

*From “Hicks” to High Tech: Performative Use in  
the American Corn Belt*

*Joshua Todd Brinkman*

Dissertation submitted to the faculty of the Virginia Polytechnic Institute and State University in  
partial fulfillment of the requirements for the degree of

Doctor of Philosophy

Science and Technology Studies

Richard F. Hirsh, Chair  
Saul E. Halfon  
Daniel Breslau  
Matthew R. Goodrum

January 17, 2017

Blacksburg, VA

Keywords: Performativity, Agricultural Technology, Identity, Modernity, Farmers

***From “Hicks” to High Tech: Performative Use in  
the American Corn Belt***

***Joshua Todd Brinkman***

ABSTRACT

This historical narrative examines technology use among farmers from the eighteenth century to the present, with an emphasis on the American Midwest. I contend that people do not simply use objects for articulated benefits, but to perform unspoken identities, a process called performative use. Through an analysis of agricultural discourses, I demonstrate how performative use allows farmers to form self-images strategically in response to changing social factors. I identify six main agrarian discourse-identity bundles – ways of thinking about words and actions that communicate or construct people’s understanding of themselves. These bundles present distinct notions about moral ways of making a living and relationships with nature and objects. Therefore, technologies and identities co-construct one another.

Beginning in the eighteenth century, elite observers evaluated the modernity of a rural “other” through a “pattern of audience.” Concurrently, German farmers exhibited the practice of performative use. These developments set the stage for conflicts over rural identity in the 1920s when urban industrialism and “rube” stereotypes framed farmers as dysfunctional. Performative use early in the twentieth century allowed rural Midwesterners to establish their own identities to combat these perceived urban threats and stereotypes. Through this resistance, farmers developed an identity of rural capitalistic modernity, gaining strength during the Cold War. Rural modernity evolved into the current “ultramodern” identity in which farmers see themselves as more technologically savvy than urban dwellers while retaining a desire to combat negative urban views of rural life. Ultramodernity partially explains why farmers have embraced the use of wind turbines and other sophisticated technologies.

My analysis shows how rural experiences with patterns of audience cause farmers to see the current organic discourse as another urban threat that stereotypes farmers as backwards and frames agriculture as male, industrial, overly technological, and immoral. I show how these urban discourses have particularly alienated rural women who formed identities as modern producers. Farmers’ attitudes towards discourses about organic agriculture reflect a continued practice of using technology to express rural resentments. I conclude that agricultural policies must respect farmers’ performative use of technology.

***From “Hicks” to High Tech: Performative Use in  
the American Corn Belt***

***Joshua Todd Brinkman***

GENERAL AUDIENCE ABSTRACT

This study traces the history of how farmers have used technologies from the eighteenth century to the present to form identities, not simply as ways of making greater economic profits. Using technologies becomes a way to “perform” a person’s sense of him or herself. This insight serves historians because it suggests that users, not just important inventors, drive technological change. My study also suggests that the relationship people have with technology (and how they use it to form their identities) has historical genealogies. Engineers and business people will also find my history useful because the notion of “performative use” means that people’s views of themselves can influence the way they adopt and employ technologies. Policy scholars will gain from my study because I show that the way people use technology to understand themselves has consequences in determining how they participate in controversies over science and technology policy.

This narrative begins in the eighteenth century by analyzing how elites like Benjamin Rush viewed the agricultural practices of German farmers, regarded by many in the upper classes as backwards. I show how observances of German farmers by elites created a pattern repeated throughout American history where rural people would use technology to perform their identities for an outside observer. In addition, I describe an identity, which I call “German agrarianism,” and contend that this rural self-image migrated to the Midwest when German farmers moved westward. German agrarianism had several important features including the association of morality with family-based production practices, an obsession with owning personal property, the inclusion of women in farming and land ownership, and the practice of performing identity through the use of material objects. Next, I describe a rural identity with English origins, one that other scholars have named “Jeffersonian agrarianism.” This Jeffersonian identity saw farmers as heroes who conquered the frontier, preserved American democracy, and supported less moral urban dwellers. I argue that Jeffersonian agrarianism in the nineteenth century began to reject technological and social change and that this view of rural people as anti-modern has influenced the way observers of rural life have viewed farmers up to the present.

This study then analyzes the rural-urban conflict of the 1920s, contending that farmers used technologies to develop their own rural modern identity, which I call “rural capitalistic

modernity.” Farmers used technology this way to combat a version of modernity, which I name “urban industrialism.” This modern identity, arising from the cities, advocated improving rural life by making farms resemble urban factories. This factory model threatened German and Jeffersonian rural identities that existed prior to the 1920s because it removed the family as the center of production and advocated work processes that took control and property ownership away from farmers. In addition, urban industrialism saw farmers as backward and in need of reform, which offended farmers who saw themselves in heroic terms as a result of Jeffersonian agrarianism. I argue that many rural people in the 1920s used technology to perform an identity of rural capitalistic modernity as a means of combating these urban efforts to restructure farms as factories and stereotype farmers as “yokels” or “rubes.” This rural modern identity became reinforced during the Cold War because the farmer saw Soviet collectivized agriculture as posing the same threats as previous urban industrialism. In addition, the way farmers used technology to reinforce their views of themselves as modern became valuable to government actors in the United States who saw increased agricultural production as a weapon in defeating the Soviet Union.

By the 1970s, farmers formed an identity called “rural ultramodernity” in which they began to think of themselves as more modern than urban dwellers because of their design and use of advanced technologies and their role as producers in the global food network. This ultramodern identity incorporates aspects of previous rural identities, including an obsession with combating urban stereotypes of farmers as “hicks.” In addition, this rural ultramodern identity views farmers as having an inborn modernity inherited from previous generations of farmers. I argue that this ultramodern way farmers think of themselves explains why rural people in the Midwest have embraced the erection of wind turbines, unlike residents of other regions in the U.S.

From a policy perspective, this study also contends that debates over science and technology, such as efforts to render agriculture more sustainable and organic, are impacted by unexpressed fundamental views about nature and morality. Statements about these controversies often take the form of proxy arguments that sound “rational” but mask these unstated ideas, and they often alienate those with opposing views. Current debates over genetically modified organisms, from a rural perspective, are actually unspoken clashes over rural ultramodern and organic identities hidden by “objective” points made by both sides involving science or economics. This study also challenges the common notion that technology and production are male domains by showing how both men and women have used technology to construct their identities as producers on Midwest farms. This insight illustrates how disagreements over gender roles underlie current policy debates about agriculture. Farmers view organic discourse as threatening rural women’s identities as modern producers by framing farming as an immoral, industrial, and male domination of a moral and female nature. Rural people view organic discourse as carrying on the tradition of urban industrialism, which saw farmers as backwards and farm women as unhappy and occupying an exclusively domestic sphere. This study suggests

that any effort to reform agriculture must include farmers and incorporate the way rural people use technologies to form and reinforce their identities. At the same time, the conclusion advocates for a new rural identity that avoids farmer's tendencies to view all technologies as "progress" regardless of their environmental or social impacts.

## Acknowledgements

In writing this study I am indebted to Bethany Brinkman for her love and support. I could not have changed careers, traveled weekly to Blacksburg, or gotten through the many hours of reading and research without her. I want to thank Meg for distracting me when I needed to be reminded of what is really important in life. I also thank Susan and Doug for raising me, encouraging me, and helping me throughout my life. Our many trips back to the Midwest as a child inspired this study and allowed me to learn where I came from. Finally, I want to thank John L. and Alvina Howe, Glen and Virginia Brinkman, and Dennis, Ann, and Jan Brinkman for including me in their world.

Several people helped me immensely in writing this dissertation and they deserve acknowledgment. I would like to thank Richard F. Hirsh for being my champion over the years and encouraging me to embark on a career in STS. His many years of teaching and advice made this study possible. Saul Halfon, Daniel Breslau, and Matthew Goodrum have also been instrumental in inspiring the ideas in this dissertation as well as teaching me how to do STS. I would also like to thank Ashley Shew for inspiring me to delve into gender studies, Matthew Wisnioski and Ann Laberge for teaching me about discourse, and Danna Agmon and Sonja Schmidt for allowing me to explore studies on modernity. Thank you also to Carol Sue Slusser and Doris Shelor for making graduate school easier. I want to also thank my colleagues and friends Keith and Meredith Johnson for the many inspiring intellectual conversations and making my travel to Blacksburg cheaper and more enjoyable. I also want to thank my colleagues Jennifer Henderson and Crystal Cook for pushing and encouraging me. The reference and research librarians at Virginia Tech also helped me a great deal. I want to thank the Society for the History of Technology (SHOT) for allowing me to present papers as a graduate student at their conferences as well as Suzanne Moon, Barbara Hahn, and Benjamin K. Sovacool for their help in writing and publishing my work early in my career. I want to thank Amy Bix, Gary Downey, and John Staudenmaier for encouraging me to study farmers and their technologies. Lastly, I want to thank Ty Scott, Fred Jackson, Renee Ruth, Charles Bailey IV, Matthew Billings and all of the other wonderful musicians I've worked with while in graduate school for keeping me grounded and creative.

## Table of Contents

Introduction	
<i>Posing with Metal</i>	1
Outline of the Six Discourse Identity Bundles Relating to Farming	22
Chapter 1	
<i>Desk Work: The Methodologies of Studying Identity and Performative Use</i>	26
Rationale for Focusing on the Corn Belt	31
The Need for a Theory of Performative Use and Discourse Identity Bundling	37
Discourse Identity Bundles and the Methodology of Targeting	
Unarticulated Cultural Values	48
Chapter 2	
<i>Historiography: Class, Jeffersonian Agrarianism, and Historical Narratives about Rural America</i>	64
Traditional Jeffersonian Agrarianism and its Intellectual Challenges for Observers of Rural Life	65
ASSUMPTIONS OF ANTI-MODERN JEFFERSONIAN YEOMANISM	
AMONG HISTORIANS OF AGRICULTURE	70
BUILDING ON HISTORIANS' ACKNOWLEDGEMENT OF FARMERS' AGENCY	
IN BRINGING ABOUT TECHNOLOGICAL CHANGE	75
Scholarship Conceptualizing Multiple and Localized Modernities	80
Discourse Identity Bundling as Filling Gaps in Recent Scholarship on Class and Rural Resentment	87
Chapter 3	
<i>Setting the Stage: The Genealogy of Contested Modernity and the Twentieth-Century Rural-Urban Conflict</i>	96
The Seeds of Contested Modernity and the Pattern of Audience	105
ENLIGHTENED ARISTOCRATIC AGRARIANISM AND THE PHILADELPHIA	
SOCIETY FOR THE PROMOTION OF AGRICULTURE	110
TRADITIONAL/PEASANT GERMAN AGRARIANISM IN PENNSYLVANIA	114
Chapter 4	
<i>The Rural-Urban Conflict as a Contest Between Rural Capitalistic Modernity and Urban Industrialism</i>	140
Urban Industrialism	173
The Development of a Competing Rural Capitalistic Modernity	183

Chapter 5	
<i>Rumbling Down Main Street: Cold War Ideology and the “American Way” Encouraging Rural Capitalistic Modernity</i>	220
The Persistence of the Jeffersonian Yeoman Myth Among Observers of Agriculture During the Cold War	233
ASSUMPTIONS OF ANTI-MODERN JEFFERSONIAN YEOMANISM IN AMERICAN POPULAR CULTURE	235
ASSUMPTIONS OF PERSISTENT JEFFERSONIAN AGRARIANISM AMONG SOME ENVIRONMENTALISTS AND POLICY ADVOCATES	241
 Chapter 6	
<i>“We Feed the World:” Rural Globalized Ultramodernity</i>	249
 Chapter 7	
<i>“Please in my Backyard:” The Welcoming Acceptance of Wind Turbines and Rural Globalized Ultramodernity</i>	281
 Chapter 8	
<i>Gender, Work Processes, and the Modernization of American Agriculture: Exploring Historical and Cultural Challenges Faced by the Organic Foods Movement</i>	301
Elements of the Organic/Sustainable Agriculture Reformist Discourse Identity Bundle that Tend to Alienate Corn Belt Farmers	311
Work Process, Technology Gendering and Rural Discourse Identity Bundles of Modernity and Ultramodernity among Farmers in the Corn Belt	324
Understanding Debates Over Organic and Sustainable Agriculture Through an Analysis of Conflicting Discourses about Gender, Work, Modernity, and Technology	352
 Chapter 9	
<i>Conclusion: Does it Still Run?</i>	377
Rationale for Altering Rural Globalized Ultramodernity	389
Rationale for Altering Organic Reformist Discourses and Identities	394
The Next Rural Identity Must Blend Organic Reformist Identity with Rural Ultramodernity Through Performative Use	396
 BIBLIOGRAPHY	405



## Introduction

### Posing with Metal

*The most romantic act of my Father's life, courtship aside, about which I know next to nothing, was to join his brother farming.*

David Hamilton, *Deep River*, 2001<sup>1</sup>

My inspiration for exploring the history of technological use in rural America began by asking one simple question: why do farmers take pictures with technology? While many people have family photos of vacations or holiday meals, farm families in the Midwest Corn Belt have boxes with photos of various family members posing with machinery. My grandparents and uncle, whose ancestors have farmed for generations in Germany and northeastern Iowa, certainly had such boxes of photos, as well as framed pictures on the walls of various family members with farm equipment. In fact, the first order of business any time I visited the family farm in Iowa included taking photos with different pieces of farm machinery much like families vacationing in Paris, France pose with the Eiffel Tower. Today, I fondly enjoy looking at pictures of childhood self standing next to the newest tractor, the largest combine, and the semi-truck with the name “Brinkman Farms” painted on the side. When my wife first visited the farm, her initiation into the family included sitting on the 1955 Farmall M my father drove as a teenager. After all, in my family, one cannot be “a true Brinkman” without sitting on the old Farmall. While the family had long ago abandoned the old tractor for bigger and better equipment, my uncle and grandfather kept it

---

<sup>1</sup> David Hamilton, *Deep River: A Memoir of a Missouri Farm* (Columbia, MO: University of Missouri Press, 2001), 150.

in mint condition so that various family members could sit on it and take photos. The pictures of family members with machinery, whether of grandparents in the 1930s or uncles in the 1990s, tend to take the form of two common poses. The first type of photo, found in Figure 0.1, shows the farmer, almost always male, posing with the latest unit of production:



**Figure 0.1:** The photo comes from my own family’s unpublished collection of photos. It shows my uncle (Dennis Brinkman) posing with his newest combine in Greene, IA, late 1990s. Similar photos of farmers in Iowa in the 1930s posing with technologies advanced for the time period can be found at the *Des Moines Register*. In one such photo, an Iowa farmer poses with his new steam tractor, 1930. See “100 Photos: Farming in Iowa since 1930,” the *Des Moines Register*, <http://www.desmoinesregister.com/picture-gallery/money/agriculture/2014/09/12/100-photos-farming-in-iowa-since-1930/15519849/ext>. (accessed 3/29/16).

The second type of photo, shown in Figure 0.2, involves the rest of the family standing on or adjacent to the new machinery, sometimes with the farmer himself taking the picture and, at times, with the whole family.



**Figure 0.2:** This picture shows a farm family in Greene, IA posing with a threshing machine. The woman to the far right with her leg perched on the grain shoot of the threshing machine is my grandmother (Virginia Brinkman). The photo comes from my own personal unpublished collection. Similar photos of a farmer in Iowa posing with his family with the family's latest tractor in 2014 can be seen at the webpage of the Bormann family in LuVerne, IA. See MNB Farms, Ltd. Webpage, <http://bormannag.com/history> (accessed 12/1/14).

In short, family farm photos in the Corn Belt exhibit a pattern that reveals some interesting insights about the relationship farmers have with technology. Farmers in the Corn Belt use tractors and combines not just to plant or harvest corn more efficiently, but to practice their identities as modern people, to reinforce agrarian ideas about the farmers' high moral status, and to display their wealth in ways considered proper within an agrarian producer ethic. The family farm photos cherished by so many Midwest families act as repeated performances of rural modern discourse and of embodied ideals and tastes. Ever since Erving Goffman published *The Presentation of Self in Everyday Life* in 1959, social theorists have recognized that people use even the most mundane activities, such as choosing clothes or walking, as performances for

others.<sup>2</sup> Similarly, Judith Butler in *Gender Trouble* sees gender as naturalized through a series of “discursively constrained performative acts.” In other words, Butler does not consider gender a “natural fact” but as a binary category of identity performed according to “a specific formation of power.”<sup>3</sup> The sociologist Jonas Larsen has analyzed photos taken by families on vacation and concluded that, “Tourist photography is a choreographed and experimental performance connecting the representational and nonrepresentational.” According to Larsen, in contrast to traditional views in studies characterizing tourist photography as representational, or as acts designed to “consume” places, tourists actually use photography to produce social relations, such as family life, through “textual and corporeal choreographies.” Photography represents an embodied performative practice.<sup>4</sup>

In the following chapters, I hope to convince the reader that the farmer poses with the newest piece of equipment and uses technology to perform a modern identity that combats urban “yokel” stereotypes. Gender studies scholar Amy Shields Dobson has recently shown how Australian women use voyeuristic photos on social networking sites in similar ways to resist “the dominant terms by which contemporary femininity is understood as normatively ‘melancholic’

---

<sup>2</sup> Erving Goffman, *The Presentation of Self in Everyday Life* (New York: Anchor, 1959); Stephen Hilgartner, *Science on Stage: Expert Advice as Public Drama* (Stanford, CA: Stanford University Press, 2000).

<sup>3</sup> Judith Butler, *Gender Trouble: Feminism and the Subversion of Identity* (New York: Routledge, 1990), viii.

<sup>4</sup> Jonas Larsen, “Families Seen Sightseeing: Performativity of Tourist Photography,” *Space and Culture* 8 (2005): 416-434.

or damaged.”<sup>5</sup> Similarly, filmmaker, scholar, and new media artist Kalli Paakspuu has pointed out how photography allows for an “interactive space that is a dialog between subject and photographer and a visual ‘writing of the body.’”<sup>6</sup> In the case of farmers, it will become clear throughout this book that technology, when combined with the camera’s gaze, constructs the agriculturalist as a modern producer and thereby reinforces rural discourses and identities.

Additionally, by posing with the latest technologies, farmers display their wealth in a way considered appropriate in an agrarian culture. The performance studies scholar Philip Auslander characterizes “the status of the photograph as an access point to the reality of the performance.”<sup>7</sup> The photograph both realizes and serves as an “access point” to embodied rural ideas about moral ways to acquire and display wealth and success. In many ways, Corn Belt agrarians take the opposite approach from the leisure class discussed in Thorstein Veblen’s influential book *The Theory of The Leisure Class*. Veblen discusses a sense of taste developed by the upper classes for items that mark the ability to abstain from manual labor. Through a process of “conspicuous consumption,” the leisure classes reinforce this sense of taste and send signals to others of their

---

<sup>5</sup> Amy Shields Dobson, “Performative Shamelessness on Young Women's Social Network Sites: Shielding the Self and Resisting Gender Melancholia,” *Feminism & Psychology* 24 (2014): 97. For theories of performativity and social networking see also Nancy A. Van House, “Feminist HCI Meets Facebook: Performativity and Social Networking Sites,” *Interacting with Computers* 23 (2011): 422-429.

