identity of a good farmer (Cusworth, 2020; Riley and Harvey, 2007). Attempts to redefine the acceptable practices and management goals of the good farmer through top-down policies is likely to be met with resistance (Anderson et al., 2017; Burton et al., 2008). While the symbols of farming and their corresponding meanings can and do change over time, these changes occur slowly and with a gradual transition from one style of farming to another (Huttunen and Peltomaa, 2016).

Much of the extant literature has found good farmer ideals to be physically manifested in the landscape through the creation and maintenance of the symbols of productivist agriculture. These symbols most often include evenly spaced rows of crops, “tidy” fields and farm buildings, the latest machinery, and animals with a “healthy” appearance (Riley, 2016; Stock, 2007; Sutherland and Burton, 2011). These symbols can easily be recognized by other farmers, often while driving by a field, and then compared to the imagined ideals of a good farmer (Burton, 2004). Past studies using the concept of the good farmer have in most cases underscored the importance of these physical symbols in maintaining the productivist paradigm of farming (Burton et al., 2021). However, there has not been agreement on what theoretical foundations can best explain the widespread farmer adherence to the good farmer ideals.

To bolster the concept of the good farmer and allow for scholars to examine its role in a wide variety of agricultural contexts, Bourdieu’s theories of social reproduction are often utilized (Sutherland and Darnhofer, 2012). In short, Bourdieu theorized how the main forms of capital accumulated by individuals and groups (economic, social, and cultural) structure all social relations and lead to the reproduction of culture as well as one’s position relative to society (Bourdieu, 1986). As Bourdieu states, the distribution of the various types of capital represents “the set of constraints, inscribed in the very reality of that world, which govern its functioning in a durable way, determining the chances

of success for practices” (1986, p. 15). Considering Bourdieu’s theories of capital, farmers have more than just economic capital tied to the maintenance of their land management practices, as their social connections and standing in society are also intertwined with these practices.

While not without major criticisms (Goldthorpe, 2007; King, 2000), Bourdieu’s theories have been useful for understanding how the notions of being a good farmer are reproduced in society and the potential loss of capital should a farmer eschew these socially constructed ideals or norms (Burton et al., 2008). However, Bourdieu’s concepts regarding social reproduction may focus too narrowly on the role of social class and childhood socialization in explaining an individual or group’s actions. Many other factors such as gender and race interact with the realities specific to a place that also contribute to the creation and maintenance of socially accepted practices. In this paper, we present a place-making conceptual framework that seeks to be more inclusive of the ways in which community-based realities interweave with larger structural forces to determine what it means to be a good farmer.

2.2. *Place-making in agricultural landscapes*

The making and remaking of a place is the result of a complex network of individual, group, and institutional meanings of the place that are continually produced and refined through the economic, political, and social interactions of those entities (Pierce et al., 2011; Williams, 2002). The ideals and practices of a good farmer are built upon the meanings for an agricultural landscape that were produced through a place-making process. When farmers talk about which practices or land management strategies are “right” for an area, they are adhering to a shared understanding for that place that sets the standards by which actions can be judged (Carolan, 2006; Roesch-Mcnally et al., 2018). This shared understanding is a social construction of the imagined ideal of a place that reflects the beliefs and values of the group.

Any understanding of a place is necessarily laden with social meanings that communicate to others “what these places are for, who they are for, and, accordingly, how they should be managed and to what ends” (Ingalls et al., 2019, pg. 627). Often, these shared understandings of a place draw upon a version of history that provides an imagined continuity between the past, present, and a desired future (Bridger, 1996; Strauser et al., 2018). While no history is ever a complete history, a narrow view of history can serve to marginalize certain people and practices in a place by erasing their lived experiences (Dunbar-Ortiz, 2014; Tilley, 2006). Such histories and the shared understandings of which they are a part, always exist alongside a multitude of competing meanings (Williams, 2008). However, some understandings can become temporarily dominant in a way that engrains them in the community and larger societal discourses as the status quo of a place (Pierce et al., 2011).