<sup>6</sup> Kalli Paakspuu, “‘Writing the Body’: The Hypertext of Photography,” *International Journal of Media and Cultural Politics* 5, no. 3 (2009): 183-197.

<sup>7</sup> Philip Auslander, “The Performativity of Performance Documentation,” *PAJ: A Journal of Performance and Art* 28, no. 3 (2006): 1-10.

status.<sup>8</sup> Pierre Bourdieu added depth to this theory of taste in *Distinction* in which he coined the term “habitus” to convey the process by which people growing up in a certain culture or class attain those habits, tastes, and ways of thinking and behaving such that they become embodied. Habitus has a moral component for members of a particular social class as it functions to render behaviors arising out of necessity virtuous.<sup>9</sup> For both Veblen and Bourdieu, consuming a certain amount in an appropriate way, or connoisseurship, signals membership in a class and in turn reinforces identity. Carl Elliott, in his study of enhancement technologies, claims that unlike the elite of Veblen’s late nineteenth-century world, Americans today “consume in order to change the quality of [one’s] inner experience.” For Elliott, advertising frames the act of consumption not only as an outward signal to others but also as a means of inward self-fulfillment.<sup>10</sup>

In posing with machinery, the Midwest Corn Belt farmer practices a form of conspicuous *production* both for himself or herself and others. While I argue that many Corn Belt farmers had abandoned elements of Jeffersonian agrarianism by the 1920s that resisted modernization and change, they have retained an identity *as producer* typical of traditional agrarian cultures. In contrast to Veblen’s elites, who practiced conspicuous *consumption* to signal a leisurely lifestyle, American farmers form embodied tastes that *favor* work as a moral activity. The Corn Belt farmer shows status by having the newest combine or planting straight corn rows, not through a

---

<sup>8</sup> Thorstein Veblen, *The Theory of the Leisure Class* (Mentor Books: New York 1953, originally published in 1899).

<sup>9</sup> Pierre Bourdieu, *Distinction: A Social Critique of the Judgment of Taste* (Routledge: Cambridge, MA 1984), 169.

<sup>10</sup> Carl Elliott, *Better than Well: American Medicine Meets the American Dream* (W.W. Norton & Co.: New York, 2003), 100-127.

“frivolous” display of wealth evidenced by his house or his clothing. For the Corn Belt farmer, technologies of utility and productivity count as moral ways of demonstrating success and achieving what historian Harold Cook calls “an objectification of self.”<sup>11</sup> In practicing his identity as a modern businessperson, the farmer must do so through a culturally determined practice of signaling success through utilitarian objects of production as the only proper or moral displays of wealth. Seen through this lens of conspicuous production and habitus, farmers approach their machinery through deep-seated and unconscious ideas about success as associated with the newest technology and the morality of a way of life based on production and the family. The tractor is a material embodiment of the self, and the photograph serves as a theatrical performance and realization of this embodiment.

Perhaps most importantly, photographs incorporate and produce cultural memory. Part of farmers’ forming identities through the technologies they use involves embedding within them family histories or memories. The use of old equipment embodies past labor activities which defined family members and relationships. The old Farmall tractor that my grandfather kept in mint condition served the sole function of preserving memory and reinforcing identities. Photographing farm machinery both preserves memory and gives future generations a way to see how far they have come since the “olden days.” This notion of “social memory” was displayed in a 1992 issue of the farm journal *Successful Farming*, which published an article on one of the hundreds of antique farm machinery shows in the Midwest entitled “Ageless Iron”. The reporter

---

<sup>11</sup> Cook explores social and cultural conceptions of moral displays of wealth in Dutch consumer and merchant culture in the sixteenth and seventeenth centuries. Harold J. Cook, *Matters of Exchange: Commerce, Medicine, and Science in the Dutch Golden Age* (New Haven, CT: Yale University Press, 2007), 14-15, 43, 68-69.

covering the machinery reunion declared, “There is something for everyone who wants to join these reunions of farming’s proud past and promising future.” The article continues with several similar quotes from those attending the event expressing how technology preserved social memory. As one local historian, C.H. Wendel, of Atkin, Iowa explained, “Threshing had a mystic quality to it and was often the social event of the year for our forefathers... It was a time when farmers, maybe not realizing it, gave thanks for the harvest.” The “Ageless Iron” author characterizes these reunions as a “bittersweet look[s] at the past,” because farmers desired to preserve their view of themselves as part of a long and “proud” legacy of agriculture, but they also did not want to go back to an earlier less modern age.<sup>12</sup> The photo of the reunion shows two lines of old tractors of different colors and models driven by male farmers down a dirt road single-file while many people of all ages and genders line the side of the road to watch the procession. Behind the crowd in the distance, one can see large piles of straw or grain adjacent to several large threshing machines. As I will more fully explain in the following chapters, taking photos like this one with machinery, old and new, acts as a way for farmers to negotiate the complex dual reality of a rural modern discourse and a nostalgic and idealized past. In other words, by posing with their newest machines, farmers reinforce their modern identities. I argue, in essence, that all people use material objects on a daily basis to form and solidify their sense of self in an unspoken and embodied process. At the same time, the pictures leave a visual record that preserves the past for future generations to maintain their identities as modern producers. Old and new farm equipment serve two sides of the same coin of a modern rural self-image.

---

<sup>12</sup> Dave Mowitz, “Ageless Iron: Reunions that Revive the Past,” *Successful Farming* (February 1992), 23-37.



For a human construct such as identity to become real, it must be constantly performed and reinforced. Farmers perform their sense of a modern, productive, independent, and family-oriented self simply by *using* technology. Every time a farmer starts a \$400,000 combine and engages the positioning devices and monitoring units on the console, he or she reinforces this identity and combats urban yokel stereotypes. This identity-forming relationship occurs through an embodied and unspoken process of using technologies on a daily basis. But because identities are fragile, particularly in an America full of constant change, the farmer needs more than such displays of conspicuous production to maintain his or her sense of self. The farmer must also reinforce identity through discourse, as well as photography. The images in Figures 0.1 and 0.2 speak for themselves. In Figure 0.1, the farmer stands in an erect position without bravado but with confidence as if to let his impressive machine do the talking. To pose in any other way would elicit scorn from fellow farmers as frivolous. His peers see the display of the machine itself, while massive and undoubtedly expensive, as not an instance of bragging because it *produces*. The machine represents productivity but, more importantly, modern and independent productivity. I personally recall an example of this sense of productive modernity: as a child, I remember standing next to my uncle as hundreds of bushels of corn shot into the back of a semi-truck and with him proudly exclaiming “This corn is going all over the world!” In Figure 0.2, family members perform their identities as *family* farmers and thereby resist urban discourses of modernity that tends to divorce the family from modern agriculture. By granting the family a central role in rural discourses and identities, the farmer impresses on both his neighbors and outside observers the moral righteousness of his way of life as well as a sense of independence, something that the farmer must defend through conspicuous production. The farmer’s embodied habitus regards success as maintaining a family-oriented farm supported by new machinery, both

of which he has produced and can, in turn, become productive units. The family crowds around the threshing machine in Figure 0.2 as a way of performing a rural modern discourse that also places technology and the family at its center.

My brief analysis of farm family photographs reveals a central theme of this book: that any analysis of farmers and their relationship to technology must account for more than simply economics or the scientific rationalism demanded by globalized industrial agriculture. While a new combine may increase corn production and reduce fuel costs by measurable amounts, the farmer does not adopt the new technology for this reason alone. Such an economic-centered analysis overlooks important social and cultural views about material objects that are deeply and historically embedded in rural farming communities. This book argues that attitudes towards technology among farmers and non-farming residents of the American Corn Belt may be driven not only by simple economic factors, but also by a strong cultural tendency to imbue artifacts with values and ideologies such as modernity within machinery used for productive purposes.

This study expands upon work by historians David Edgerton and Ruth Schwartz Cowan, who focus on the everyday use and social construction of material objects rather than on macro-level studies of large systems or on celebrated inventors.<sup>13</sup> Put differently, this type of historical work emphasizes the adoption of technologies rather than their design. But I expand upon

---

<sup>13</sup> David Edgerton, *Shock of the Old* (Oxford: Oxford University Press, 2007), ix-xviii; and Ruth Schwartz Cowan, *More Work for Mother: The Ironies of Household Technology from the Open Hearth to the Microwave* (New York: Basic Books, 1983). For a recent use-centered history of technology see also Mats Fridlund, “Buckets, Bollards and Bombs: Towards Subjective Histories of Technologies and Terrors,” *History and Technology* 27, no. 4 (2011): 391-416.

Edgerton and Cowan's theoretical frameworks to explore how people use material objects in their daily work lives for performative purposes to establish identities and notions of modernity. This book, therefore, seeks to combine the emphasis on use and materiality with historian Rosalind Williams' recent work, which reminds scholars to avoid overlooking the desires and consciousness of the user.<sup>14</sup>

I also draw on the social constructivist notion that nothing predetermines the uses and developments of technologies. Rather, social and cultural elements influence why people use technologies in particular ways and at particular times. As Eric Schatzberg demonstrated, ideologies and symbolic meanings often guide technological choices.<sup>15</sup> Indeed, these ideologies become fixed within the artifacts themselves. I add to this insight by suggesting that users implant their identities within the technologies they use. Instead of portraying a world in which people choose between an old fashioned, non-mechanized existence and an industrialized and

---

<sup>14</sup> Rosalind Williams, *The Triumph of Human Empire* (Chicago, IL: University of Chicago Press, 2013); part of this paragraph will be published in the upcoming article, Joshua T. Brinkman and Richard F. Hirsh, "Welcoming Wind Turbines and the PIMBY ('Please in my backyard') Phenomenon: The Culture of the Machine in the Rural American Midwest," (forthcoming 2017). Paper accepted for publication by *Technology and Culture* on September 25, 2015.

<sup>15</sup> Eric Schatzberg, "Ideology and Technical Choice: The Decline of the Wooden Airplane in the United States, 1920-1945," *Technology and Culture* 35 (1994): 34-69.

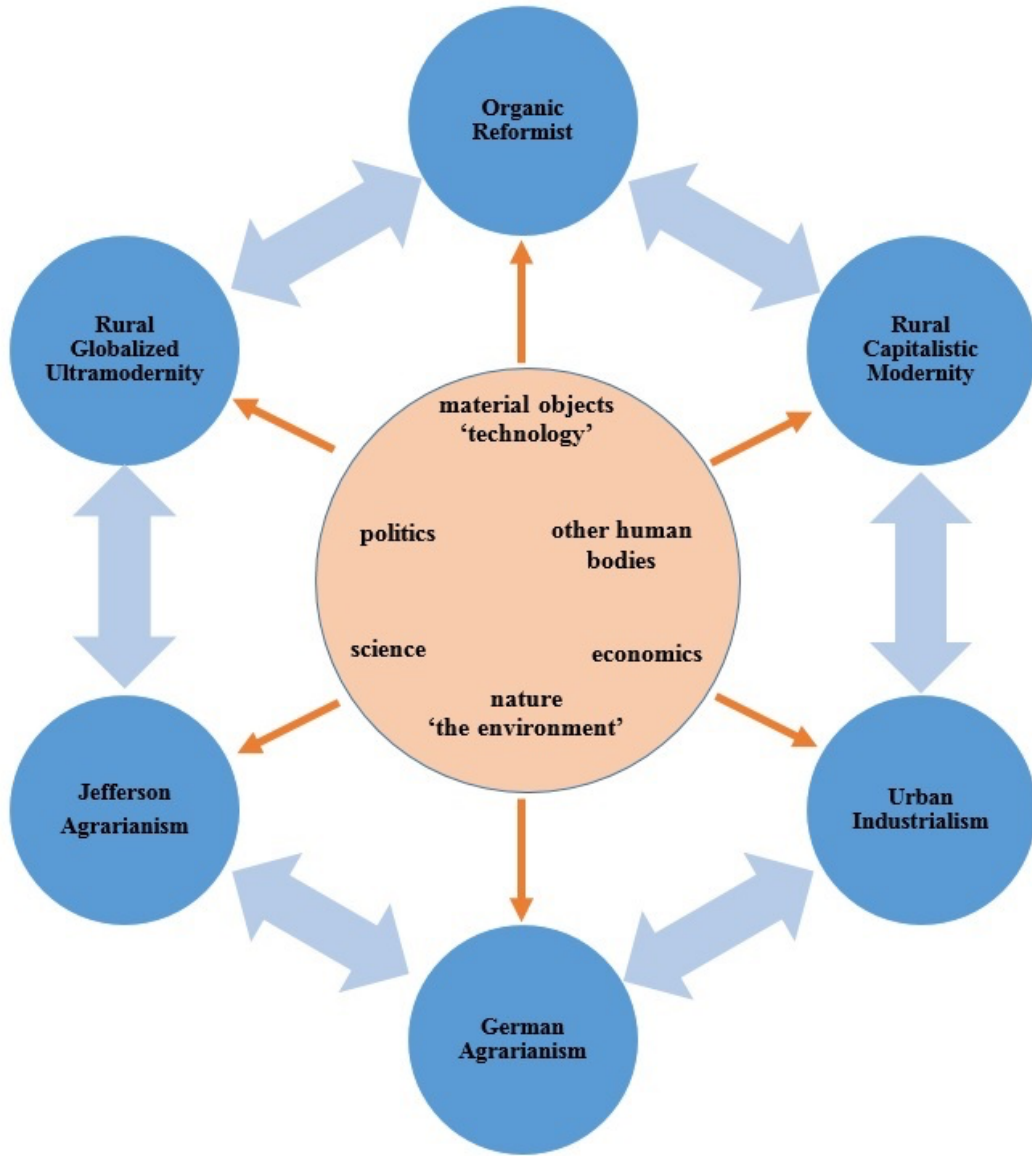
mechanized way of life, I propose a more subtle theory of modernity and use of technology that incorporates ideology and identity as essential elements.<sup>16</sup>

More specifically, I present the emergence of modernity in terms of changing and contested discourses that affect how farmers use technology and view themselves. This book will argue that beginning early in the twentieth century, farmers in the Corn Belt have used artifacts performatively, not just to plant or harvest corn more efficiently or to increase profit. In taking a user-centered approach that focuses on the farmers themselves, I will demonstrate that farm technologies serve as tools in rural America for people to understand themselves within a broader social context. This repeated cultural practice of *performative use* goes beyond merely imbuing material objects with symbolism. Rather, using and developing artifacts allows farmers to form and practice their identities as modern, to reinforce rural ideas about the morality of production, and to display their wealth in ways considered proper within an agrarian producer ethic. As such, one can think of technologies as constituting *a part* of rural discourses about unarticulated moral senses of self. These rural discourses and identities are not only unstable and constantly negotiated, but often conflict as a result of discordant rural responses to the realities existing in the broader American social ether or milieu. The contexts include scientific, political, technological and economic pressures exerted on farmers. As a result, rural Americans do not form one monolithic identity through technological use over time, but multiple combinations of rural discourses and self-images that form, break apart, or interact in a space of negotiation and

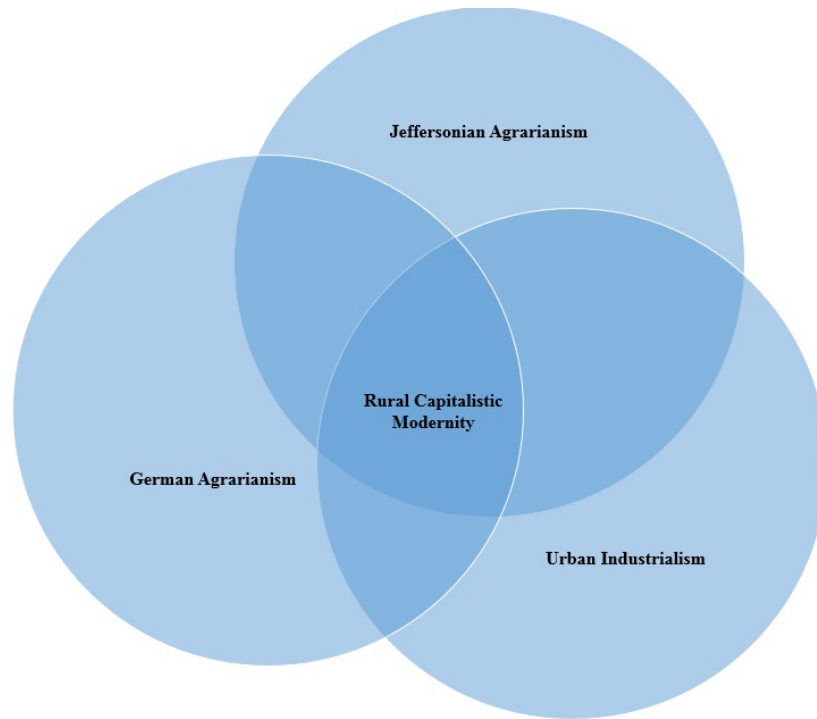
---

<sup>16</sup> This paragraph will be published in the upcoming article, Brinkman and Hirsh, “Welcoming Wind Turbines and the PIMBY (‘Please in my backyard’) Phenomenon: The Culture of the Machine in the Rural American Midwest,” (forthcoming 2017). Paper accepted for publication by *Technology and Culture* on September 25, 2015.

conflict over the morality of rural ways of life and agrarian landscapes. Much as a child blows bubbles that float in the air, join, and break apart, these *discourse identity bundles* form and exist in the social space of rural America in which farmers unconsciously help create and make use of them for strategic purposes (Figure 0.3). In other words, different ideologies, identities, and discourses about family, the environment, and ethical ways of making a living form possible packages of the moral self. These discourse identity bundles create social versions of the real items in the social ether to answer basic questions like “how should the land look?,” “what is the moral way to produce food?,” and “what should women and men do on a farm?” (Figure 0.3a and 0.3b). Farmers interact with technologies as a way of forming and performing these bundles of discourses and identities.



**Figure 0.3a:** Theory of discourse identity bundling in visual form. The blue arrows between each discourse identity bundle represent sites of conflict. The orange arrows signify that each discourse identity bundle forms as a result of unarticulated but also strategic interactions with the social ether, the orange circle, which includes the use of technology. Technological users then repeatedly perform each bundle of discourses and identities through technological use.



**Figure 0.3b:** This diagram depicts just one example of how a new discourse identity bundle can form through the combination of elements from two or more existing bundles as a response to stimuli in the social ether (the orange circle in Figure 0.3a above). This book will argue that this blending of some features of urban industrialism with a few characteristics of Jeffersonian and German agrarianism formed a new bundle called rural capitalistic modernity (shown in the center of this figure). This new discourse identity bundle then assumes its position in Figure 0.3a above as some actors perform it through technology use.

These discourse identity bundles may hold firm, repel one another, or combine to form new moral selves as a result of farmers’ strategic responses to new realities in the social ether. This book will examine six of these discourse identity bundles through the lens of performative use in response to “new” realities challenging rural Americans from the 1920s to the present. In Chapter 1, I present my methodology and detail the basis for my notion of performative use. This chapter also explains how scholars in a variety of fields from history, sociology, science and technology in society (STS), and policy studies, among others, may find my concepts of

performative use and discourse identity bundling useful in thinking about technology. Chapter 2 describes the historiography of performative use. Further, it describes why my perspective differs from other scholarship pertaining to a variety of domains including agriculture, class, and modernity. More specifically, my analysis identifies and challenges scholarly portrayals of farmers as stubbornly retaining a pure Jeffersonian “yeoman” identity that eschews technology and change. Since chapters 1 and 2 are largely academic and quite detailed, I invite readers more interested in my lighter historical narrative to skim these chapters in favor of beginning on Chapter 3. I do, however, recommend at least a quick overview of Chapter 2 so that the reader understands the notion of traditional Jeffersonian agrarian identity. As I will argue, later discourse identity bundles affecting agriculture incorporated elements of Jeffersonian and German agrarianism.

In Chapter 3, I discuss the genealogy of this performative use and the rural-urban conflict prior to the 1920s. I do not seek to present a comprehensive history of the origins of rural performative practices. Rather, I have selected as a case study encounters between social elites such as Benjamin Rush and Pennsylvania German farmers in the eighteenth century. I argue that these instances of observance in early America exhibit a “pattern of audience” involving performance by agrarians for the benefit of “outsiders” who regarded their subjects as less urbane “others.” The ritual of social elites observing an agrarian culture performing, from the audience’s perspective, an ambiguous mix of sophistication and backwards traditionalism would become reframed in the early twentieth century as a rural-urban conflict with updated bundles of identities and discourses. Additionally, Rush describes the discourse identity bundle of traditional German agrarianism, expressed through technology use and specific farming practices, that would later contribute to forming rural modernity in the Corn Belt as German



farmers migrated westward. The settling of the Corn Belt with traditional German and Jeffersonian agrarianism in the nineteenth century as well as the pattern of audience exemplified by Rush's tour of rural Pennsylvania in the 1790s set the stage for how farmers would use technology to perform their identities in the 1920s.

Chapter 4 discusses how some farmers used new technologies to help develop and reinforce a discourse identity bundle of *rural capitalistic modernity* in the context of a perceived rural-urban conflict in the 1920s and 1930s. This discourse identity bundle of rural capitalistic modernity combines elements of Jeffersonian agrarianism and traditional German agrarianism that existed prior to the 1920s. This new rural discourse adapted pre-existing ideas about the morality of the private landowner producing independently on a family farm with new modern sensibilities. These sensibilities include the capitalist concept of efficiency and a forward-looking faith in the newest technologies. Farmers who embraced these views practiced a modern capitalistic rural identity through technological use as a means of combating urban yokel stereotypes of rural Americans that underlay the rural-urban conflict. In doing so, some rural Americans could resist efforts by interests outside the farm to define rural modernity as equivalent to urban industrialization. As Joseph Frazier Wall notes in his bicentennial history of Iowa, farming especially presents a need for identity-reinforcing devices in an American cultural context:

The Iowa farmer had always been glibly and easily characterized as to personality and attitudes by historians and political commentators as he has been in dress by cartoonists. He has been portrayed as being basically conservative, isolationist, the last exponent of true laissez-fair in economics, and intolerant of alien peoples and new ideas. Much of this characterization

is false, but not easy to refute perhaps because *the farmer has had more difficulty than anyone else in our society of establishing his own identity*. He can identify with both management and labor in his aspirations and economic objectives. He is both producer and at the same time a heavy consumer of basic capital goods [emphasis added].<sup>17</sup>

In Chapter 4, I argue that Wall's description presents a repeated American cultural practice of farmers using technology performatively as one means of "establishing his own identity." I will show that the rural-urban conflict of the 1920s accelerated this process of identity formation and performance by rural Americans.

Chapter 5 traces how the political ideologies of the Cold War in the 1950s and 1960s entrenched farmer's identities, developed in the 1920s, as modern producers. From 1920 to 1950, farmers used technology to resist the urban image of farmers as backwards and of need of reform from outside of the farm through industrialization that took control away from farmers. During the Cold War, rural Americans similarly used technologies to resist the collectivized "other" in the communist world. In both cases, the farmer employed technology to perform his identity as an independent producer in control of work processes. The farmer in the Corn Belt became enrolled easily in a broad national project of promoting private ownership and capitalistic production as a means of combating the ideology of collectivized government control on the world stage because farmers had already reconciled capitalistic production with rural values and identities through technological use. Farmers had already embedded technology with

---

<sup>17</sup> Joseph Frazier Wall, *Iowa: A Bicentennial History* (New York: W.W. Norton & Company, 1978), 127-128.

an identity that opposed collectivization in the 1920s when urban interests sought to mold farmers as factory workers. In the Cold War, the rural modern identity became the “American way” in which discourses of rural-urban conflict yielded to a more inclusive nationalistic discourse. The importance given to agricultural production at all levels of government rendered the modern capitalist farmer as a Cold War warrior who had a duty to invest in the latest hardware and increase production. In spite of the strengthening of rural capitalistic modernity during the Cold War among farmers, the persistence of Jeffersonian yeoman stereotypes among urban observers of agriculture increased rural resentment. I describe how two groups of urban observers, television producers and environmental advocates, gained increased cultural significance in urban America during the Cold War and maintained false images of the anti-modern rural yokel. In addition to fanning the rural resentment of urban dwellers that had started in the 1920s, these urban actors also ensured that farmers would continue the familiar cultural practice of performative use well after the Cold War era. Farmers emerged from the Cold War with both an enhanced ultramodern identity and heightened frustration that their urban cousins viewed them as backwards in spite of many years of performative use.

In Chapter 6, the narrative turns to an analysis of the emergence of an ultramodern rural identity in which farmers think of themselves as heads of socio-scientific systems and as the ultimate experts in a globalized food network. Farmers have gone beyond using technology as a means of claiming their own version of modernity as they did in the early twentieth century. Instead, they use it as a means of constructing an identity of *greater* modernity. In addition, this ultramodern discourse identity bundle carries strong associations between machinery, production, and family legacy. Farmers adopting this ultramodern discourse identity bundle employ artifacts both as a means of rehashing a rural practice of combating urban yokel

stereotypes and as a way of reinforcing a perceived inborn capacity to use and develop new technology which they inherited from their grandfathers and grandmothers and which they intend to pass to their children. Additionally, this updated identity includes rural views of moral ways of displaying wealth and producing rooted in older Jeffersonian and German agrarianism.

Chapters 7 and 8 examine how rural identities and performative use among farmers in the U.S. Corn Belt influence controversies involving networks of scientific knowledge and material objects (so called “technoscience”<sup>18</sup>) in rural America. First, Chapter 7 analyzes the discourse surrounding the “Please in My Backyard” (PIMBY) response in which rural residents of the Midwest embrace the erection of large wind turbines. Going beyond simply attributing PIMBY attitudes to economic factors such as the increased rent received by farmers from the power companies, this chapter argues that many rural residents of the American Midwest view wind turbines as one of several artifacts reinforcing their identities as ultramodern users of technology. Second, Chapter 8 explores the ways in which the dominant discourse identity bundle of rural globalized ultramodernity poses unrecognized and historically embedded cultural challenges to the efforts of the organic and sustainable foods movement to reform American agriculture. The chapter concludes with a discussion of the debate over regulating genetically modified organisms in the U.S. In viewing the organic foods movement from the farmer’s perspective, I argue that farmers see scholars and sustainable food advocates as incorrectly interpreting the historical relationships between gender, technology, work, and family in ways that prevent producers and

---

<sup>18</sup> I use the term “technoscience” here in recognition of the current dominant view in STS and social studies of science that science and technology are not two separate entities but co-produced and hybrid human activities. Bruno Latour, *Science in Action* (Harvard University Press: Cambridge, MA, 1987), 174-175.

reformers from participating in a useful dialog about agricultural reform. Crucially, this chapter differs from traditional scholarly views of gender and work by demonstrating that both men and women on Midwest family farms participated in important “production” processes and formed a modern rural identity based on the use and adoption of technology. Rather than uncritically assuming a dichotomy between a feminized “family farm” and a masculinized “industrial farm,” I seek to show that both rural men and women regard technology and glorification of the “family” as forming important aspects of their identities and discourses as modern producers. In this chapter, I begin to apply my concept of discourse identity bundles to science and technology policy. I contend that by creating a discourse interpreted by farmers as characterizing large Midwest grain farms and their technologies as “industrial,” “masculine,” and overly mechanized, rural people regard organic food advocates and scholars as attacking the identity of Midwest denizens of both genders. These agrarians regard themselves as moral, family-oriented, and modern producers. This organic discourse thereby creates a roadblock to true agricultural reform endorsed by advocates seeking to reform mainstream agriculture because of the rural experience with the pattern of audience and past urban evaluations of rural life. Going beyond the farm, I seek to offer a deeper social and cultural understanding of what motivates people to use technologies as well as identify the often-unarticulated meanings attached to material objects. Alternatively, the view of the organic and sustainable foods movement from the Corn Belt farmer’s perspective reveals one example of two competing discourse identity bundles that offer clashing visions of the moral rural self, as represented by the red arrows in Figure 0.3 above. Scientific debates over the safety of genetically modified organisms or the effectiveness of monoculture to actually alleviate world hunger stand in as articulated proxy arguments that mask the underlying disagreement over the morality of the farmer’s ultramodern self-image. The

parties in the unarticulated debate retain bundled ideologies about progress, nature, gender, and the ways to make a living strategically to support their own self-images as moral actors.

Technological use in the case of Corn Belt farmers or lack of technological use in the case of sustainable agriculture advocates serves as a crucial site for entrenching two competing discourse identity bundles pertaining to food production. In Chapter 9, I conclude by extending Chapter 8 and asking the reader to consider what my theory of performative use may mean from a policy perspective. I suggest that both rural globalized ultramodernity and organic reformist identities pose outdated discourse identity bundles. I argue that a new rural identity incorporating elements of both of these agrarian identities will, and should, emerge in the coming years, and that this updated rural identity must come from farmers themselves through the performative use of technologies.

### **Outline of the Six Discourse Identity Bundles Relating to Farming**

My focus on the user and commitment to discourse precludes a realist perspective, but rather requires that I see the world through the *farmer's* cultural lens. My decision to focus on how the world looked to rural Americans by no means implies that others saw the world more “rationally.” I have no intent of taking such a pejorative stance towards the farmer. Rather, I assume that all social actors see the world through cultural filters in which discourse identity bundles play a critical role. I only single out the identities and discourses motivating farmers, rather than saxophonists, for example, in using material objects because of my own interest in agriculture. This rejection of realism aligns with the prevalence of social constructivism in STS

and the history of technology maintaining that nothing predetermines the uses and developments of technologies.<sup>19</sup>

Namely, I present the history of American agricultural in the twentieth century as experiencing six discourse identity bundles, each of which spoke to the relationship between farmers and technology and the discourses around farming, technology, and work processes: *traditional German agrarianism, traditional Jeffersonian or English agrarianism, urban industrialism (or urban industrial modernity), rural capitalistic modernity, and rural globalized ultramodernity*. In Chapter 8, I argue how *organic reformist* identity seeks to add itself to the mix of rural discourses and identities, often seen by farmers as conflicting with rural versions of modernity.

Urban industrialism and rural capitalistic modernity developed early in the twentieth century while rural globalized ultramodernity appeared by the 1970s and continues to the publication date of this book. Farmers largely opposed urban industrialism based on a perception of urban encroachment on rural life as part of the rural-urban conflict. From rural perspectives, urban notions of modernity violated important values of Jeffersonian and German agrarianism such as independence, ownership of personal property, and the farmer's control of a family-based production process. Historians Theodore Saloutos and John D. Hicks have also

---

<sup>19</sup> By “realism” or “realist” I mean Bruno Latour’s definition as the tendency to regard “representations” as “what is really outside, by the only referee there is, Nature.” In other words, realism is the tendency to regard objects as having only one true observable nature and meaning determined by simple observation regardless of socially or culturally specific ways of seeing and knowing. Latour, *Science in Action*, 98.

pointed out that Populist political movements in the Midwest early in the twentieth century “instilled in many farmer’s minds a deep-seated belief that the various combines through which business operates must somehow be restrained.”<sup>20</sup> In contrast to urban industrialism, farmers helped to develop rural capitalistic modernity and rural globalized ultramodernity, identities that they devised and reinforced through technological use.

In the following pages, this book will demonstrate the identity-forming relationship farmers in the Corn Belt have established with the material objects they use. It does so through a contextual view that seeks to identify consistent discourses affecting rural America over time. One can see how farmers use technology as a means of performing the moral self in the memoir of English professor David Hamilton who recalled growing up on a Missouri farm in the late 1930s and early 1940s:

It was my small theater of possibility as one winter afternoon after another, after walking home from school, I went downstairs, climbed into the tractor’s seat, and steered toward that imaginary horizon. The only window was high, small, behind me to the wintery north. A gray wash of shadow surrounded my play. But for me, that gloomy wall opened to a sunswept expanse of grain. I worked long rolling fields, under sky blue to the horizon, with wheat spreading on all sides like my expectation of summer. I thought it heroic to bring all the grain to harvest. On that tractor, I farmed more acreage than my

---

<sup>20</sup> Theodore Saloutos and John D. Hicks, *Agricultural Discontent in the Middle West: 1900-1939* (Madison, WI: University of Wisconsin Press, 1951), 31.



family would ever know, and night after night, my mother had to call and call again to tell me to turn out the light and come upstairs for supper.<sup>21</sup>

As a young boy, Hamilton had already inherited an embodied cultural practice of performance by rural Americans before he could even drive the tractor he sat on. Later in his memoir, he states poetically, “To farm is to hold onto something, and a farm is land to grasp.” Harmonizing with this view, I intend to show in the following pages that farming in the Corn Belt also involves grasping farmer’s identities, not just their land, and that technology serves as an important means of “holding on” to a sense of self. Hamilton recognized this self-forming function of his uncle’s tractor when he wrote, “Standing on his tractor, Uncle Henry was grasping more than the wheel. He had grown up farming. He had studied agriculture at the university.”<sup>22</sup> Hamilton then described the pride his uncle and father had at “‘being his own boss,’ able to make his own decisions and work through his mistakes.” In other words, Hamilton’s father saw the tractor as a way to perform his identity as an independent, land-owning, farmer through repeated use of the artifact itself. This relationship between Corn Belt denizens and artifacts was not inevitable. Rather, several cultural and historical forces in the century before Hamilton farmed his imaginary acreage shaped this unarticulated performative use of technology.

---

<sup>21</sup> Hamilton, *Deep River: A Memoir of a Missouri Farm*, 5-6.

<sup>22</sup> *Ibid.*, 155-156.

## Chapter 1

### Desk Work: The Methodologies of Studying Identity and Performative Use

*Don't play the saxophone. Let it play you.*

Charlie Parker, quote found in Edward Slingerland, *Trying not to Try*<sup>23</sup>

One of my fondest childhood memories away from the farm occurred at nine years old when I received my first alto saxophone. I can still remember the leather case opening to reveal glimmering and intricate key work lying on a bed of blue velvet. I literally lost my breath for a second. As I hung the instrument from my neck and played its first notes, I instantly transformed from a child who had, up to that point, played a nerdy plastic recorder into “a cool jazz cat too hip for the room,” at least in my own mind. Since that moment, I have made the same type of transformation literally thousands of times when the horn changes me from a bookish student or intellectual to a symbol of coolness on a bandstand. This transition occurs both in my own mind and to others. In fact, people have told me that for them I “become a different person” when I play my saxophone on “gigs” in public. From my own perspective, I feel anxious if I spend several days not playing my saxophone, and I often solve writing blocks by playing my horn and then returning to a manuscript. I cannot “quit” playing the object because ending my relationship with the artifact is equivalent to quitting myself.

---

<sup>23</sup> Edward Slingerland, *Trying Not to Try: Ancient China, Modern Science, and the Power of Spontaneity* (New York: Broadway Books, 2014), 1; see also Charlie Parker, *The Official Site of Charlie “Yardbird” Parker*, “Quotes,” <http://www.cmgww.com/music/parker/about/quotes.html> (accessed 5/23/16).

The historian Michael Segell, in his *The Devil's Horn: The Story of the Saxophone from Noisy Novelty to King of Cool*, noted this effect that the object has on the sense of self. A saxophone player himself, Segell interviewed famous saxophonists including Sonny Rollins and Branford Marsalles, asking them to recall their first encounter with the instrument. "Almost all of them [the saxophonists]," Segell wrote, "described their virgin encounter with the horn as some kind of epiphany, conversion, mythical event-or, more prosaically, a mugging." For the virtuoso alto saxophonist Phil Woods, Segell recalls, "Phil Woods can vividly picture his mother pulling the cased instrument from its bedroom hiding place, as though it was a dirty family secret that he was now old enough to understand, and his hands trembling as his fingers magically assumed a perfect position on the sleek, sexy, serpentine vessel." Segell himself described receiving his first saxophone as "a thunderbolt, a lightning strike that instantly and permanently rearranged my brain chemistry." Later in his account, Segell writes in similar mystical terms "After an innocent fist kiss - a perfect long tone, say - its mysterious energy envelopes and overwhelms you. You enter into some strange unwritten devotional contract, helplessly announce your allegiance to the cult of Adolph, and become a loyal advocate for the voice of Sax."<sup>24</sup>

Importantly, none of the musicians in Segell's account describe the saxophone in economic terms. In fact, the legendary tenor saxophonist Sonny Rollins has famously declared "But if I didn't have to make money, I would still play my horn."<sup>25</sup> The question for historians of

---

<sup>24</sup> Michael Segell, *The Devil's Horn: The Story of the Saxophone from Noisy Novelty to King of Cool* (New York: Picador, 2005), 5-7.

<sup>25</sup> Sonny Rollins, *WikiQuotesX*, <http://www.wikiquotesx.com/quote/sonny-rollins-364159/> (accessed 5/23/16).

technology and STS scholars becomes “why would Rollins still play his horn and what does that teach us about how we think about technology?” For me, one epiphany in my playing occurred several years ago when the music professor Pete Whitman told me in a private lesson “Just relax on the gig, it’s just another day. Playing the horn is just the way I understand the world.” Seeing music this way allowed me to relax and play better because it drew attention away from stresses such as how to impress the audience and towards a type of surrender to the environment and the music.

This idea that an object represents not simply a tool for performing a specific function leading to an economic benefit, but a means of understanding oneself and relating to the world has resonated with many musicians writing or talking about playing music. Victor Wooten, Charlie Parker, and Kenny Werner have all claimed that the artifacts they use on a daily basis allow for some kind of mystical transformation where music already “hanging in the air” literally “plays” them.<sup>26</sup> I must admit that when playing well, I often enter what one drummer I regularly perform with calls a “bubble” or a non-physical, non-linguistic, space of consciousness where I can communicate with other musicians and audience members and access what one may call

---

<sup>26</sup> Victor Wooten, *The Music Lesson: A Spiritual Search for Growth Through Music* (New York: Berkley Books, 2006); Kenny Werner, *Effortless Mastery: Liberating the Master Musician Within* (New Albany, IN: Jamey Aebersold Jazz, 1996); as quoted at the start of the chapter, alto saxophone master Charlie Parker is famously quoted as saying “Don't play the saxophone. Let it play you.” Charlie Parker, *The Official Site of Charlie “Yardbird” Parker*; Slingerland, *Trying Not to Try: Ancient China, Modern Science, and the Power of Spontaneity*, 1. See also Stephen Nachmanovitch, *Free Play: Improvisation in Life and Art* (New York: Jeremy P. Tarcher/Putnam, 1990).