An understanding of a place can become so well accepted and normalized within a population that it remains largely unquestioned for a period of time. This is not to suggest that normalized understandings go unchallenged, but without a larger shift in community or societal values, competing meanings are often unable to gain traction beyond specific groups. As a place can be just as easily understood by what does not belong there as what does, one consequence of an uncritical view of place is that suppression of other meanings goes unnoticed (Cresswell, 1996). The support or suppression of place understandings occurs through socially reinforced norms and, when they become officially recognized by a government, through laws. The more well-defined the established norms of a place, the more homogenous a landscape will look. To illustrate this point, one can look to the dominance of non-native turf grass lawns in many urban and suburban areas of the United States. Maintenance of a well-kept lawn requires intensive management utilizing chemical inputs and substantial irrigation which negatively affects ecosystem and community health (Robbins, 2012). Homeowners and renters who have understandings of their

neighborhoods that prioritize more sustainable alternatives to grass lawns face the challenge of established norms and laws that actively restrict enactment of such an understanding (Sisser et al., 2016).

While the physical landscape is only one component of a place, it has many important roles in encouraging or maintaining a shared understanding for an agricultural region. First, and most importantly, the way a farm looks is a part of a farmer’s identity as it is the most visible symbol of the values and beliefs that underlie specific practices that have shaped the land (Burton, 2004; Stenholm and Hytti, 2014). These emplaced practices interact with other forces to shape the individual farmer’s identity while at the same time creating the physical symbols that others in the community can use as an anchor to both confer identities on other farmers as well as themselves (Morse et al., 2014). Second, physical landscapes can serve as a repository of memories and history not only to an individual farmer, but the larger community and beyond. The way cut hay is stacked and stored, the architecture of an old barn, and even the presence of a field in a particular location are all connections to the culture and practices of past generations (Riley and Harvey, 2007). These artifacts of previous generations are imbued with meanings and create a sense of coherence in a landscape by linking the past with the present (Stewart et al., 2004). Third, because agricultural landscapes are the result of human cultural practices, they reflect the outcome of a process of social negotiation referred to as place-making (Greider and Garkovich, 1994; Stokowski, 2002; Williams, 2002). Even though place-making is an informal process with results that are constantly in flux, power and hegemony can become entrenched and embodied in the physical and discursive elements in a landscape which stabilize and privilege certain understandings of place (Anderson et al., 2017; Gailing and Leibenath, 2017). Stokowski (2002) clearly stated this idea: “what is visible ‘on the ground’ at any given time is only the working out of one

version of reality, promoted by a set of social actors who have succeeded in using their power and position to advance their own ideals” (p. 380).

2.3. Integrating place-making with the good farmer

This paper integrates the concepts of place and the good farmer by arguing that the normalized meanings that define what it means to be a good farmer in an agricultural community are constructed through place-making processes. This place-making process is bi-directional, meaning that on-site farming practices influence senses of place as much as they are influenced by them. Farming creates a physical imprint of landscape features and conditions that express aspirations for a farmer’s identity, serves as visible cues for others to assess the goodness of the farmer, and reflects a larger discourse of the meaning of a good farmer – in ways that could both conform to and disrupt a normalized meaning and sense of place. This framework, coupled with insight gained from discussions with farmers, is useful to understand the possibility of transformative change of the agricultural systems of the Corn Belt.

3. Methods

This research was part of a larger transdisciplinary effort to understand relationships among climate change, fisheries biodiversity, and resident preferences for management of agroecosystems. The research engaged land management professionals, farmers, and others in the agricultural industry to understand their appreciation for and understanding of the landscapes in their everyday lives as well as the concerns of surrounding residents’ abilities to adapt to changing conditions.

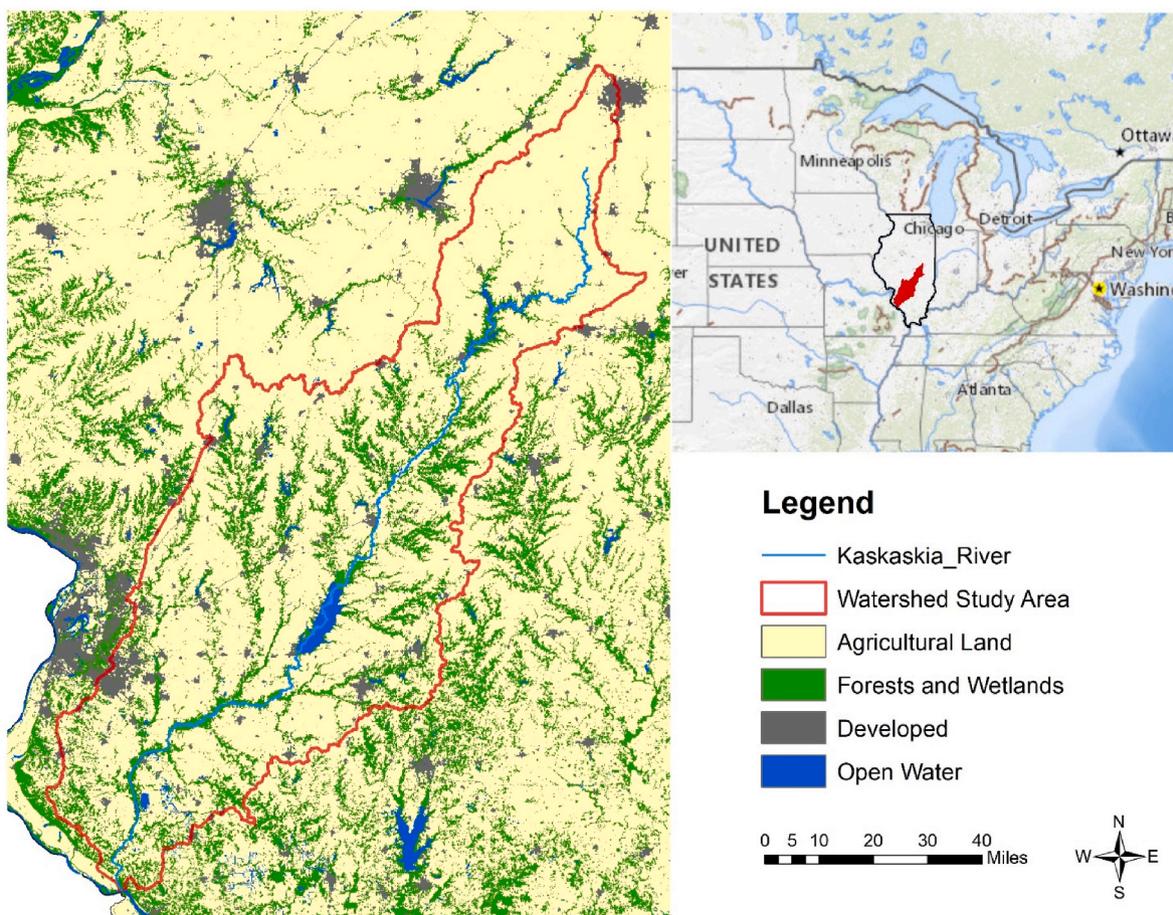


Fig. 1. Map of the Kaskaskia River watershed with 2020 land cover classifications in south-central Illinois.

3.1. Study area

The study took place in the Kaskaskia River Watershed located in central and southern Illinois (Fig. 1). The watershed is the second largest in Illinois, making up around 10% of the state’s total land area. Agriculture is the most common land cover, accounting for close to 80% of the watershed’s total area (NLCD, 2007; Krohe, 2001). Though agriculture has remained the predominant land use of the Kaskaskia River Watershed and Illinois in general, the number of farms has declined precipitously. In the period from 1950 to 2017, more than 60% of all farms in Illinois disappeared while the total land area devoted to agriculture decreased by only 12% owing to the increase in average farm size (United States Department of Agriculture, 2021a). The farms that remain in the watershed primarily follow a row crop corn and soybean rotation, but pasture and winter wheat are also common in the southern portion. The northern third of the watershed is predominantly flat terrain that once consisted of prairie and oak-hickory forests, while the southern two-thirds have more varied topography and significantly more forest cover.

3.2. Sample

Many of the stakeholders we interviewed were part of the Kaskaskia Watershed Association (KWA), a regional non-governmental group comprised of farmers, business owners, citizens, and state and federal agency personnel that focuses on development and land management issues of the watershed. The KWA was identified as relevant to a regional dialogue on issues related to farming and conservation (Weiss, 1995). While interview participants were initially identified through their involvement in the KWA, participants were asked to suggest other relevant stakeholders for the research team to contact, including additional farmers who would have a distinct perspective.