“energies.” From the perspective of a scholar, if users of musical instruments have widely recognized the importance of material objects in forming their identities and for understanding the world around them, one must wonder why historians of technology and STS scholars focus largely on the economic benefits or designed functions of technologies.<sup>27</sup> Surely, these identity-forming and world-conceiving uses of artifacts extend beyond the saxophone. Indeed, if one attends a car show in the U.S., one can observe people not simply analyzing gas mileage or cost of new vehicles but sitting in the driver’s seat, placing their hand on the wheel, and gazing out of the window with a smile on their faces, even in cars they cannot afford. In fact, people brave traffic to reach urban convention centers across the U.S. and purchase a ticket simply to sit in non-moving cars. Why do people engage in such “strange” and “irrational” behavior? I argue that when people interact with technology, such as playing a saxophone or sitting in a new car at a car show, or driving a tractor, they perform their identities in ways influenced by culture and society. Further, this process of performative use of artifacts represents not simply an interesting side-note in the human experience with the material world, but comprises a significant factor in determining how people adopt and interact with technology. In short, I do not simply play my

---

<sup>27</sup> Although, as already discussed in Chapter 1, Edward Jones-Imhotep has recognized pianist Glenn Gould’s use of recoding technologies to form a moral “technological self.” Jones-Imhotep, “Malleability and Machines: Glenn Gould and the Technological Self,” 287. However, Jones-Imhotep still focuses on the functional use of these recording technologies to achieve a more moral self rather than on the unconscious relationship between technological use and identity. For a more detailed discussion of how my theory of performative use differs from Jones-Imhotep’s conception of the technological self, see Chapter 1, pages 36-37.

saxophone for the “rational” aim of making a certain amount of money at a wedding or music festival, but as a form of repeated performative use.

---

I view methodological analysis as the academic equivalent to farmers’ “desk work” of doing taxes and balancing account books: as a tedious process that just must be done. Thus, before commencing my historical narrative of how and why farmers adopted the cultural practice of performing rural identities through technology use, I feel compelled to outline the methods I used to study the relationship between identity and technology. I aim here to convince the reader that my approaches (or methodological innovations?) of performative use and discourse identity bundling provide useful ways to think about the unarticulated meanings that users attach to technologies in a wide variety of domains, not just in farming. Next in this chapter, I describe my methodology in examining farmers’ unarticulated identities. How does one, after all, find and examine unspoken evidence? In Chapter 2, I outline the historiography of my study arguing that my theory of performative use combats a common misconception among historians and other scholars that farmers have held onto a persistent anti-modern Jeffersonian agrarianism. I then explain how this book builds on the work of historians that have granted farmers greater agency in bringing about technological change. First, in this chapter, I address the obvious question of why I chose to focus my narrative in this book on only the American Corn Belt and not on rural identities more broadly. After justifying my geographical boundaries, I discuss my methods for targeting unarticulated identities and why my theory of discourse identity bundling presents a particularly effective way of identifying and analyzing historical actors’ unarticulated senses of self. In this chapter, I attempt to justify why I think existing scholarship would benefit from my theories of performative use and discourse identity bundling.

## Rationale for Focusing on the Corn Belt

I limit my examination of farmers' technology use to the Corn Belt, which I consider to comprise an expansive area consisting of Ohio, Illinois, Indiana, Missouri, Iowa, Indiana, southern Minnesota and Wisconsin and eastern North Dakota, South Dakota, Nebraska, and Kansas, and northern Kentucky. (For a map taking a broad view of states commonly considered as comprising the Corn Belt, see Figure 1.1. This region may comprise more states than other scholars would consider as the "Corn Belt" for reasons I will explain below). In focusing on this region, I do not consider the social and cultural attitudes of farmers in the American Southeast, Mid-Atlantic, or West. While packages of rural discourses and identities travel, I also recognize that regions of rural America have different social, political, cultural, and economic heritages. The view of work or land early in the twentieth century, for example, may differ significantly between a Midwest corn farmer and Southern sharecropper.

My decision to focus on rural populations in the Midwest Corn Belt derives from three main advantages that this region provides for my focus on the performance of identity through technological use. First, as I will show in Chapter 8, the Corn Belt has thoroughly blended the "industrial" and the "family" farm both currently and historically, allowing one to problematize these categories. Second, the variance in crops and animals produced in the Corn Belt historically means that farmers in the region have always carved out their identities through what geographers J.E. Spencer and Ronald J. Horvath call "a farming mentality" organized around a perception of shared technologies and production processes.<sup>28</sup> Not only have geographers and

---

<sup>28</sup> J.E. Spencer and Ronald J. Horvath, "How Does an Agricultural Region Originate?" *Annals of the Association of American Geographers* 53, no. 1 (1963): 80-81.

historians such as William Warntz found that the Corn Belt existed as a well-defined region in academic and popular literature by 1900, but farmers themselves in these areas also viewed themselves as sharing some commonality with one another early in the twentieth century in ways that created a de facto distinct cultural “region.”<sup>29</sup> When discussing corn farming methods by native Americans in 1920 for example, Estelline Bennett, writing for *Better Farming*, stated “On the Fort Bethold reservation in North Dakota many miles north of what white men consider the corn belt, the Indians still are raising the Mandan corn with the same sureness of crop that is a matter of history.”<sup>30</sup> As a result, the region provides fertile ground for thinking about how people form unarticulated views that may or may not reflect the realities of production and how these “mentalities” change over time. My treatment of technology focuses on how these taken-for-granted mentalities and identities formed historically, the role of material objects in forming these views of self, and the centrality of artifacts in policy debates driven by these unarticulated notions.<sup>31</sup> Spencer and Horvath even allude to the idea that the tendency to view “innovation”

---

<sup>29</sup> William Warntz, “An Historical Consideration of the Terms ‘Corn’ and ‘Corn Belt’ in the United States,” *Agricultural History* 31, no. 1 (1957): 40-45; Spencer and Horvath, “How Does an Agricultural Region Originate?” 81-82.

<sup>30</sup> Estelline Bennett, “Mandarin Corn, the Little Mother of the Great Crop,” *Better Farming* 43, no. 8 (March 1920): 7, 13.

<sup>31</sup> Further, Spencer, Horvath and Warntz have shown that Midwesterners have understood the borders of the Corn Belt in terms similar to contemporary conceptions since at least 1900, even though many portions of the region at the time produced crops other than corn. Warntz, “An Historical Consideration of the Terms ‘Corn’ and ‘Corn Belt’ in the United States,” 40-45; Spencer and Horvath, “How Does an Agricultural Region Originate?” 81-82.



as a virtue among the residents of the Corn Belt has served as a more important factor in rendering it a distinct cultural region than the growing of feed corn.<sup>32</sup> As the geographer Wilbur Zelinsky points out, one should think of the Corn Belt more of a “vernacular region” that reflects cultural traits rather than an area that delineates certain physical features.<sup>33</sup> As such, I have

---

<sup>32</sup> Spencer and Horvath, “How Does an Agricultural Region Originate?” 80-81; Indeed in the 1920s, Bennett considered the Corn Belt as the geographic border of “modern” American agriculture and the Native American corn growers as clearly outside of this region of “modern” methods. Bennett, “Mandarin Corn, the Little Mother of the Great Crop,” 7, 13; for use of the term “Corn Belt” in the 1920s see also A.L. Haecker, “Do I Need a Silo? Half a Million Farmers in the U.S. Have Answered ‘Yes,’” *Better Farming* 43, no. 6 (June 1920): 6. Thus, I share the view of Spencer, Horvath, and Warntz in considering these cultural perceptions of commonality as more historically significant in defining the Corn Belt than any actual shared production process or geographical characteristic. My conception differs from some historians who have incorrectly assumed that the region acquired the term “Corn Belt” because the corn-hog economy has in fact always dominated the area. See for example, Mark Essig, *Lesser Beasts: The Snout to Tail History of the Humble Pig* (New York: Basic Books, 2015), 153-155 where Essig uses the term Corn Belt assuming that the term meant that the growing of corn as feed in fact comprised the predominant mode of production throughout the region. Essig failed to problematize this assumption.

<sup>33</sup> Spencer and Horvath, “How Does an Agricultural Region Originate?” 82. Indeed, a closer look at farming in the region reveals the utility of viewing the region in terms of shared cultural mentalities rather than actual geographical or economic traits. While the growing of corn varieties used for animal feed rather than human consumption marks the most identifiable form

chosen the Corn Belt to study how technology forms unarticulated cultural identities because the

---

of agricultural production in the Corn Belt, farmers have historically raised many other animals and crops in the region in significant quantities. Spencer and Horvath note that farmers in the Corn Belt achieved the maximum in acres of corn in 1925 and then experienced a decline. Even as late as 2012, corn comprised just roughly 36% of the total crop area planted in Iowa, with 29% as soybeans, 21% wheat, and 14% as “other” crops.<sup>33</sup> In fact, geographers since the mid-1930s more interested in a functionalist description of landscapes rather than sociological or cultural explanations have bemoaned that the term Corn Belt has implied “distinctions which have little or no geographic validity when checked on the ground.” Derwent Whittlesey, “Major Agricultural Regions of the Earth,” *Annals of the Association of American Geographers* 26, no. 4 (1936): 211-212. Yet, these long-standing efforts by these rationalist geographers to construct more “scientific” maps of the region that reflect variations in crop and animal production have failed to dislodge the “Corn Belt” vernacular among farmers or within American society more broadly. John C. Weaver, “Crop-Combination Regions in the Middle West,” *Geographical Review* 44, no. 2 (1954): 175-200. Geography teacher Douglas MacLeod, writing to improve geographical pedagogy, has even urged using analysis of the Corn Belt to teach students the difficulty of defining a region based on statistical production categories. Douglas MacLeod, “The Corn Belt: An Exercise to Define the Limits of a Region,” *Journal of Geography* 110, no. 1 (2011): 32-46. Therefore, the Corn Belt comprises a distinct agrarian region not because of a simple observation that “farmers grew breathtaking amounts of corn,” as historian Mark Essig claims, but as a result of a complex set of shared cultural values, institutions, and perceptions revolving around agriculture. Essig, *Lesser Beasts: The Snout to Tail History of the Humble Pig*, 154.

region itself is defined by these same unspoken attitudes. One may even say that “the Corn Belt” is part of the discourse that forms farmer’s identities.

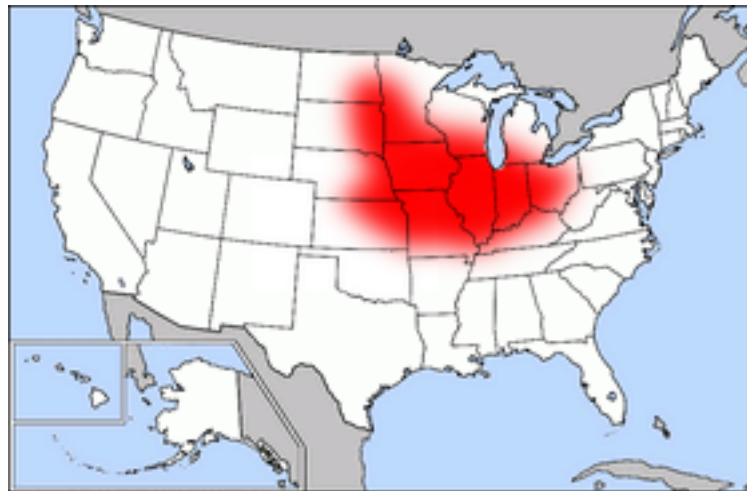
Third, Americans often view the Midwest, of which the Corn Belt comprises a large part, as the region where the myth of Jefferson’s moral pastoral most prominently resides. The accomplished historian James R. Shortridge has extensively traced the process by which contemporary popular literature from 1880 to 1915 constructed the “Middle West” as a distinctive regional label. Much like the “Corn Belt,” Shortridge argues that perceived “cultural traits” explain the formation of the “Middle West” regional label more than any geographical feature. According to Shortridge, “Writers said the Middle West epitomized the pastoral ideal” and that by 1912, they described it as “the cultural core of the nation.”<sup>34</sup> Shortridge described these traits granted to the Middle West by popular writers as “self- reliance/independence, pride, kindness/openness, realism/pragmatism, strength of character, thrift, humbleness, industriousness, progressivism/idealism, and morality.”<sup>35</sup> In the following chapters, I will argue that the strength of the Jeffersonian pastoral ideal in the Midwest from 1880 to 1919 allows for an interesting examination of the cultural role played by technology during the rural-urban conflict of the 1920s. Namely, I will contend that people negotiated or reformed their identities as moral actors consistent with the traits described by Shortridge when faced with new technologies and more rapid urban industrialization from 1920 onward. My story will show that these changes at first seemed to threaten the moral sense of self for those in the “Middle West” as urban discourses around technology sought to reframe the dominant image of Corn Belt

---

<sup>34</sup> James R. Shortridge, “The Emergence of the ‘Middle West’ as an American Regional Label,” *Annals of the Association of American Geographers* 74, no. 2 (1984): 209-220.

<sup>35</sup> *Ibid.*, 213.

farmers from a heroic figure occupying the pastoral to an unintelligent, backward, and dysfunctional “rube.” The often-contested process of farmers forming identities as moral producers in ways that reconciled technology with a Jeffersonian ideal in the face of growing urban industrial power yields a rich and fascinating historical narrative. This story of farmer’s relationship with technology reveals broader insights into how people use material objects to understand themselves. All of these characteristics of the Corn Belt render this region not only fertile for growing corn and pigs, but for analyzing the role of technological use in forming and performing identities.<sup>36</sup>



**Figure 1.1:** The Midwest Corn Belt highlighted in red. This map is in the public domain. Benc at English Wokipedia, “Map of the USA Highlighting Corn Belt.png,” *Wikimedia Commons* (The General Libraries, the University of Texas at Austin, August 13, 2004).  
[https://commons.wikimedia.org/wiki/File:Map\\_of\\_USA\\_highlighting\\_Corn\\_Belt](https://commons.wikimedia.org/wiki/File:Map_of_USA_highlighting_Corn_Belt).

---

<sup>36</sup> So, for a comprehensive history of how people came to conceive of the Corn Belt, see Shortridge, “The Emergence of the ‘Middle West’ as an American Regional Label;” Spencer and Horvath, “How Does an Agricultural Region Originate?” Wartz, “An Historical Consideration of the Terms ‘Corn’ and ‘Corn Belt’ in the United States.”

[png](#) (accessed 1/24/17). See also “The Midwest Corn Belt,” *PBS-American Experience*, <http://www.pbs.org/wgbh/amex/trouble/maps/> (accessed 2/28/16).

### **The Need for a Theory of Performative Use and Discourse Identity Bundling**

Focusing on the history of technology from a user’s perspective allows scholars to deconstruct the social power relationships embedded in large technological systems.<sup>37</sup> This revealing of underlying power relationships not only serves a possible social justice function by including technology within the purview of structures that quietly preserve inequalities; it also serves a practical role by allowing scholars to solve two main intellectual challenges posed by contemporary historians of technology. First, highlighting use allows historians to more easily abandon the concept of “technology” for the concept of “materiality,” thereby broadening the scope of scholarship. David Edgerton has urged historians examine use as a means of expanding understandings of how humans interact with the material world. For Edgerton, the Western progress narrative constructed by twentieth-century corporations as a means of selling products has created a cultural bias that causes people to focus only on the newest and most complex technologies rather than the way people actually live on a daily basis. By associating technology with only great inventors and innovators, Edgerton argues, history becomes a series of epochs

---

<sup>37</sup> For a discussion of how scholars should view technology as part of large technological systems, see Thomas P. Hughes, “Technological Momentum.” In *Does Technology Drive History? The Dilemma of Technological Determinism*, edited by Merritt Roe Smith and Leo Marx, 101-113. Cambridge, MA: MIT Press, 1994; Wiebe E. Bijker, Thomas P. Hughes, and Trevor J. Pinch, *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology* (Cambridge, MA: MIT Press, 1987).

such as “the computer age” that fails to capture how most people live, particularly non-Western, non-white, and non-male people comprising the majority of the world’s population. In addition, Edgerton observes that by concentrating on a small handful of new and complex technologies, historians play a role in reinforcing the social power wielded by corporate interests and controllers of large technological systems. The spotlight on great inventors for Edgerton also makes technological development appear linear because it draws attention away from older material objects that form an important part of both technological systems and epochs of technological development.<sup>38</sup> In short, focusing on use “gets” the progress narrative “out of the historians way” allowing for a more honest view of material objects. Historian Steven W. Usselman criticizes Edgerton’s work on several grounds, including the observation that in seeking to debunk “popular enthusiasm for technology,” Edgerton tends to create straw men that give the reader the impression that most historians of technology fail to critique these popular celebrations of progress. Usselman alleges that in seeking to disprove a premise that no longer widely exists among historians of technology, Edgerton exhibits “a deep reluctance to impose upon the course of events in the twentieth century a central, commanding narrative in which technological change figures prominently.” While Usselman offers a valid critique, I would also contend that the chief value of Edgerton’s approach derives from the fact that he tempers the tendency of historians to over-emphasize macro-narratives for explanations of historical change. Indeed, Usselman finds Edgerton’s approach useful in considering the experience of people outside the U.S. with technology precisely because such users operate within different macro-level contexts. Surely, one can find Edgerton’s approach useful for thinking about how similar people occupying non-dominant or localized social groups interact with artifacts. Concentrating

---

<sup>38</sup> Edgerton, *Shock of the Old*, Introduction.

on use, in other words, leads to an examination of technology from the perspective of people whose daily lives or interests remove them from the mainstream macro-level narratives of progress. Although Usselman identifies the importance of government-funded research and development or the importance of computers to create an “Information Age,” one should not take the next logical step and assume that these macro-level contextual concepts describe one monolithic experience with technology even for people within “developed” nations like the U.S.<sup>39</sup> I intend to simply echo Edgerton’s attention to the user’s actual experiences within broader social and economic developments in society.

Second, a focus on use provides a window into what a Society for the History of Technology (SHOT) panel in 2015 called “diversity as method” because it allows the scholar to emphasize material use by people excluded by dominant social institutions without “naturalizing” social categories.<sup>40</sup> The focus on use allows historians of technology to enact Donna Haraway’s appeal to abandon social dichotomies because it requires an examination of material use from the perspective of the “outsider.” Use reveals how those people excluded from the dominant institutions that pursue technological development utilize material objects to form

---

<sup>39</sup> Steven W. Usselman, review of *Shock of the Old: Technology and Global History Since 1900*, by David Edgerton, *Reviews in American History* 35, no. 4 (2007): 580-589.