In total, 19 separate interviews were conducted with 25 participants, representing 17 men and 8 women. In the instances where the interview included more than one person, this was due to the participation by additional members of the farming family such as a spouse or son. Of the total participants, 17 were farming full or part-time or were retired farmers. There were eight participants who are labeled “non-farmers”; although they were not currently practicing farming at the time of the interview, they were directly involved in the local agricultural industry in a regulatory or advocacy capacity and had either grown up on a farm or previously worked on a farm in the area. The inclusion of non-farming participants was deemed important in order to fully understand and contextualize the impact of farming on the broader communities of the study area. See Table 1 for a summary of interviewee characteristics.

3.3. Interviews

During the period from spring 2018 to spring 2020, the research team conducted a series of semi-structured interviews with stakeholders in the Kaskaskia River Watershed. This inquiry tool was chosen for its ability to focus on a specific set of questions while allowing for a natural dialogue between researcher and participant. Our goal was to use this interviewing strategy to facilitate the co-construction of knowledge and bring out the nuances of understandings of place (de Wit, 2013; Riley and Harvey, 2007; Schegloff, 1997).

The interviews were structured around four sets of questions related to: 1) land management practices, 2) perceptions of landscape change, 3) identifying important places in the region, and 4) understanding relationships between landscape change and management practices. Each interview lasted between one and 2 h and often included a tour of the farm operation and property. Interviews were digitally recorded and transcribed verbatim. All coding and analysis was completed using NVivo version 12.

Table 1
Socio-demographic characteristics of interview participants.

	n	Percent
Gender		
Female	8	32
Male	17	68
Farmer Status		
Active	13	52
Retired	4	16
Non-farmer	8	32
Age		
<30	1	4
30–40	3	12
41–50	4	16
51–60	2	8
61–70	9	36
71–80	5	20
80+	1	4
Farm Size, acres^a		
<200	1	8
200–400	3	23
401–1000	4	31
1001–5000	3	23
>5000	2	15

^a Reflects the number and percentage of unique farms where acreage was reported.

3.4. Analysis procedures

Transcripts were analyzed by the first two authors using a thematic analysis process to identify shared place meanings across participants (Braun and Clarke, 2006). Initially, the two coders met to jointly review the transcripts, discuss themes and associated codes, then independently analyze the same set of text. The process was useful to promote reflexivity and dialogue among the research team regarding the meaning of words and associated themes (O’Connor and Joffe, 2020). It took several iterations of this process to reach an inter-coder reliability coefficient of 71% – which is the number of instances of agreement divided by the number of instances of both agreement and disagreement; Landis and Koch (1977) have indicated agreement above 60% is considered “substantial agreement” between coders.

4. Findings and discussion

Through our analysis of the interview data, we identified five interconnected themes related to farmers’ senses of place. While not encompassing the entirety of the many meanings that existed among participants, the five themes captured much of what was shared about the importance of farming and their land. Each of the five themes related to the ideals of a good farmer in how they guided land management decisions in the watershed. The five themes were labeled as the following: (1) landscape of family legacy, (2) landscape to steward a viable future, (3) efficient landscape, (4) landscape of profit, and (5) landscape of care. Each of these themes are independently characterized below, yet they often surfaced in ways that reflected an inter-dependence.

4.1. Landscape of family legacy

When discussing land management practices on their own property or elsewhere in the watershed, many farmer and non-farmer participants reflected on the contributions of past generations. The participants, regardless of their occupation, often expressed pride in being a descendant of a farm family and related that to a duty to maintain the legacy started by their ancestors. For farmers, the pride and gratitude for the hard work of their forbearers seemed to fuel a drive to maintain the farm in the face of uncertainty and change. Previous research has also found that farmers can feel a sense of obligation to ensure the

continuation of a family farm and would feel shame if the crop or business fails (Bryant and Garnham, 2015; Kuehne, 2013; Peter et al., 2005). Some of the farmers interviewed expressed this responsibility to a family's legacy directly.

“Well, there's always been a concern of, of farmers or landowners in particular of, of, you know, you bought the farm or you had the farm given to you by your parents or grandparents, and as I said, you want to give it to your kids and your heirs that they can continue the legacy that's been laid out in front of you.”

“... our ancestors worked really hard to get this far. It would seem like a shame to just let it, go. I mean I think, I mean when you think about a grandfather walking down and maybe picking one of your corn at a time, as compared to what they're doing now. I don't think people can really appreciate the amount of really true hard work that goes into it.”

Although seldom in direct terms, nearly all farmers in our study indicated that their forbearers would be disapproving of what they deemed “poor” farming. As with the notions of what makes a good farmer, the definition of a “bad farmer” varied from person to person, but generally reflected the norms of an efficient, production-oriented farmer. One farming participant eluded to this point when telling a story about a bad farmer who took over the lease on land that the participant had previously been farming.

“I cared about what he did to the farm and what he has not done. We built, I built a bin, me and the land ladies built a bin. It would hold the corn on half the farm. The other half was soybeans. First year he farmed he put the whole farm in corn and never filled the bin. It took him four years to ever fill the bin when he doubled the acreage going into the bin. That, that pissed me off. You know what I mean? But, this farm ... I care about this ground. And it's, it's my great grandfather's, my grandpa's, my dad's, mine.”

In addition to reflecting on the legacy of their more distant ancestors, farmers commonly identified their fathers and, to a lesser degree, their grandfathers as the source of their knowledge and understanding of farming. Many farmers described how their fathers had them helping out with the farm work starting at a very young age. As Sutherland notes, Bourdieu theorized that childhood is the time when individuals develop the ability to recognize and value objects and practices with high cultural value (Sutherland, 2013). Our study provides evidence for this claim as in many instances farmers told stories about how as children, they observed their fathers carrying out specific farming practices that they now recognize as “good farming”. The following quote highlights a common sentiment about a father's farming acumen.

“... well, my dad was still alive and he was pushing to get the anhydrous monitor and, because you know, he wanted it to get it just right. And after that, the anhydrous would come by and he'd get on his hands and knees and he was smelling up the trench to make sure it was getting sealed over, and not evaporating back into the air.”

4.2. Landscape to steward a viable future

In addition to the relevance of past generations, participants also thought about the future when managing their land. Participants recurrently brought-up the need to pass along a farm business and landscape that would be viable for the next generation. Stewardship of both the monetary and environmental aspects of the farm was discussed in relation to maintaining a life on the farm for subsequent generations. This type of stewardship is not an altruistic notion of caring for the sustainability of the physical environment, instead it is an obligation to protect the farm in such a way that it can prosper and sustain the farm family in the future. This conceptualization tracks closely with that of Reimer et al. who describe stewardship as “expressing an inherent

responsibility to family, neighbors, future generations, God, or the farmland itself” (2012, pp. 32). As illustrated by the following quote from one farmer, stewardship was often expressed in ways that blur the distinctions between love of the land, duty to family, and smart business decision-making.

“The most special place is the Old Lands farm. I've had my grandchildren ... it will be theirs. My niece and nephews, they have a portion of the farm. When they come by, we go over and we go to the farm. And then we talk about the farm, about what my practices are. I show them my cover crops. I show them the filter strips. And we got to preserve this. We got three ton going down off of these other fields - three tons of soil every year, sometimes more. And my fields, we're losing something like 3/10ths of a ton, then we've got to keep these practices so that we can maintain our asset.”

Another aspect of viability of the farm was the difficulty in sustaining financial stability for themselves and the future of the farm. The fluctuation in global market prices for agricultural commodities coupled with increases in the cost of farmland and production expenses has made it challenging for farmers to be optimistic about a future viability in farming (Holland et al., 2020; Sumner, 2014). The constant pressure to maintain the financial well-being of the farm in volatile markets has long-lasting negative impacts on stewarding a viable future for the farm family (Glover and Reay, 2015; Salamon et al., 1997).

The farmers in our study lamented about the difficulty in managing their operations in ways that would allow both themselves and their adult children's families to be supported by income generated by the farm. Farmers had different ways of addressing the desire of having their children work with them and eventually take over the farm. The most common strategies involved buying or renting more acres to put into row crops, increasing the output of their animals or crops through new technologies, diversifying their core business, or encouraging their children to pursue other careers. As illustrated by the following quotes by two farmers, most people that we spoke with had an understanding that it is difficult to make a living farming in the area and even more difficult to do so in a way that can support more than one family.

“So how can you bring a son or daughter back to the farm? Well, you might expand or diversify with a livestock operation or confinement operation whether it'd be for hogs or poultry and provide some opportunity to keep your sons or grandsons or daughters on the farm.”