<sup>40</sup> Ruth Schwartz Cowan and Francesca Bray, Organizers, “Presidential Roundtable: Diversity as Method in the History of Technology” (presentation, Society for the History of Technology Annual Meeting, Albuquerque, NM, October 9, 2015).

identities and discourses either as forms of resistance to social power or as a way of carving out cultural “spaces.”<sup>41</sup>

Several historians have already focused on use as a means of conceptualizing technology as materiality and incorporating diversity as method. Nina Lerman showed that exhibits of “material arts” included basket weaving by black women alongside machinery as late as the 1870s. For Lerman, the fact that these baskets later became labeled “craft” rather than “technology,” suggests that technology is not even an artifact, but a social category of exclusion. The category “technology” became mapped onto existing social hierarchies such that objects resulting from the activities of those already with social power became “technology.” As Lerman states, “It (technology) helped limit access to things and knowledge, to a new kind of power, without sounding undemocratic.” This realization allowed Lerman to study activities in a juvenile home in terms of how use of artifacts constructed social categories such as race and gender. A focus on only “great inventors” would ignore the function of technology as reinforcing social hierarchies.<sup>42</sup>

A few historians of technology have gone beyond Lerman’s theory that “technology” itself reinforces social hierarchy by exploring how “outsider” groups use material objects to form their own identities and discourses. A focus on use not only allows historians to see how

---

<sup>41</sup> Donna Haraway, “A Cyborg Manifesto: Science, Technology, and Social-Feminism in the Late Twentieth Century,” in *Simians, Cyborgs and Women: The Reinvention of Nature* (New York: Routledge, 1991), Ch.8.

<sup>42</sup> Nina E Lerman, “Categories of Difference, Categories of Power Bringing Gender and Race to the History of Technology,” *Technology and Culture* 51, no. 4 (October 2010): 893-918.



people's lives involve a greater variety of old and new artifacts, as Edgerton argues, but also a multiplicity of ideologies, identities, and discourses. As historian Rayvon Fouché has stated, scholars do not simply need to view material objects as suppressing outsider groups, such as racial minorities, but as a means towards "black technological agency." Fouché asserts that black people have not only been oppressed by technology, such as slave ships, but have also used material objects as "black vernacular technology" to preserve and promote their identities organized around a unique black aesthetic.<sup>43</sup> These "vernacular technologies" have come in three types: redeployment (a saxophone used in jazz rather than military music), reconception (a police scanner used to observe police activity), and re-creation (a DJ redesigning a conventional turntable in a case of strong social constructivism). Fouché then discusses how black people used the controversy over the darkening of OJ Simpson's photo on the cover of *Time* magazine on June 27, 1994 to contest both the racism embedded in photographic technology and the social criminalization of black men.<sup>44</sup> In focusing on use, Fouché can see technology as a site of contestation in which people co-construct material objects and racial identities. A study simply

---

<sup>43</sup> Fouché uses as an example of the "black vernacular" the "blues muse," a term coined by the notable black studies scholar Guthrie Lewis, Jr. to denote an aesthetic found in early blues through James Brown and up to black music in the present as a means of coping with while subtly protesting social hierarchies by creating an "othered" cultural space. Guthrie Ramsey, Jr., *Race Music: Black Cultures from Bebop to Hip Hop* (University of California Press, Berkeley, CA: 2003).

<sup>44</sup> Rayvon Fouché, "Say it Loud, I'm Black and I'm Proud: African Americans, American Artifactual Culture, and Black Vernacular Technological Creativity," *American Quarterly* 58 (2006): 639-61.

focusing on the invention of the camera or the turntable would view these objects as neutral artifacts that serve one design function rather than as material sites for determining the meaning of “blackness” in America, as means for social protest of accepted hierarchies, and as vehicles for expressing a cultural vernacular.

Focusing on use of material objects also creates possibilities for scholars to explore the intersection of technology, gender, and identity in ways that do not naturalize the “maleness” of technology. Ruth Oldenziel shows how greater access of men to twentieth-century institutions such as engineering schools at a time when the middle class viewed the bodies of male workers and athletes as models of white maleness contributed to the gendering of technology as “male” in the U.S. Oldenziel argues that engineers shaped their identities to conform to this model of maleness to shore up class, race, and gender boundaries and to distinguish themselves from shop floor unionized workers. Technology became “the measure of men and not women as a matter of course.”<sup>45</sup> Carroll Pursell similarly argues that the appropriate technology and organic foods movements lost popularity in the 1980s because of their association with “feminine” cultural values such as “Small is Beautiful.” Values regarded as feminine conflicted with the culture and politics of the 1980s, which sought to re-masculinize America after its defeat in Vietnam.<sup>46</sup>

Surprisingly, these feminist-minded scholars simultaneously point out the male gendering of technology as a technique for enforcing social power while also ignoring how women use

---

<sup>45</sup> Ruth Oldenziel, *Making Technology Masculine* (Amsterdam: Amsterdam University Press, 1999), Introduction.

<sup>46</sup> Carroll Pursell, “The Rise and Fall of the Appropriate Technology Movement in the United States, 1965-1985,” *Technology and Culture* 34 (1993): 629-637.

material objects to construct their own identities. In other words, Oldenziel and Pursell do not use *diversity as method* as Fouché does when he examines black technological agency. Existing scholarship implies that the relationship between gender and technology may not conform neatly to the masculine-technology/feminine-nature binary when one focuses on use of material objects. Rather than exploring this gender dichotomy directly, Ruth Schwartz Cowan argues that use of household technology by housewives in the twentieth century did not actually lead to less work for middle class women. The number of tasks women had to do increased because men worked outside of the home and advertisers raised societal expectations of cleanliness and order. Importantly, women themselves internalized this new cultural standard for greater cleanliness such that society and technology co-constructed identities to reinforce what it meant “to be a good mother.” Cowan leaves the reader with an interesting ambiguity, namely, to what degree should we view the women as having agency to construct their identities as mothers through technological use? For example, household technologies of food preparation could have led to less work had people lived communally, but Americans’ valuing of private property and the nuclear family prevented communal technology use. Women, who ultimately controlled the work process of food preparation, used household technologies to realize their own identities as workers in a privatized workplace and as independent food preparers for a nuclear family.<sup>47</sup> One could argue women had technological agency even though they created more work for themselves. Alternatively, Michel Foucault’s concept of disciplinary power, viewing discourses and ideologies in society as disciplining people, suggests that the women in Cowan’s history lacked agency in determining their identities, notwithstanding their control over use of material

---

<sup>47</sup> Cowan, *More Work for Mother*.

objects.<sup>48</sup> However, even Foucault's concept of an omnipresent disciplinary power makes room for the view that control over technology, such as industrial machinery, grants agency to influence time and work. Sharing a Marxist view with scholars such as David Noble, who showed how employers used less efficient computerized machine tools to weaken unionized labor, Foucault still sees technological use as influencing discourses and power.<sup>49</sup>

A similar ambiguity in the agency of women to construct identities exists in Rachel Maines' study of women's use of electrical vibrators in the late nineteenth and early twentieth centuries. Maines shows how women and doctors camouflaged the sexual nature of vibrators by framing them within the medical discourse of hysteria, a disorder arising from negative stereotypes about women as irrational. One could read Maines' study as showing how women used technology to maintain a female sexual identity within a culture of male sexual oppression. According to this interpretation, Maines' vibrators take on the same resistance function as Fouché's black vernacular technologies. However, if women honestly believed in hysteria as a form of pathology, one could read Maines' study as showing how doctors disciplined women into adopting negative stereotypes. Under this interpretation of Maines' work, women's use of vibrators takes on less significance in terms of female agency.

---

<sup>48</sup> Michel Foucault, *Discipline and Punish: The Birth of the Prison* (New York: Vintage Books, 1979).

<sup>49</sup> Michel Foucault, *Discipline and Punish*, 145; David F. Noble, "Social Choice in Machine Design: The Case of Automatically Controlled Machine Tools," in *The Social Shaping of Technology*, ed. Donald MacKenzie and Judy Wajcman (Buckingham: Open University Press, 1999), 161-76.

An analysis of use also promises to provide fresh insights into how farmers have constructed their identities as modern producers. As discussed in more detail in Chapter 2, Ronald Kline has studied how farmers in the Midwest in the early twentieth century modified technology for their own purposes. For example, Kline shows how rural people transformed the automobile from a form of transportation to a general source of power.<sup>50</sup> As Avi Rubin argued in his study of the Ottoman court system, people have constructed multiple modern identities that have combined a general sensibility favoring the new, emanating from Europe, while still retaining traditional norms and values from their own cultures.<sup>51</sup> Taking this idea of multiple modernities, I seek to combine Kline's focus on use with Fouché's concept of re-creation as resistance and identity formation. Rather than expressing a vernacular, technology serves to form a non-dominant identity of rural modernity that incorporates traditional rural values such as independence and the importance of the nuclear family. Eric Schatzberg has shown how military engineers favored metal airplane construction in the early twentieth century not for purely technical reasons, but because they associated metal with modernity.<sup>52</sup> In addition, David Nye has argued that electricity constituted a powerful symbolic medium between 1885 and 1915 in

---

<sup>50</sup> Ronald R. Kline, *Consumers in the Country: Technology and Social Change in Rural America* (Baltimore: Johns Hopkins University Press, 2000).

<sup>51</sup> Avi Rubin, *Ottoman Nizamiye Courts: Law and Modernity* (New York: Palgrave Macmillan, 2011).

<sup>52</sup> Eric Schatzberg, "Ideology and Technical Choice: The Decline of the Wooden Airplane in the United States, 1920-1945," 34-69.

the form of world's fairs, theatres, public events and electric advertising signs.<sup>53</sup> I suggest that using technology in ways described by Kline allows farmers to continuously perform their identities as modern to combat urban "yokel" stereotypes.<sup>54</sup>

To meet challenges identified in the above discussion and to make history relevant to policy, I also argue that both men and women on Midwest farms participated in important "production" processes and formed a modern rural identity based on the use and adoption of technology. In addition, I contend that Corn Belt agrarians see organic advocates and scholars as creating a discourse characterizing large Midwest grain farms and their technologies as "industrial," thereby attacking the identity of farmers of both genders who regard themselves as moral, family-oriented, and modern producers.<sup>55</sup> As a result, I hope to shift focus away from the ambiguities in Cowan and Maines as to the agency of technological users and toward an analysis of how people use technologies to develop coexisting "discourse-identity bundles" to construct

---

<sup>53</sup> David E. Nye, *Electrifying America: Social Meaning of a New Technology* (Cambridge, MA: MIT Press, 1992).

<sup>54</sup> See also Brinkman and Hirsh, "Welcoming Wind Turbines and the PIMBY ('Please in my backyard') Phenomenon: The Culture of the Machine in the Rural American Midwest," (forthcoming 2017). Paper accepted for publication by *Technology and Culture* on September 25, 2015.

<sup>55</sup> I presented this argument in a paper before the , Society for the History of Technology Annual Meeting, Joshua Brinkman, "Gender, Work Processes, and the Modernization of American Agriculture: Exploring Historical and Cultural Challenges Faced by the Organic Foods Movement" (presentation, Society for the History of Technology Annual Meeting, Albuquerque, New Mexico, October 10, 2015).

moral selves. My view, that people use technology to perform what they regard as a moral identity, concurs with Edward Jones-Imhotep's notion of the "technological self." In his history of mid-twentieth century pianist Glenn Gould's obsession over recoding technology, Jones-Imhotep argues that Gould worked with material objects not just to achieve a certain aesthetic but as a "moral project" to create "the kinds of people we ought to be." According to Gould's philosophy, a moral listener was one who judged music based on individual rather than popular or group tastes. A moral performer or musician was one who carefully crafted musical structure rather than one who felt compelled to impress the audience with showmanship and "frivolous" playing.

"Gould's rejection of the concert hall," Jones-Imhotep contends, "was rooted in a criticism of the kinds of people it produced, the way it separated composer, performer, and listener into a rigid hierarchy that discouraged and even prevented individual judgment." In addition to this rigid hierarchy, from Gould's point of view, concert halls created a sort of mob mentality on the part of the audience simply by bringing many people together in one place. This gathering of people caused audience members to base their aesthetic judgments on subtle cues from the group rather than on individual evaluation. These two characteristics of music venues, Gould thought, created both immoral listeners and musicians. For the musician, the hierarchy and mob mentality of the concert hall compelled him or her to impress the audience with unnecessary playing rather than carefully considering structure. In addition, these two characteristics of classical venues caused listeners to conform to the tastes of the group rather than judging music as individuals. Gould also felt that by applauding as a large group in concert halls, audience members encouraged immoral showmanship on the part of the artist.

Gould saw recording technology as a way of freeing both musician and listener from the hierarchy and mob atmosphere of the concert hall and become the “kinds” of people they “ought to be.” In abandoning live venues for solitary work with early sampling, mixing, and multi-tracking technologies, Gould aimed to create more moral performers who could now perfect structure. Additionally, Gould hoped his work with technology would lead to home editing kits leading to a new moral listener removed from the group and in control of sound based on individual taste. Gould envisioned people sitting at home sampling recorded music and mixing their own compositions based on their own aesthetics. Throughout his study, Jones-Imhotep shows how Gould consciously used artifacts to achieve his moral ideals.<sup>56</sup> My theory of performative use to achieve a moral self within bundles of discourses and identities projects Jones-Imhotep’s concept of the technological self beyond the “lone wolf” individual represented by Gould, to broad groups of social actors. Performative use also recognizes the type of social signaling process discussed by Elliott and views the technological self not as a conscious conceptualization by a single individual, but as an unarticulated identity influenced by historical and social contexts.

### **Discourse Identity Bundles and the Methodology of Targeting Unarticulated Cultural Values**

I have chosen the bundling metaphor as a conceptual tool to think about discourse and identity to alleviate several methodological challenges raised by an exploration of unarticulated cultural values. First, by focusing on how people bundle ideologies and discourses around

---

<sup>56</sup> Edward Jones-Imhotep, “Malleability and Machines: Glenn Gould and the Technological Self,” *Technology and Culture* 57, no. 2 (2016): 287-321.



identities, I aim to move the focus away from an understanding of the realities of American agricultural change, a topic already covered extensively by notable historians such as Deborah Fitzgerald and David Danbom. Rather, I want to build on the work of these scholars by using the concept of discourse identity bundles to see how the world *looks* to those involved in agriculture from *their perspective* and how they come to understand the technologies and work processes they use every day. Second, discourse identity bundles allow the scholar to avoid simplistic periodization while still permitting for new or adapted discourses and identities. Bundles of discourse and identities can vanish and reappear years later due to changed contextual pressures making older or adapted discourses or identities more strategically useful among technological users. Third, the use of discourse identity bundles draws attention away from the tendency to focus on *who* devised certain discourses or identities and focuses on the more relevant question of *how* and *why* these discourses and identities were used by historical actors. Fourth, my approach allows for multiple bundles of identity and discourse existing in the same social milieu, thereby avoiding the assumption that farmers constituted one monolithic group while still permitting an analysis of dominant discourses and identities among users of technology. As such, the fact that the economic pressures of the techno-economic system of global agriculture may in fact deny a farmer in the Corn Belt any choice of what technology to use or how to organize work processes is less important to me than answering how the farmer thinks of himself or herself when he or she climbs into a combine, starts it, and begins harvesting corn. In taking a user approach to technology, I intend to explore what the farmer sees and feels on a daily basis. I want to come as close as I can to seeing the world through the farmer's cultural lens when using artifacts, rather than conducting an analysis from the perspective of the economist or the policy advocate. As such, my bundling approach incorporates the common practice in STS of

relating the view of technology on the part of rural residents to broader contextual and historical conditions. Fifth, my bundling metaphor incorporates the general methodological approach of social theorists Michael Schwarz and Michael Thompson of viewing politics, technology, and social choice as an inseparable “inchoate mass” related to unarticulated ways of “seeing and knowing.” While Schwarz and Thompson tend to relate these inchoate masses only to underlying views of nature, I find their overall approach of looking for “shared patterns of meaning and mutually consistent values” useful in thinking about how people in rural settings bring dissimilar, and often conflicting, ideologies, identities, and discourses to bear on technological use.<sup>57</sup> In other words, people do not use technology to reinforce or develop one ideology, but a whole package of identities, ideologies, and discourses that hang together in ways that seem strategically useful. These bundles or packages come about due to historical, cultural, and economic contexts influencing users in an *embodied and unarticulated manner*. The research question using this concept of bundling, then, becomes much more interesting than asking what economic factors contributed to the mechanization or scientization of American agriculture. Rather, the query now becomes what bundles of values, ideologies, identities, and discourses have formed so that increased use of technology and modern science made sense to the farmer? Answering this question provides a richer inquiry into the meaning of machines within the agrarians’ worldview. If we think of the farmer or any other user of material objects as seeing the world through a particular cultural lens, the use of discourse identity bundles allows us to explore and describe the nature of that lens and why it has taken that particular form.

---

<sup>57</sup> Michael Schwarz and Michael Thompson, 1990. *Divided We Stand: Redefining Politics, Technology and Social Order* (Philadelphia: University of Pennsylvania Press, 1990), 1-12.

In pursuing this goal, the practical methodological issue concerns the articulation and identification of unarticulated cultural values. I have approached this problem by taking an expansive view of discourse that seeks to reveal broad trends in the ways people speak, act, and see the world. In doing so, one must appreciate the difference between rhetoric and discourse. An examination of rhetoric traces the use of specific words, while discourse analysis employs language in a contextual framework to more fully understand the motivations of historical actors.<sup>58</sup> In contrast to rhetoric, Gilbert Weiss and Ruth Wodak characterize discourse analysis as a mediation of social and linguistic theory that views language as a social practice. This approach critically analyzes speech and writing qualitatively with the view that language is both socially constructing and conditioned.<sup>59</sup> Put differently, discourse determines the boundaries within which people think about the world around them and, in doing so, constructs social relations and identities. Alternatively, the cultural, historical, and political contexts in which words exist also shapes discourse. This reciprocal nature of discourse means that it serves an important function in producing power relations and constructing boundaries between different social groups.<sup>60</sup> In focusing on discourse, the scholar aims to reveal meanings and assumptions

---

<sup>58</sup> Marianne Jørgensen and Louis Phillips, *Discourse Analysis as Theory and Method* (Sage: London, 2002): 1-2; Rodney H. Jones, "Creativity and Discourse," *World Englishes* 29, no. 4 (2010): 471-74.

<sup>59</sup> Gilbert Weiss and Ruth Wodak, "Introduction: Theory, Interdisciplinarity and Critical Discourse Analysis," in *Critical Discourse Analysis* (New York: Palgrave Macmillan, 2003): 13; see also Stephen Bix, *Discourse and Genre* (New York: Palgrave Macmillan, 2011): 20-35.