“One way to look at it, each farm, there's so many plates at the table. So, you got to figure if there's enough plates for 2 families to live off of it. At one point looking, can we make another plate work? And sometimes you can and sometimes you just – unless you grow your acreage, I guess.”

4.3. Efficient landscape

Participants frequently talked about how new technology and practices have allowed for larger and higher-yielding farms. New seed varieties, more sophisticated and precise chemical applications, semi-automated advanced machinery, and improved drainage systems were commonly cited as some of the most important means of improving efficiency and production yields. In the following quote, one farmer discusses the how new technology has changed the way fertilizer is applied to his fields.

“Um, and we're fortunate with technology gives us that opportunity. That we can put the nutrient where we want it at the right place at the right time. Um, we're not doing these general 300 lbs per acre. Yeah, we might put 150 here and we might put 400 over there. But we do the soil testing and the mapping, technology gives us the opportunity. We can drive to the fields 25 miles an hour with these TerraGators [chemical sprayer] and put it right where we want it.”

Achieving higher yields through efficient technology and practices was not always linked to the desire to make more profits. In some cases, farmers expressed a sense of pride about the high yields. After one farmer was asked about what other farmers might say about his farming practices, he spoke specifically about his high crop yields.

“Um, according to my crop insurance guy. I’m number one in the county in corn production and number four in soy production and I’m number one in wheat production.”

Like many others in our study, this farmer attributed the high production of his crops to his investment in the “correct” technology as well as the best practices to complement that technology. In this specific farmer’s case, he invested heavily in a sophisticated system of drainage tiles while he claimed other nearby farmers were putting too much of their financial resources into expensive new machinery. Stories about the farming practices of others were often normative and provided examples of what a bad farmer does on their land. While being an efficient farmer requires the right technology, using this technology incorrectly can lead to others casting judgment on a farmer’s competence. The following stories are representative of the many instances when farmers did so:

“And the example I’ll use is that years ago, and it happens from time to time now, that a farmer will, let’s say, um, plant LibertyLink beans. And then he plants RoundUp beans. And he won’t document, or forgot to document, what he planted where. And he’ll go out there with PowerMAX [RoundUp type herbicide], and he’ll spray, and he goes, ‘oh, crap’. He killed them! Deader than a hammer. So here he’s got a crop of soybeans that’s this tall, and he just smoked them. Because he didn’t do the paperwork.”

“... and I think it’s the respect that you give the product [RoundUp] too. I mean, there was a farmer who would put his feet on the tank and stir it by hand. I mean, respect the product, and that probably, he’s no longer around today.”

Outside of the “correct” use of technology, another important aspect of the efficient farm was based on aesthetics. The idea that farmers judge each other based on the look of a field or farmhouse has been well documented in previous research (Burton, 2004; Sutherland, 2013; Wilson et al., 2003). Participants recurrently linked the “look” of the farm with that of (in)efficient practices and a misuse of the land. Farmers did not simply see a “messy” landscape, they saw a bad farmer. These “bad farmers” were not necessarily judged as being lazy, but instead as outliers who do not follow the shared – yet tacit – rules of farming in the area. This point was underscored by a farmer speaking of the “improper” practices of some of his Amish neighbors.

“... well, you’ve been by ... saw Amish farmsteads that aren’t always the cleanest place, I mean as far as livestock next to ditches and things like that ... and I’m not pointing the finger at the Amish but that’s something that to me is ... is pretty visible as farmsteads. Of course, ground next to the river is going to be cheaper ... so, there’s probably going to be land uses in those areas that, that don’t ... aren’t as clean, aren’t as neat.”

4.4. Landscape of profit

While related to efficiency, we found that the notion that land should be worked in such a way that maximizes farmer profits was a unique and important theme. With a drive to maximize profits, farmers strongly consider the perceived return on investment when determining their practices and business decisions. As with the theme of efficiency, there is “right” and “wrong” way to maximize profits. Determining the “right” way to make money while farming often depends on the group identity of the farmer i.e., do they consider themselves a “conventional” or “conservation-minded” farmer, and the norms of the area in which they

farm. For example, one farmer participant expressed disapproval about some of the farmers that they compete with to rent more land and ultimately, make more money.