<sup>60</sup> Jørgensen and Phillips, *Discourse Analysis as Theory and Method*, 1-2.

hidden or masked by traditional interviewing focusing on articulated language.<sup>61</sup> Importantly, actions, such as decisions about the use of various technologies, can also constitute discourse while rhetoric limits its focus on language. One would not expect farmers to use the term “modernity” to describe why they bought a tractor any more than settlers in 1840s would use the term “Manifest Destiny” to explain why they left their eastern homes for western territories. Commentators and historians invent these terms to understand the ideologies that drove social actors. A purely rhetorical search of settlers’ journals for the term “Manifest Destiny” would likely yield little. But this lack of word use at the time does not mean that we can no longer think of those pioneers as motivated by a belief in a divine directive to expand the country.<sup>62</sup> Similarly, farmers in the 1920s (or even in the 2000s) did not often use the term “modernity” to

---

<sup>61</sup> My use of discourse analysis draws on the work of Ernesto Laclau and Chantal Mouffe. See *Ibid.*, 7-13. Also see Jones, “Creativity and Discourse,” 467-480 and Jørgensen and Phillips, *Discourse Analysis as Theory and Method*, 7.

<sup>62</sup> The term, “Manifest Destiny” first appeared in articles published by John O’Sullivan in 1845 to argue in support of the annexation of Texas and U.S. claims to the Oregon territory. See Albert K. Weinberg, *Manifest Destiny: A Study of Nationalist Expansionism in American History* (Gloucester, MA: Peter Smith, 1958), 144; Richard De Zoysa, “America’s Foreign Policy: Manifest Destiny or Great Satan?” *Contemporary Politics*, 11, no. 2-3 (2005): 133-56. This portion of the paragraph discussing Manifest Destiny part of this paragraph will be published in the upcoming article, Brinkman and Hirsh, “Welcoming Wind Turbines and the PIMBY (‘Please in my backyard’) Phenomenon: The Culture of the Machine in the Rural American Midwest,” (forthcoming 2017). Paper accepted for publication by *Technology and Culture* on September 25, 2015.

describe their adoption of what we now identify as a modern state of mind. These farmers often employed the term “modern,” but also terms such as “efficiency” and “progress” to express an up-to-date and future-oriented sensibility, or they simply *acted* in ways consistent with such notions. For example, in 1920, *Better Farming* described Walter Tomlinson, a farmer in Defiance County, Ohio as “one of Defiance county’s progressive, scientific farmers and stock raisers.” Tomlinson had used “up-to-date dairy equipment” and the latest stock breeding methods to report an annual profit of \$8,500, a large sum at the time.<sup>63</sup> An expansive view of discourse embraces the idea that when farmers adopt the scientific method to breed a new seed variety, or exhibit sophisticated abilities to understand and alter technology, or welcome a new road for reasons such as gaining a competitive advantage in a national market, they express a modern sensibility. Discourse analysis captures unspoken notions and ideologies that nevertheless motivate people to act and speak in certain ways.

In recognition of the unspoken and embodied tastes and views discussed by Veblen and Bourdieu, I guard against basing my study of discourse on methodologies that seek to identify specific “buzz” words or phrases. For example, interviews with farmers asking directly about “modernity” or even “technology use” likely would not elicit *unarticulated* associations between machinery and modernity in the rural Midwest. Farmers see themselves as independent and self-made businessmen and want to appear as rational economic actors. While one may glean abstract cultural perspectives in interviews, farmers would rarely express these views cogently in daily conversation about technology, modernity, and industrialization, which they consider as normal and not notable. Stated more simply, the scholar must do more work than simply identifying

---

<sup>63</sup> “Aged Farmer Makes Over Eight Thousand,” *Better Farming* 43, no. 8 (March 1920): 10.

certain words to reveal the unarticulated. Discourse analysis captures embodied ideas and ideologies that motivate people to act and speak in certain ways, especially about modernity.

Rather than relying on rhetorical analysis or interviews asking farmers to articulate ideas of modernity directly, I have relied on many other sources to gather unarticulated motivations of farmers. For example, in the following pages I have used not only family farm photos as insight into unspoken discourses and identities governing the relationship many farmers have with technology, but also quotes from farmers themselves, farm journal editorials, letters to the editor, and farm journal advertisements. The last type of evidence helps in understanding the farmers' mindset because I view agrarian journals as discursive devices in which farmers, advertisers, and editors work out rural identities to advance mutual interests. In other words, farmers and advertisers *both* constructed identities of farmers as modern technological users in a manner consistent with the views of marketing scholars Richard Pollay and Katherine Gallagher, who assert that advertising of available products echoes existing values.<sup>64</sup> Similarly, a comparative study of cultural values in U.S. and Korean television commercials by several marketing and business professors stated, "cultural values are at the core of advertising messages and typical advertisements endorse, glamorize, and reinforce cultural values."<sup>65</sup> My approach also comports

---

<sup>64</sup> Richard Pollay and Katherine Gallagher, "Advertising and Cultural Values: Reflections in the Distorted Mirror," *International Journal of Advertising* 9 (1990): 360; see also Russel W. Belk and Richard W. Pollay, "Images of Ourselves: The Good Life in Twentieth Century Advertising," *Journal of Consumer Research* 11, no. 4 (1985): 888.

<sup>65</sup> Bongjin Cho, Up Kwon, James W. Gentry, Sunkyu Jun, and Frederic Kropp, "Cultural Values Reflected in Theme and Execution: A Comparative Study of U.S. and Korean Television Commercials," *Journal of Advertising* 27, no. 4 (1999): 59.

with the work of historian Roland Marchand, who demonstrates that while advertising does not mirror “social reality,” it can reveal “fundamental beliefs” and contribute “to the shaping of ‘community discourse.’”<sup>66</sup> As Marchand observes, “[f]ew students of mass communication now accept the ‘hypodermic-needle’ theory, which emphasizes the power of media images to inject certain attitudes and ideas into the minds of audience members.” Rather, “ads were likely to shape or reinforce the same popular attitudes they sought to reflect,” albeit often in imperfect or “refracted” ways.<sup>67</sup> Thus, scholars from a wide variety of fields, from cultural history to communications and sociology have adopted the view that advertisements mirror existing social and cultural values, although in distorted forms.<sup>68</sup> According to this well-accepted view, advertising may only encourage, rather than wholly create, existing beliefs and values.

---

<sup>66</sup> Richard Pollay and Katherine Gallagher, “Advertising and Cultural Values: Reflections in the Distorted Mirror,” 360-72; Roland Marchand, *Advertising the American Dream: Making Way for Modernity, 1920-1940* (Berkeley: University of California Press, 1985), xix, xx.

<sup>67</sup> Marchand, *Advertising the American Dream: Making Way for Modernity*, xx, xxii; the portion of this paragraph discussing Marchand’s work will be published in the upcoming article, Brinkman and Hirsh, “Welcoming Wind Turbines and the PIMBY (‘Please in my backyard’) Phenomenon: The Culture of the Machine in the Rural American Midwest,” (forthcoming 2017). Paper accepted for publication by *Technology and Culture* on September 25, 2015.

<sup>68</sup> Carolyn A. Lin, “Cultural Values Reflected in Chinese and American Television Advertising,” *Journal of Advertising* 30, no. 4 (2001): 83-94; Bruce W. Brown, *Images of Family Life in Magazine Advertising: 1920-1978* (New York: Praeger, 1981); Hye-Jin Paek, Michelle R. Nelson, and Alexandra M. Vilela, “Examination of Gender-role Portrayals in Television Advertising across Seven Countries,” *Sex Roles* 64 (2001): 192-207; Rebecca Centanni,

For the historian or STS scholar, this body of theoretical work on advertising suggests that the use of advertisements, *especially when combined with other contextual evidence* such as the statements and actions of farmers themselves, enables one to consider the creation of farmers' identities as a complex negotiation among social actors, with journals serving as a medium in which farmers, advertisers, and editors construct a discourse and identity of rural modernity.<sup>69</sup> While advertisements do not indicate whether farmers or urban advertisers "started" a particular discourse identity bundle, which is not my question in the first place, they likely indicate that certain discourses and identities existed in the social ether of rural America, particularly when these conclusions comport with other contextual evidence.

In addition, although many farm journals in the early twentieth century were published in urban centers, they established credibility among their readers by writing and advocating from

---

"Advertising in Life Magazine and the Encouragement of Suburban Ideals," *Advertising & Society Review* 12, no. 3 (2011).

<sup>69</sup> Russell W. Belk and Richard W. Pollay, "Images of Ourselves," 888; Carolyn A. Lin, "Cultural Values Reflected in Chinese and American Television Advertising," 83-94. See also Bongjin Cho, Up Kwon, James W. Gentry, Sunkyun Jun, and Frederic Kropp, "Cultural Values Reflected in Theme and Execution," 59-73 which confirms this view with television studies, concluding that "cultural values are at the core of advertising messages and typical advertisements endorse, glamorize, and reinforce cultural values." *Ibid.*, 59. For a paper advocating caution when using farm journal editorials as reflections of farmers' views, see John J. Fry, "'Good Farming-Clear Thinking-Right Living: Midwest Farm Newspapers, Social Reform, and Rural Readers in the Early Twentieth Century.'" *Agricultural History* 7, no. 1 (2004): 34-49.



the farmer's perspective. E.T. Meredith, publisher of *Successful Farming*, wrote in his 1921 book *The Opportunities and Responsibilities of the Farm Paper Editor*:

An editor must be able to see things from the viewpoint of his readers. The more nearly he can make his readers feel that he is their close friend, that he has their interests in his heart, the greater will be his success. With that thought in mind, the editors of *Successful Farming* avail themselves of every opportunity to mingle with farm people and endeavor to keep in close touch and hence sympathy with farm life.<sup>70</sup>

Similarly, Robert A. Jones, director of the research department of the Chicago-based National Association of Farm Equipment Manufacturers, wrote a press release to farm journal editors on January 2, 1930 asking whether the articles written by his organization provide “the information of the kind you and your readers would like to have.” Jones’ letter suggests that at least some manufacturers and farm equipment engineers did not view farm journals as a medium for dictating discourses and identities to unwitting farmers. Rather, Jones saw the journals as providing a window into the desires and goals that already existed among both journal editors and farmers. In the event Jones’ department did not supply farmers with information they wanted, he asked the journal “suggestions as to how it may be improved.” Jones’ language shows a high level of deference towards farmers instead of an effort to inject his own cultural

---

<sup>70</sup> E.T. Meredith, *The Opportunities and Responsibilities of the Farm Paper Editor* (Des Moines, IA: Successful Farming Publishing, 1921), 3-10.

views or sense of modernity.<sup>71</sup> Nor can one assume that farm journal editors sought to dupe farmers for the benefit of urban interests, even if the farm journal hailed from a city. Indeed, since the 1920s, a clear line between farmer and farm journal editor has never really existed as many editors of journals published in urban centers actually lived and farmed in rural areas, while others farmed for many years before abandoning it in favor of journal editing. This hybrid status of farm journal editors even confused readers at the time of their publication as to the rural identities of their favorite writers. For example, farmer Frederick L. Chapman wrote a letter in 1921 to the editor of *Better Farming* published in Chicago:

You living in the city know nothing of the expense of the farmer had in putting out and tending last year's crop. All you know or care is that living expenses have decreased a little. How would you like to work from daylight until dark, longer hours than any other working people, and have nothing for all your labor? It is very well to sit in an easy chair and write those editorials, but if you had the actual experience you'd change your opinions.<sup>72</sup>

The affronted editor responded, "The day you wrote your interesting letter I was not lolling in a swivel chair. I was grading a farm road while my farm men were pitching gravel, forty loads a day, in a cold mist. Being a little short of help I drove my own team and manipulated the grader.

---

<sup>71</sup> Robert A. Jones to "The Editor," National Association of Farm Manufacturers, Farm Press Release #76, January 2, 1930, Box 24, Record Group Number 503, Accession Number 79-001, Ag Engineering Records, Auburn University Archives.

<sup>72</sup> Frederick L. Chapman, "An Interesting Letter, March 5, 1921," *Better Farming* 44, no. 4 (April 1921): The Daily Mail, 4.

It was a man's job, and when the day was done I felt very much a man, though I was sore and chilled, and had to go to an osteopath to reset dislocated ribs and vertebrae." The editor went on to let the farmer know that the next week he planned to go to another of his farms to start spring work and harvest last year's crop only to lose profit. The editor exclaimed "I am going to say that I appreciate, better than you seem to think, what we farmers are up against" to emphasize that the editor and the farmer lived the same lifestyle.<sup>73</sup>

My analysis, therefore, views farm journals as discursive devices in which farmers, advertisers, and editors work out rural identities and ideologies to advance and form mutual interests. While urban advertisers and journal editors undoubtedly influenced rural discourses, I do not see this fact as fatal to my argument in this book. In reality, farmers and advertisers *both* co-constructed identities of farmers as modern technological users. I see little reason why in a complex world where identities form through constant negotiation one must advance an overly simplistic causal relationship between farm magazine advertisements and the views of farmers, particularly in light of prevailing marketing theories of advertising.<sup>74</sup> Thus, farm journals can

---

<sup>73</sup> Fred L. Chapman, "Answer," *Better Farming* 44, no. 4 (April 1921): The Daily Mail, 4.

<sup>74</sup> Russell W. Belk and Richard W. Pollay, "Images of Ourselves," 888; Richard Pollay and Katherine Gallagher, "Advertising and Cultural Values: Reflections in the Distorted Mirror," 360-72; Carolyn A. Lin, "Cultural Values Reflected in Chinese and American Television Advertising," 83-94. See also Bongjin Cho, Up Kwon, James W. Gentry, Sunkyu Jun, and Frederic Kropp, "Cultural Values Reflected in Theme and Execution," 59-73 which confirms this view with television studies, concluding that "cultural values are at the core of advertising messages and typical advertisements endorse, glamorize, and reinforce cultural values." *Ibid.*,

serve as a place where farmers construct a discourse of rural modernity *and* are swayed by the interests of advertisers and editors living in cities. Furthermore, I view the ultimate origin of a rural modern discourse as less important than the fact that farmers used this discourse to form identities that defied urban efforts to frame rural Americans as the anti-modern “other,” especially from the rural-urban conflict of the 1920s to the present. Certainly, advertisements do not only reflect views of the advertisers, they can also serve as insight into unarticulated ways of seeing the world on the part of farmers when used alongside other contextual evidence.

In light of the scholarship discussed above, farm journals sought to reflect and shape values of farmers rather than serve simply as spokesmen for urban industry, government agencies, or Progressive reformers. Moreover, I find such interpretations of advertisements useful since so many farmers in the early twentieth century read farm journals. Advertisements in widely read publications such as *Wallaces' Farmer*, edited in Des Moines, Iowa, can, therefore, offer insight into unarticulated expressions of some farmers' perspectives.<sup>75</sup> In “The

---

59. For a paper advocating caution when using farm journal editorials as reflections of farmers' views, see Fry, “Good Farming-Clear Thinking-Right Living,” 34-49.

<sup>75</sup> Historian Stuart Shulman discovered a 1913 survey showing that more than three-quarters of farmers in the North-Central region read farm publications. Shulman, “The Progressive Era Farm Press: A Primer on a Neglected Source of Journalism History.” *Journalism History* 25, no. 1 (1999): 28-29. Shulman found that he could confidently use the advertisements and opinion pieces in them as reliable indicators of the readers' views. Historian Randall Patnode used ‘*Farmer* in his notable study of radio because of its “high level of reader interaction and allegiance among subscribers.” Randall Patnode, “What these People Need is Radio,” *Technology and Culture* 44, no. 2 (2003): note 16.

Progressive Era Farm Press: A Primer on Neglected Source of Journalism History,” Stuart W. Shulman advocates the use of farm journals as a source rural public opinion in the early twentieth century.<sup>76</sup> While Shulman focuses on the examination of political opinions contained in farm journals, the advertisements and editorials contained in these sources can also reveal cultural views of modernity and progress in farming communities. As Shulman notes, a survey in 1913 by the Bureau of Plant Industry found that 75.5% of farmers surveyed in the North-Central region subscribed to an agricultural paper.<sup>77</sup>

In conclusion, my theories of performative use and discourse identity bundling provide insightful frameworks for thinking about how and why people excluded from dominant discourses or networks of technical elites use technologies. My approach brings together several threads in existing scholarship that have treated technology as a means for various marginalized groups to contest dominant social structures or images. By focusing on how people perform their own bundles of discourses and identities, my methodology frees scholars from the often ambiguous question of agency and towards a more concrete question of how people use technology to form their sense of self. In addition, my theories of performative use and discourse identity bundling makes room for understanding the experiences of individual users

---

<sup>76</sup> Shulman, “The Progressive Era Farm Press: A Primer on a Neglected Source of Journalism History.”

<sup>77</sup> Ibid., 29; the portion of this paragraph discussing Shulman’s work will be published in the upcoming article, Brinkman and Hirsh, “Welcoming Wind Turbines and the PIMBY (‘Please in my backyard’) Phenomenon: The Culture of the Machine in the Rural American Midwest,” (forthcoming 2017). Paper accepted for publication by *Technology and Culture* on September 25, 2015.

while still considering broader social and historical factors contributing to their identities. My methodology incorporates practices from some sociologists that view actions such as technology use not as one isolated act but as part of an inchoate mass of actions and rhetoric that hold together around a common discourse identity bundle. Thus, my approach can serve as a methodology for studying a wide variety of users of material objects, not simply farmers.

In terms of farming itself, I have justified my decision to focus on the Corn Belt because identity has always played a prominent role for farmers in the region. Everything in the region, including the name “Corn Belt,” has been socially constructed. At the same time, the Corn Belt provides an interesting case study for understanding change in identity formation because a tension exists between traditional agrarianism and a desire to modernize. Finally, I have discussed my methodology of analyzing discourse as a way of addressing the difficult quandary of how one locates unarticulated identities. By identifying commonalities in discourses and actions of historical actors pertaining to technology use, I have sought to describe trends in the way people think of themselves within a broader social context. I have analyzed discourse from farmers contained in farm journals, family farm photos, newspapers, letters, and memoirs as well as from farm journal advertisements. Importantly, I view farm journals as discursive devices used by both rural and urban actors to develop rural identities. This approach to advertising reflects the dominant view among contemporary marketing scholars that advertising represents an altered reflection of already existing cultural values. In addition, my methodology seeks to identify which discourse identity bundles a group of technical users found most strategically appropriate within their social context, not to determine who ultimately invented such identities. In other words, I care less about determining who actually has agency than I do about what technology means to users from their perspective. I am simply interested in what unarticulated

identities motivate people to use certain material objects in particular ways and to explain why certain relationships between technology and identity formed among a group of technical users. Indeed, my theory of performative use contends that people reinforce and project their unarticulated identities through repeated use of material objects on a daily basis. Additionally, I view identity as a sense of self, influenced by social actors beyond the individual. Therefore, questions of agency yield little insight because under my theories of performative use and discourse identity bundling the user of technology both retains and relinquishes agency all at once. In addition, my theories of performative use and discourse identity bundling seeks to move STS and the history of technology away from the overly simple idea that ideology influences technical choices to a model where multiple and often conflicting values can influence material use. My methodology, unlike that employed by some scholars, acknowledges the possibility of several, and often contested, identities among the same group of technical users and relates this multiplicity to a broad array of social influences occurring outside of the user's immediate social group. My method still provides a concrete and useful theoretical approach beyond simple contextual analysis, however, because it identifies distinct and describable bundles of discourses and identities formed and reinforced through performative use.

## Chapter 2

### **Historiography: Class, Jeffersonian Agrarianism, and Historical Narratives about Rural America**

Before presenting my historical narrative, I feel that the reader would benefit from a more detailed discussion of Jeffersonian agrarianism. Importantly, my view differs from scholars of agriculture in many fields who see Jeffersonian agrarianism as an identity that affects only the *performers* in rural America. Rather, I see the Jeffersonian yeoman myth as impacting *observers* of rural life as well. More specifically, I argue that scholars, reformers, authors, and advocates from a variety of domains tend to uncritically assume that the Jeffersonian yeoman farmer and urban dominant images of people in the Corn Belt as “rubes,” arising from the rural-urban conflict of the 1920s, accurately reflects how farmers think of themselves in the rural Midwest. This basic view of the Corn Belt as the region where Jeffersonian agrarians stubbornly protect the “pastoral” leads many observers from outside of the farm to ignore the important role of farmers in developing their own identities as modern in bringing about technological change. Rather than accepting this black-and-white assumption that adopts the urban view of the farmer as the anti-modern “other,” I draw on theorists allowing for multiple modernities that incorporate elements of localized, traditional, identities. In doing so, I build on recent scholarship of agricultural technologies that give farmers a greater role in the process of modernization by using theories of identity and modernity to highlight the process of performative technology use. In addition, my work adds to recent scholarship on class and rural resentment by introducing technology use as an important element.



## **Traditional Jeffersonian Agrarianism and its Intellectual Challenges for Observers of Rural Life**

Sociologists and communications scholars such as Tarla Rai Peterson have argued that Jeffersonian agrarianism based on a frontier myth still drives people's self-image in rural communities.<sup>78</sup> A discourse identity bundle most aptly named *traditional Jeffersonian agrarianism* undoubtedly exists in rural America. As historian Mark Essig points out, the Anglo-American Protestant practice of using agricultural technologies to reinforce the moral self has a long history pre-dating Thomas Jefferson. Essig argues that English settlers in the colonial world reacted to the lack of gold in the English colonies by seeing colonization through farming as more virtuous and more Christian than the Spanish use of soldiers and mines. "Instead of killing Indians," Essig writes "they would convert them to Christianity and train them as farmers." Essig further explains, "This posture nicely suited the Englishman's idea of himself. Neat fields, tidy hedgerows, healthy animals-all spoke of his virtue and godliness." English settlers went as far as seeing themselves as fulfilling God's decree in Genesis: "Let them have dominion over the fish in the sea, and over the fowl in the air, and over the cattle, and over all the earth."<sup>79</sup> For Peterson, this traditional English agrarian identity derived less from the original settlers and more from Jefferson's slightly later view that saw small yeoman farmers as chosen by God to civilize the American continent and preserve democratic ideals. The prosperity of industry and even the morality of the cities, according to Jefferson and later thinkers like William Jennings Bryan (the populist politician of the late nineteenth and early twentieth centuries),

---

<sup>78</sup> Tarla Rai Peterson, "Jefferson's Yeoman Farmer as Frontier Hero: A Self Defeating Mythic Structure," *Agriculture and Human Values* (Winter 1999): 9-19.

<sup>79</sup> Essig, *Lesser Beasts: The Snout to Tail History of the Humble Pig*, 131-132.

rested on this group of independent small yeomen braving the frontier. Further, Jeffersonian agrarianism ascribes to a pastoral ideal that romanticizes the farmer's work with nature.<sup>80</sup>

Peterson argues that Jeffersonian agrarianism creates a persistent and dysfunctional frontier myth in which the farmer holds onto a "self-image of a hero victimized by circumstances," but who overcomes these obstacles through independence and grit and the inventive use of resources.<sup>81</sup>

The feminist writer Barbara J. Scot, in her recollection of visiting her Iowa farm family, described the spiritual elements of Jeffersonian agrarian myth eloquently as, "The most dignified and worthy of all callings was the land - a land rightfully assumed because of a promise to people far distant in time and place. Once on the land, you and your progeny were part of a succession that was not only grounded in the Bible, it was meant to endure until Judgment Day. On the family farm."<sup>82</sup> Certainly, this version of the pure Jeffersonian yeoman frontier hero still appears in popular treatments of American farming, such as author Richard Rhodes' acclaimed 1989 book *Farm: A Year in the Life of an American Farmer*. After living for a year with a farm family in Missouri, Rhodes produced a book that simply and uncritically reinforces the purist version of Jeffersonian agrarianism in which a family-oriented hero overcomes the harshness of nature and the instability of markets to preserve the moral base of American civilization.<sup>83</sup>

---

<sup>80</sup> For example, see Wall, *Iowa: A Bicentennial History*, 136.

<sup>81</sup> Peterson, "Jefferson's Yeoman Farmer as Frontier Hero a Self Defeating Mythic Structure," 9-10.

<sup>82</sup> Barbara J. Scot, *Prairie Reunion* (New York: Farrar, Straus and Giroux, 1995), 54.

<sup>83</sup> Richard Rhodes, *Farm: A Year in the Life of an American Farmer* (New York: Simon & Schuster, 1989).

While Peterson and Scot correctly identify a significant bundle of discourses and identities in rural America that views farmers in virtuous and heroic terms as people chosen by God to civilize and “save” society by planting the idealized “pastoral garden,” they ignore other possible discourses and identities within the Corn Belt. It rarely occurs to Peterson, in particular, that farmers may work with technology to develop other identities alongside or adapting the Jeffersonian agrarian ideology that she so vividly describes. From Peterson’s perspective, the pure and unaltered Jeffersonian yeoman frontier myth dominates rural discourse so completely, that it creates a monolithic rural identity in which farmers engage in a constant battle with technology as a threat to the pastoral ideal. As such, farmers view themselves as victims of technology growing beyond their control preventing “positive adaptation” to social and economic change.<sup>84</sup> Not only does Peterson ignore the possibility of evolving discourses over time, she ignores the influence of other agrarian identities such as the German agrarianism observed by Benjamin Rush in Chapter 3 below, which undoubtedly combined with Jefferson idealism in Corn Belt states rich with German heritage. Rhodes, after all, wrote from a preconceived and romanticized notion of farming formulated prior to even arriving on the Missouri farm he describes in his book and makes no effort to critically evaluate the unarticulated discourses and identities of his subjects. A more serious scholar must not take Rhodes’ static and celebratory view of agriculture as an accurate reflection of much more

---

<sup>84</sup> Scot, *Prairie Reunion*, 9, 15-17.

complex and nuanced unarticulated identities forming and reforming continuously in rural America.<sup>85</sup>

Certainly other writers on the cultural views of rural Americans late in the twentieth century dispute Peterson's claim that pure traditional Jeffersonian agrarianism still drives farmers in forming discourses or identities. For example, in a personal essay written in 1985 about growing up on a family farm in Kansas, historian Thomas D. Isern asked "Where is the yeoman farmer of Jeffersonian myth today? I know that last winter Bill Short on Diamond Creek in Chase County fed quail in his barn and allowed wild turkeys on his silage, but otherwise I see little resemblance between the mythical Jeffersonian yeoman and the contemporary farmer of my acquaintance." Indeed, Isern concludes that the mythical yeoman was not a "permanent figure" as Paterson claims but "a transitory figure at best, an annual to be succeeded by perennials."<sup>86</sup> Isern's idea of Jeffersonian agrarianism as a temporary mythology comports better with more recent theories of identity and culture as "dominant images" that acknowledge a process of constant contestation and change.<sup>87</sup> My theory of discourse identity bundles, by contrast, embraces both Peterson and Isern's notions by allowing for elements of

---

<sup>85</sup> Although in my efforts to maintain self-reflexivity, I must admit that my dismissal of Rhodes' work as lacking critical theory is shaded by my own efforts at "boundary work" as a scholar formally trained academically in the field of STS.

<sup>86</sup> Thomas D. Isern, "The American Dream: the Family Farm in Kansas," *Midwest Quarterly* 26 (1985): 359-361.

<sup>87</sup> Recall my discussion of theories of identity proffered Elliott, *Better than Well: American Medicine Meets the American Dream* and culture as dominant images in Downey, "What is Engineering Studies For? Dominant Practices and Scalable Scholarship" in Chapter 2.

previous identities bundles to become reframed and incorporated into later conceptions. Rather than behaving according to Isern's annual-perennial metaphor, discourse identity bundles behave more like human beings who inherit genetic traits from their ancestors to form a completely new whole organism. Farmers in the Corn Belt have developed identities and discourses that retain some aspects of Jeffersonian agrarianism, particularly the view that "the farm is more than a business and a place to try to accumulate wealth. It is life itself," and the idea that agricultural production with the family at the center renders this "life" moral.<sup>88</sup> Overall, I agree with Peterson's main contention that farmers tend to view themselves as heroically overcoming obstacles posed by an outside "other." But, I disagree with the notion that this hero myth leads to a persistent anti-modern yeomanism resistant to social and technological change. Rather, farmers have altered pure Jeffersonian agrarianism, overlaying it with new ideologies and views in response to different cultural contexts to form new bundles or rural discourses and identities.

In fact, by the beginning of the twentieth century, many American farmers had begun to adapt to change and developed and/or adopted discourses that incorporated elements of modernity within pure Jeffersonian ideals that saw farmers as "the chosen People of God."<sup>89</sup> Farmers had already embraced notions of progress, modern business practices, and faith in technology prevalent throughout the broader American society to create a new discourse identity bundle that did not resemble one pure and monolithic discourse of traditional Jeffersonian or German agrarianism. Much like two bubbles merging together and spawning a new bubble

---

<sup>88</sup> Wall, *Iowa: A Bicentennial History*, 136.

<sup>89</sup> Thomas Jefferson, *Notes on the State of Virginia* 1787 (Chapel Hill, N.C., 1995), quoted in Patnode, "'What These People Need is Radio: New Technology, the Press, and Otherness in 1920s America," 286.

containing the contents of each, as pictured in the bottom right hand corner of Figure 0.3b in the Introduction, Corn Belt farmers began to combine these two traditional agrarian identities with modern sensibilities in the 1920s strategically in response to the rural-urban conflict.

*Assumptions of Anti-Modern Jeffersonian Yeomanism among Historians of Agriculture*

Similarly, the traditional historical narrative, written primarily by scholars living in universities or urban areas, took this notion of the Jeffersonian yeoman as well as early twentieth-century urban representations of farmers as unsophisticated “yokels” as credible evidence that all farmers and their neighbors in actuality held anti-modern views. Thus, the traditional narrative of agricultural change portrays the American farmer as clinging to Jeffersonian yeoman ideologies and resisting industrialization until New Deal policies ushered in a modern era.<sup>90</sup> For example, in 1961 Clifford Anderson argued for the persistence of an

---

<sup>90</sup> See, for example, Robert H. Wiebe, *The Search for Order, 1877-1920* (Hill and Wang, New York, 1967), viii; Shane Hamilton, “Agribusiness, the Family Farm, and Politics of Technological Determinism in the Post-World War II United States,” *Technology and Culture* 55, no. 3 (2014): 560-590; Clifford B. Anderson, “The Metamorphosis of American Agrarian Idealism in the 1920’s and 1930’s,” *Agricultural History* 35, no. 4 (1961): 182; David B. Danbom, “Romantic Agrarianism in Twentieth-Century America,” *Agricultural History* 65, no. 4 (1991): 1-12; Peterson, “Jefferson’s Yeoman Farmer as Frontier Hero a Self Defeating Mythic Structure,” 9-19; Paul K. Conklin, *A Revolution Down on the Farm: The Transformation of American Agriculture Since 1929* (Lexington, KY: University Press of Kentucky, 2008); Carolyn Dimitri , Anne Effland, and Neilson Conklin, “Economic Research Services/USDA,” *The 20th Century Transformation of U.S. Agriculture/EIB3* (Washington, D.C., 2005), 9-12; this sentence

agrarian idealism that sought to preserve the small yeoman farmer. As late as 1967, in *The Search for Order, 1877-1920*, Robert Wiebe attributed the modernization of agriculture solely to progressive reformers representing a new urban middle class.<sup>91</sup> Anthropologist Jane Adams argues that farmers in the nineteenth century adopted new technologies slowly because communal production practices among neighbors and family “dampen[ed] the economic pressures toward innovation.” But Adams does not recognize new rural cultural contexts that suppressed this communalism, leading to greater adoption of technologies in the first half of the twentieth century.<sup>92</sup> As a result, she implies that farmers clung to traditionalism until forced to adopt new hardware as a result of economic pressures. Adams’ reliance on exclusively economic explanations for increased mechanization strikes the reader as strange since she explicitly disputes the prevailing narrative of “agricultural history as an inevitable progression from ‘inefficiency’ to ‘efficiency’” in favor of highlighting the choices made by rural people. In spite of Adams’ commitment to place rural denizens at the center of historical analysis, she has nothing to say about what those people thought when technological change did indeed occur. Adams seems to assume that the reluctant communal farmer played no role in bringing about

---

will be published in the upcoming article, Brinkman and Hirsh, “Welcoming Wind Turbines and the PIMBY (‘Please in my backyard’) Phenomenon: The Culture of the Machine in the Rural American Midwest,” (forthcoming 2017). Paper accepted for publication by *Technology and Culture* on September 25, 2015.

<sup>91</sup> Wiebe, *The Search for Order, 1877-1920*, viii; Anderson, “The Metamorphosis of American Agrarian Idealism in the 1920’s and 1930’s,” 182.

<sup>92</sup> Jane Adams, *The Transformation of Rural Life* (Chapel Hill, NC: University of North Carolina Press, 1994), 81-83.

modernization. Dennis Nordin and Roy Scott came to a similar conclusion in *From Prairie Farmer to Entrepreneur: The Transformation of Midwestern Agriculture*. Nordin and Scott argue that farmers who abandoned an anti-modern Jeffersonian agrarianism and embrace urban enthusiasm for technology, market capitalism, non-localism and government dependence survived and expanded while those holding onto traditional anti-modern Jeffersonian views failed.<sup>93</sup> As such, Nordin and Scott fall in to the same trap as many traditional historians of agriculture in assuming a black-and-white world in which rural Americans face only one possible choice between urban modernity and rural backwardness. Such an approach makes little room for farmers developing a distinctly rural version of modernity. As David Danbom argued, “the back-to-the-land movement faded before World War I, but the anti-modernism it expressed never disappeared.” While Danbom conducts a more nuanced analysis that grants the farmer some role in developing notions of modernity, he tends to attribute the anti-modern agrarianism lamented by intellectuals such as Ralph Borsodi, T.J. Jackson Lears, and Bolton Hall as accurate descriptions of a majority of farmers in early twentieth-century America.<sup>94</sup>

The view that farmers retained an anti-modern agrarianism reinforces the simplistic practice, on the part of both historians and other writers, of attributing agricultural change to wholly economic explanations. The dominant image of a farmer resistant to change until forced to act by overwhelming financial pressures underlies this economic centered analysis and precludes considerations of potentially richer social and cultural explanations for agricultural

---

<sup>93</sup> Dennis S. Nordin and Roy V. Scott, *From Prairie Farmer to Entrepreneur: The Transformation of Midwestern Agriculture* (Bloomington, IN: Indiana University Press, 2005): 147-178.

<sup>94</sup> Danbom, “Romantic Agrarianism in Twentieth-Century America,” 1-12.



transformations early in the twentieth century. This economic-centered view, personified by Paul Conklin's *A Revolution Down on the Farm*, further tends to portray today's farmer as a cold, calculating industrialist who is influenced only by financial considerations in contrast to farmers in the past who lived in a simpler time.<sup>95</sup> One can hardly blame scholars for developing this traditional narrative, as it appears to correspond to the standard history of agricultural industrialization from the top, that is, from the perspective of urban industrialists, government bureaucrats, and economists. According to this traditional narrative, American farmers resisted industrialization and urban notions of modernism in the name of preserving traditional methods and an agrarian way of life until a dramatic revolution occurred in productivity during World War II. This sudden revolution occurred because of a combination of low labor supplies and high farm prices, and because of crop and livestock improvements coming out of scientific research at the USDA and land grant universities. Other scientific and technological improvements from 1940 to 1950 spurred the sudden transition to industrialization including increased mechanization, the introduction of electrical power following the creation of the Rural Electrification Administration (REA) in 1935, and the development of DDT, 2,4-D, and other pesticides and herbicides in the late 1930s and early 1940s.<sup>96</sup> Federal programs, not farmers themselves, encouraged farmers to grow by setting minimum land holdings to apply for loans, which discouraged diversification and shrunk unit margins from 1945 to 1975.<sup>97</sup> Due to these

---

<sup>95</sup> Conklin, *A Revolution Down on the Farm: The Transformation of American Agriculture Since 1929*.

<sup>96</sup> Danbom, *Born in the Country: A History of Rural America*, 233-270.

<sup>97</sup> I understand the term "unit margin" to mean the selling price minus the cost per unit of production.

federal policies, farmers had no choice but to farm more land to take advantage of economies of scale. By 1995, as scholar David Danbom exclaimed, “farming ha[d] clearly become big business.”<sup>98</sup> Not only academic historians, but also USDA reports, have presented this traditional narrative.<sup>99</sup>

While this customary story accurately reflects the history of twentieth-century industrialization of Midwest agriculture in terms of macroeconomic realities, it inaccurately regards economic changes as marking the moment of a cultural shift from an anti-modern stance to a more modern, urban, and business-centered mindset among a majority of farmers. As Danbom states, farmers are now “highly sophisticated people, manipulating machinery, chemicals, and capital beyond the dreams of their parents and grandparents.”<sup>100</sup> Danbom further declares, “one can easily imagine how pleased such people as Justin Morrill or the members of the Country Life Commission would have been with the sophisticated, professional, and business like agriculture that had emerged by the seventies.”<sup>101</sup> Clearly, according to this traditional narrative, the history of twentieth-century American agriculture shows that urban modernity triumphed over rural backwardness thanks to university professors, government policy makers, and urban reformers who, because of favorable economic conditions, wisely brought the impoverished backward-looking farmer into the modern world.

---

<sup>98</sup> Danbom, *Born in the Country: A History of Rural America*, 240.

<sup>99</sup> See for example Dimitri, Effland, and Conklin, “Economic Research Services/USDA.”

<sup>100</sup> Danbom, *Born in the Country: A History of Rural America*, 239.

<sup>101</sup> *Ibid.*, 256.

*Building on Historians' Acknowledgement of Farmers' Role in Bringing About  
Technological Change*<sup>102</sup>

In contrast, other historians grant farmers elements of agency in embracing new technologies.<sup>103</sup> Taking a position somewhat in between the view that farmers drove agricultural change and the traditional position denying them agency, historian Deborah Fitzgerald argued that in the 1920s, farmers began contending with new forces that arose from the increasingly productive systems used in urban industries.<sup>104</sup> Even though Fitzgerald does not argue that farmers actively resisted change, she still tends to view a wave of industrializing forces that swept rural Americans into participating whether they desired to be modern or not. For Fitzgerald, “science, technology, and the spirit of rationalism that characterized industrial agriculture were created and maintained by a new class of people and institutions whose principle purpose was to modernize the whole agricultural enterprise.”<sup>105</sup> These “agents of industrialism” or “modernizers” consisting of “economists, farm managers, employees of agricultural colleges, and particularly, farm home demonstration agents, rural banks, and

---

<sup>102</sup> Part of this section will be published in the upcoming article, Brinkman and Hirsh, “Welcoming Wind Turbines and the PIMBY (‘Please in my backyard’) Phenomenon: The Culture of the Machine in the Rural American Midwest,” (forthcoming 2017). Paper accepted for publication by *Technology and Culture* on September 25, 2015.