“And, and the other thing I’ll say is they were out bidding each other for the cash rent. Oh, if I do this, I can bid another \$5-\$10 an acre to the landlord and I can get this farm away from someone who was on it before. Because you know and they will farm right up to the ... well they will tear out fence rows. They would tear out water ways. Um, just so they could farm those.”

In the above example, farmers are looked at as violating the norms of the good farmer so that they can afford to outbid others also looking to rent additional land. In this scenario, the bad farmers are seeking to maximize profits which has been established as a norm of the good farmer across many agricultural landscapes (Burton et al., 2021; Cusworth, 2020). As was the case with many of farmers participating in our study, the farmer we quoted above ascribed to a socially constructed notion of a good farmer that values profit-making, but not at the cost of “improper” soil erosion management. As reported by the following two farming participants, farmers also noted when they themselves went against the norms that dictate the “right” way to farm, often times in an effort to prevent a loss of revenue due to prolonged wet conditions.

“Yeah, there’s gonna times that, you, it’s not gonna look pretty when we get done. Let’s say this time of the year and we got to get the harvest out. And we’re gonna muck things up. We really don’t want to. Or we’re gonna have a wet spring and we got to get a crop planted. We’re gonna do things that we normally don’t do ... and it’s, it’s not because you didn’t want to do it right, you, you got put into a corner and you had to do things to get it to where it needed to be.”

“Because our ground just doesn’t dry out nice you know, it’s ... you have a field that this part will dry out today and the other may take forever to dry out. Whether you hit it with a disc, you can get it all to dry out and you know, plant it. But, then of course, then the, the other do-gooder on the other side said ‘Well yeah but you worked that over there too wet, you shouldn’t have worked it.’ Well yeah, possibly so.”

As the above stories illustrate, farmers think about how others would judge their practices and in turn need to justify practices that deviate from those of the good farmer. While utilizing the land in ways that maximize farming profits is solidly a part of the good farmer narrative, it is complicated by other factors such as a responsibility to maintain a family legacy and to steward the land for the next generation.

4.5. Landscape of care

A final theme about farmers’ relationship to their lands is one of obligation to care for land in a way that maintains its health into the future. While this obligation to protect the health of the land did not always take priority over other motivations, it was a widely held sentiment among our participants. The notion of a landscape of care was sometimes related to maintaining a viable farm for the next generation, but with a stronger emphasis on the moral obligation to be a good steward of the land. This obligation to care for the land was often expressed as being part of the practices of a good farmer and those who did not follow these norms were talked about in a negative light. The following quote from a farmer provides an example of this discourse.

“Yeah, everybody, if everybody tries to do it right, I mean things will, nutrient runoff will be a heck of a lot better. But there’s always gonna be somebody who doesn’t care, there’s gonna be some people who don’t want to do right or just do it how they want to and ... yeah I don’t know, everybody has to try to do it in the right way definitely.”

Farmers were aware that their peers, neighbors, and the public have expectations that they farm in a way that is perceived to be caring for the

land. As the example below illustrates, these expectations of care were an important part of what it means to farm in the “proper” way.

“I think peer pressure, there is peer pressure to keep the soil on the land, to change your farming practices, so that you’re not causing sedimentation and pollution and things like that. I think, there, for us anyway, I think there’s a real peer pressure to, to do things properly.”

It was clear that although most farmers saw themselves as caretakers of the land, there were limits to the types of practices that could be realistically considered. The practices discussed by participants were generally concerned with controlling soil and nutrient runoff. Practices mentioned most often included maintenance of grass in drainage waterways, buffer strips of grass adjacent to waterways, and both a reduction in the number of times a field is tilled as well as a change in the type of plow used to till a field. Cover crops and no-till were more commonly used by farmers in the southern portion of the watershed than those of the northern areas. This may be explained by the greater presence of rolling hills and steeper slopes in the south as previous research has found evidence that farmers perceive greater benefits of cover crops on hillsides than on flat areas of their farms (Arbuckle et al., 2015; Plastina et al., 2020). Even though the farmers in our study rarely considered practices to improve wildlife habitat, mitigate climate change, or reduce the use of pesticides they still considered themselves conservationists. As one farmer told us:

“I think more farmers are conservation minded than the public probably really understands. Yeah, there’s always a few guys who make, you know how it is ... in everything you get bad guys, but I think most farmers are conservation minded and they’re trying to do the best of their ability. Some are doing more than others, but they’re still conservation minded, they’re just maybe haven’t gotten to the point where they’re doing everything, but they still have, ‘boy I want to treat the land like, um, like I need to.’”

The effects that the norms of the good farmer had on the conservation practices of farmers in the watershed were readily apparent. Wetland restoration on farmlands has long been known to have great potential to prevent the nutrient runoff from reaching downstream areas (Ribaud et al., 2001) and was mentioned by a few participants. However just one participant had undertaken a wetland restoration project on their land. Similarly, habitat restoration projects or practices meant to benefit wildlife were not widely shared among our participants. The focus on erosion management and the relative lack of consideration of other conservation practices shows that the good farmer narrative of this watershed has limited the potential positive outcomes available through alternative agricultural practices.

Understanding the meanings of farming that are central to the lives of agricultural producers is an important step in realizing a transition to a more sustainable practice of agriculture in the Midwest. However, our study only examined one watershed within Illinois. Undoubtedly, local knowledge and traditions will influence how farmers understand their livelihoods. As such, future research should seek to utilize a place-based framework to describe the meanings important to farmers in other parts of the Corn Belt in order to validate our findings.

5. Conclusion

A primary contribution of this paper is that by utilizing the good farmer concept through the lens of place-making, we were able to show that many farmers in our study share place-meanings of farming that conflict with the productivist system in which they operate. In response to a globally connected market that has put pressure on farmers to “get big or get out” and led to a large amount of farm consolidations, we have found that the farmers in our study have a common understanding that prioritizes the preservation of a family legacy of farming. If a farmer were to be compelled to sell their farm due to the difficulty in making ends meet, they would bear the weight of a decision to give up the land

and livelihood maintained by their ancestors for generations and potentially be labeled a “bad farmer” (Kuehne, 2013). Similarly, farmers share a concern for how best to manage their land and business so that they can pass along a viable operation to their heirs. As the cost of land and farm inputs have steadily increased while commodity prices have remained volatile (Sumner, 2009), the farmers in our study steward their lands in ways that they believe will ensure the farm’s long-term productivity. Additionally, many farmers discussed the expectation that good farmers will care for their land by using practices that mitigate the negative effects of industrial agriculture.

While we found that many of our participants also shared understandings that aligned with a productivist paradigm, such place-meanings were spoken about in a matter-of-fact way that included technical descriptions and brand names. In contrast, place-meanings of family legacy, stewarding a viable future, and caring for the landscape came forth in ways that were heartfelt, emotionally compelling and extensively integrated with personal stories of family and community. Farmers interviewed framed their occupation as a lifestyle choice rather than a strategy to earn a living, and most were forthcoming about themselves or other family members having to work off-farm jobs just to keep farming. They would explain non-productivist place meanings as being their reasons for choosing farming as a way of life, giving them an everyday sense of purpose, and at times, as tension that required negotiation with efficiency and profit.

Our participants showed first-hand understanding of problems with an agricultural system focused on efficiency and profit at the expense of agrarian values that were close to their own senses of self and family. Our discussions with farmers did not explore their perspectives on state and federal policies and programs, however a general implication was their stake in farming and selection of farm practices was far more than responding to a financial cost-benefit roster. Their collective concerns for farm legacy, viability and care are noticeably not reflected in many of the farm policies ostensibly directed at “helping” farmers and supporting the “good farmers” of the U.S. Corn Belt.

The findings of our study support the notion that transformative change in the agricultural systems of the Corn Belt is possible. By contextualizing the good farmer concept within place-making, we were able to shed light on a wider range of meanings that farmers in the study area share. Most of these shared meanings are not in conflict with alternative farming systems that seek to address human demands for food and fiber in ways that support functioning of a social and ecological system. While this research does not layout a roadmap for transitioning to these alternative farming systems, it does highlight the need to structure policies and programs that seek to achieve such change in ways that address farm legacy, viability, and care.

Author roles

Ben Leitschuh- Conceptualization, Formal analysis, Investigation, Methodology, Writing-original draft, Writing-review and editing. **William P. Stewart**- Conceptualization, Formal analysis, Funding acquisition, Investigation, Writing-review and editing. **Carena J. van Riper**- Funding acquisition, Writing-review and editing.

Author statement

The authors declare that there is no known competing personal or financial interest in regards to this work.

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