<sup>103</sup> Kline, *Consumers in the Country: Technology and Social Change in Rural America*, 1-19; Danbom, *Born in the Country: A History of Rural America*, 234-48.

<sup>104</sup> Deborah Fitzgerald, *Every Farm a Factory: The Industrial Era in American Agriculture* (New Haven, CT: Yale University Press, 2003), 3.

<sup>105</sup> *Ibid.*, 5-6.

insurance companies, and agricultural businesses such as those centered on farm machinery and seeds” introduced an “overarching logic of change.”<sup>106</sup> While Fitzgerald does not explicitly address farmers’ agency, she implies that once they adopted new technologies they became “tacitly” placed within an industrial system and ideal “epitomized by the modern mass production factory and industrial boardroom.”<sup>107</sup> Fitzgerald’s view suggests that farmers adopted technologies so that their farms would resemble an urban factory and sought to act simply as an input in a large, well-managed machine that represented a modernity defined as industrialization or “science, technology, and the spirit of rationalism.”<sup>108</sup> While Fitzgerald gives the farmer agency in adopting new technologies, she does not give him or her a role in developing a distinctly rural modern discourse or identity as she sees mechanization of farm work as “opening a wedge of industrialization” as defined by “engineers, bankers, and federal agents.”<sup>109</sup> These “modernizers” persuaded farmers to conform to their industrial logic.<sup>110</sup>

---

<sup>106</sup> Ibid., 4-6.

<sup>107</sup> Ibid., 3, 5.

<sup>108</sup> Deborah Fitzgerald, “Blinded by Technology: American Agriculture in the Soviet Union, 1928-1932,” *Agricultural History* 70, no. 3 (1996): 459-86.

<sup>109</sup> Fitzgerald, *Every Farm a Factory*, 6, 8.

<sup>110</sup> As Fitzgerald states clearly “I maintain that an agricultural leadership emerged in the 1920s—composed of business leaders, government agents, agricultural college professors, demonstration agents, and bankers—and that this leadership developed an industrial logic for agriculture. This logic functioned as a matrix of ideas, practices, and relationships that persuaded farmers to change the way they did things. This set of practices and relationships was explicitly modeled on

These urban stakeholders simply applied the same techniques of mechanization and management employed to industrialize American factories to industrialize agriculture.<sup>111</sup> Reading Fitzgerald's narrative, modern industrialization means large-scale production, specialized machines, standardized processes and product, reliance on managerial expertise, and efficiency as the production standard.<sup>112</sup> By introducing these elements into agriculture, these business leaders and academics had turned every successful farm into a factory by the mid-twentieth century.

While I do not dispute Fitzgerald's notion that, in reality, farmers may have found themselves in a system that required them to mechanize, I am more interested in the different question of how farmers thought of themselves when using their material objects and how these artifacts reinforced rural identities. I do, however, dispute the notion that the identities of farmers as modern from the 1920s onward can be characterized wholly as a process of simply copying urban industrial ideals imposed by "modernizers" from outside the farm. I give farmers more agency in helping to construct their own identities through technological use. Even though the economic pressures of a technological system may have denied them the choice *in reality* to adopt new technologies, farmers still played a role in shaping technological use and development. The idea that technological systems directed modernization fails to problematize the functionalist assumption that the technologies we have now and the way we use them is mandated by the artifact itself as the inevitable result. In the case of agriculture, the traditional story of technological change assumes that the economic advantages afforded by new farming factory and business practices that were familiar to this leadership and that were being trumpeted in the press during the postwar period." Ibid., 8.

<sup>111</sup> Ibid., 1-9.

<sup>112</sup> Ibid., 23.

technologies made their adoption in the Corn Belt inevitable. I am not willing to concede such technological determinism. Instead, I maintain that user identities and technologies co-construct one another. Thus, in contrast to Fitzgerald, I contend that while “modernizers” from outside of the farm may have also helped to construct a rural modern identity, the significant role of urban stakeholders does not mean that farmers had only a marginal role in constructing agrarian identities. I believe my approach gives a richer understanding of why farmers acquiesced and, at times, led efforts to mechanize farming as well as a more accurate picture of the unarticulated meanings of technologies in rural America.

Explaining the increased mechanization of agriculture by way of deep-seated cultural values and views about progress and technology, as I do in this book, fits awkwardly into the traditional story of rapid change. Considering cultural views in the early twentieth century suggests that a shift in artifacts and methods resulted from a gradual change in attitudes on the farm rather than as a rapid break from traditionalism demanded by greater technological efficiency. According to the traditional historical narrative, change most likely occurs because the modern industrialized reformed farmer realizes the economic advantages of new technologies. Since every farm has become a factory, according to Fitzgerald, farmers simply act as idealized factory managers would by making purely economic business decisions.

As I have shown here, the view that persistent anti-modern agrarianism existed in the Corn Belt also reflects negative urban notions about rural America rooted in the rural-urban conflict of the 1920s rather than the realities of the way farmers interact with technology. Farmers, in fact, created their own sense of modernity in opposition to urban conceptions. In developing this argument, I seek to build on scholarship, such as Fitzgerald’s and historian Ronald Kline’s, that grants farmers a significant role in bringing about increased agricultural

mechanization.<sup>113</sup> I do so by highlighting unarticulated and unconscious formations of identities and discourses.<sup>114</sup> In a compelling fashion, Kline particularly has drawn attention to technological use by the farmers themselves and has debunked the traditional notion of farmers as the anti-modern “other” who passively accepted industrial attitudes drawn from the cities. His work, along with Fitzgerald’s attention to rural ideologies, opens up new possibilities to take a more nuanced look at social and cultural attitudes in the early twentieth century.

This book proposes that those uncritically adopting the view that modernizers from outside of the farm have overcome persistent Jeffersonian agrarianism in rural communities to bring about agricultural change have neglected a subtle distinction between the discourses and concepts of urban industrialization and rural modernization. While farmers rejected urban visions of industrialization involving direction from government and industry (which in many cases favored collectivization) many farmers began to develop their own notions of modernity and progress by the early twentieth century and sought to modernize farm production as a means of gaining a competitive edge over their neighbors much earlier than urban stereotypes and

---

<sup>113</sup> While I do not dispute Fitzgerald’s notion that, in reality, farmers may have found themselves in a system that required them to mechanize, I am more interested in the different question of how farmers thought of themselves when using their material objects and how these artifacts reinforced rural identities. I do, however, take issue with the notion that farmers’ identities (from the 1920s onward) can be characterized as having been imposed by “modernizers” from outside the farm. I give farmers more agency in helping to construct their own identities through technological use even though economic pressures may have denied them much choice in adopting new technologies.

<sup>114</sup> Kline, *Consumers in the Country: Technology and Social Change in Rural America*, 6.

traditional historical narratives suggest. Before I construct this narrative of how rural capitalistic modernity arose out of the rural-urban conflict of the 1920s, I feel that some readers may desire to know more about the theoretical basis for my argument. As such, in the next section, I discuss the work of scholars who have written about multiple and contested meanings of modernity.

### **Scholarship Conceptualizing Multiple and Localized Modernities**

Several historians and STS scholars have opened up a space for developing an alternative narrative of rural modernization that does not rely on the binary conception of farmers either asserting Jeffersonian agrarianism or accepting urban industrialization. Legal historian Avi Rubin, for example, convincingly argues that while globally shared notions of what “modern” means emanated from the West steadily from the eighteenth to the early twentieth centuries, historians must acknowledge differences in how local actors conceived of modernity. Rubin uses the Ottoman *Nizamiye* courts from 1873 to 1909 as a case study to describe how Turkish judges and lawyers incorporated non-Western cultural elements into European modernity through everyday interactions with institutions.<sup>115</sup> Additionally, the historian Ronald Kline has argued that farmers have resisted the wholesale adoption of technologies, such as centralized electricity, “to create new modernities.” Kline conceives of “transformative resistance,” or actions taken by rural users against the imposition of technology from urban actors, in three forms: actively opposing the introduction of technology as in a farmer cutting telephone poles on his land; not purchasing new technology as farmer’s refusal to purchase refrigerators and other electric appliances; and not using technology in a proscribed manner (covering the same three categories as Rayvon Fouché’s “vernacular technologies”) such as using a car for a stationary

---

<sup>115</sup> Rubin, *Ottoman Nizamiye Courts: Law and Modernity*, 5-7, 155-157.



form of power for farm work.<sup>116</sup> Kline, however, never really defines what modernity means as a cultural identity for rural people. He simply shows that farmers have resisted or adapted technologies while taking the meaning of “modernity” for granted. I argue in this book that the use of artifacts does not in itself define modernity but, rather, derives from multiple modern identities that exist in a more abstract process of forming embodied taste. Identities come from more than simply the use of artifacts as Kline contends. Instead, a sense of self arises out of a more complex process by which historical, social, and economic factors contribute to the meaning of technology use. Further, Kline’s focus only on the use or non-use of technology by individual farmers gives no explanation of why rural people would share one version of modernity or why rural people would enthusiastically adopt some artifacts and not others. The question remains, therefore, of how scholars should define a shared European notion of modernity while allowing non-dominant social actors to define modernity on their own terms. In other words, how should historians acknowledge modernity’s real qualities as a global Western phenomenon while still “unthinking the conventional narration of modernity?”<sup>117</sup> Rubin recognizes this quandary and offers sociologist Anthony Giddens’ theory that across cultures, modernity constituted a *state of mind* characterized by constant reflexivity with an emphasis on the new. This reflexivity involved basing actions on the repeated testing of knowledge rather

---

<sup>116</sup> In showing “transformative resistance,” Kline aims to challenge the traditional historical narrative that farmers denied electricity by private utility companies warmly embraced the REA’s program to electrify rural America. Ronald R. Kline, “Resisting Development, Reinventing Modernity: Rural Electrification in the United States before World War II,” *Environmental Values* 11, no. 3 (August 2002): 327-344.

<sup>117</sup> Rubin, *Ottoman Nizamiye Courts: Law and Modernity*, 6.

than wholly on custom. Hence, modernity at its core sought to enact a set of shared discourses and sensibilities in the project of perfectibility of man and society in an attempt to reach a kind of European utopia of “newness.”<sup>118</sup>

Importantly, this over-arching modern global sensibility has always proposed a utopian set of goals that does not actually reflect realities.<sup>119</sup> An analysis of Rubin and works by other scholars suggest a much more specific definition of this utopian sensibility as not only an emphasis on the new but on a European version of “new” encompassing several important characteristics. First, as discussed extensively by scholars such as Bruno Latour, Andrew Feenberg, and Ulrich Beck, this global modern sensibility regarded Western notions of rationalism, empiricism, and reason as leading to personal and social progress.<sup>120</sup> Second, this global modern sensibility associated truth with quantification and Western notions of objectivity in the form of rational removal of the subjective self. Other scholars such as Theodore Porter similarly have noted a Western epistemic tendency to imbue numbers with credibility, and scholars such as Lorraine Daston argue that objectivity creates a “myth” that truth comes from

---

<sup>118</sup> Ibid., 13-14, 105; Anthony Giddens, *The Consequences of Modernity* (Stanford: Stanford University Press, 1990), 36-45.

<sup>119</sup> Rubin, *Ottoman Nizamiye Courts: Law and Modernity*, 6.

<sup>120</sup> Andrew Feenberg, *Between Reason and Experience: Essays in Technology and Modernity* (The MIT Press: Cambridge, MA, 2010), 129-143; Latour, *Science in Action*, Ch. 5; Ulrich Beck, *Risk Society: Towards a New Modernity* (Sage Publications: London, 1986), 51, FN1, 228-229; Lorraine Daston and Peter Galison, *Objectivity* (New York: Zone Books, 2010), 262, 270; Steven Shapin and Simon Schaffer, *Leviathan and the Air Pump* (Princeton, NJ: Princeton University Press, 1985), 25-26.

nothing more than an empirical observation of nature.<sup>121</sup> Third, as historian David Edgerton has examined extensively, the global modern sensibility ascribed to the Western progress narrative the view of technology as neutral and always advancing mankind through growth, capitalism, and industrialization.<sup>122</sup> As a “sensibility,” the scholar should not regard these characteristics as a litmus test in that what ultimately matters is not whether a group such as musicians or farmers has adopted all of these characteristics. Rather, one must ask the more significant question of whether local actors and discourses have embraced some of these characteristics as a desirable means of achieving “newness” and “progress” and as a break from whatever people conceive as “old” in that particular culture.

Conceptualizing modernity as a sensibility rather than a strict set of rules or definitions allows the historian to understand why a group such as Midwest farmers could develop a discourse of modernity containing traditional elements that seemed to contradict the dominant modern conception. The rural discourse that developed in the Midwest Corn Belt embraced universally modern ideas about the faith of technology, rationalism, modern business practices, and capitalist competition in bringing about progress while injecting traditional notions about morality, prosperity, and ethical ways of living with origins in Jeffersonian and German

---

<sup>121</sup> Theodore M. Porter, *Trust in Numbers* (Princeton, NJ: Princeton University Press, 1995); Lorraine Daston and Peter Galison, *Objectivity*, 5-8, 35-39; Stephen Hilgartner, *Science on Stage* (Stanford, CA: Stanford University Press, 2000), 66-70; Carolyn Merchant, *The Death of Nature* (New York: HarperCollins Publishers): 1980; Jan Golinski, *Making Natural Knowledge, Constructivism and the History of Science* (Chicago, IL: The University of Chicago Press, 1998).

<sup>122</sup> Edgerton, *Shock of the Old*, ix-xviii, Ch. 1; see also Norman Balabanian, “On the Presumed Neutrality of Technology,” *IEEE Technology and Society Magazine* (2006), 15-25.

agrarianism. Farmers in the Midwest Corn Belt helped to develop a discourse based on rural identity containing seemingly opposing views and positions that differed from purely urban discourses of industrialism. This rural modern discourse became remolded over three phases of American agriculture and technological use from 1920 to the present in a complex negotiation between rural identity and modernity that influences the ways farmers use technologies and think about themselves. In this way, farmers use both technologies and discourses to work on the rural moral self.<sup>123</sup>

Finally, I should note that my argument that farmers helped to form a notion of modernity distinct to the American Corn Belt offers one possible critique of Ulrich Beck's important theory of "risk society" because I challenge his claim for one monolithic form of "reflexive modernity."<sup>124</sup> Beck describes a worldwide transition from an age of modernity in an industrial era marked by a mix of naturalized and man-made but localized risks to an age of "reflexive

---

<sup>123</sup> Part of this paragraph will be published in the upcoming article, Brinkman and Hirsh, "Welcoming Wind Turbines and the PIMBY ('Please in my backyard') Phenomenon: The Culture of the Machine in the Rural American Midwest," (forthcoming 2017). Paper accepted for publication by *Technology and Culture* on September 25, 2015.

<sup>124</sup> Beck, *Risk Society: Towards a New Modernity*; see also Scott Lash, Ulrich Beck, and Anthony Giddens, *Reflexive Modernization. Politics, Tradition and Aesthetics in Modern Social Order* (Cambridge: Polity Press, 1994); Beck, *Ecological Politics in the Age of Risk* (Cambridge: Polity Press, 1995); Beck, "World Risk Society as Cosmopolitan Society? Ecological questions in a framework of manufactured uncertainty," *Theory, Culture and Society* 13, no. 4 (1996): 1-32.

modernity” characterized by the risk of purely man-made, global catastrophes. Beck conceptualizes risk as equivalent to a danger. Gabe Mythen contends that dangers in the risk society have qualitatively changed also in their ability to transcend time and space. Unlike hazards in pre-industrial or modern societies, the environmental and health effects of events reach across geopolitical boundaries and can lead to harm well into the future.<sup>125</sup> Beck argues that these macro-level risks affect everyone regardless of social or economic class and have created one global “risk society” in which people construct heightened notions of risk.<sup>126</sup> One may think of the threat of nuclear weapons, climate change, or global financial collapse as examples of such risks.

This “risk society” results in several effects throughout society leading to what Mythen calls a “distinctive form of ‘reflexive modernity.’”<sup>127</sup> Most importantly for my later discussion of the debate over GMOs, Beck argues that the role of science in bringing about hazards and the inability of scientists to agree on the risks posed by contemporary dangers has caused lay people

---

<sup>125</sup> Additionally, in contrast to risks faced in pre-modern or industrial societies, science itself has created risks difficult for lay people to see or evaluate creating paranoia. At the same time, Beck recognizes that advances in science have revealed more dangers than could be observed in the modern era, contributing to this increased risk perception. Gabe Mythen, “Mapping the Risk Society,” in *Ulrich Beck: A Critical Introduction to the Risk Society*, ed. Gabe Mythen (Sterling, Va.: Pluto Press, 2004), 18-19.

<sup>126</sup> Mythen, “Risk, Reflexivity and Trust,” in *Ulrich Beck: a critical introduction to the risk society*, 143-144.

<sup>127</sup> Mythen, “Mapping the Risk Society,” p. 17;

to question the authority of scientific experts.<sup>128</sup> In contrast, Deborah Lupton, Gabe Mythen, and Brian Wynne offer significant critiques of Beck's risk society thesis. While differences exist among these scholars, they all criticize Beck's "'one size fits all' approach to reflexivity" as well as "Beck's insistence on the contemporary individual as an exclusively rational assessor of risk." Instead, these scholars recognize the diversity of localized approaches to risk based on individualistic situational understandings of the world in which individuals evaluate risk through culturally learned and shared assumptions.<sup>129</sup> Therefore, my argument that farmers use technologies to form and develop a unique rural form of modernity in the Corn Belt aligns more with the notions of Rubin and these critics of Beck who recognize the persistence of multiple localized modernities. In addition, my historical narrative showing how rural modernity has a genealogy lends credence to the argument that people do not form risks through rational calculation of dangers but through cultural lenses. Further, the existence of a rural capitalistic modernity or rural ultramodernity suggests that Beck's reflexivity exists perhaps only in the cities or among elites, not as a monolithic conception shared by all members of society. Indeed,

---

<sup>128</sup> Deborah Lupton, *Risk* (New York: Routledge, 1999), 69.

<sup>129</sup> Lupton, 104-147. For a similar socio-cultural view of risk see also Mary Douglas and Aaron Wildavsky, *Risk and Culture: An Essay on the Selection of Technological and Environmental Dangers* (Berkeley: University of California Press, 1982); Mythen, "Risk, Reflexivity and Trust," 142-148; Brian Wynne, "May the Sheep Safely Graze? A Reflexive View of the Expert-Lay Knowledge Divide," in *Risk, Environment, and Modernity*, ed. Scott Lash et al. (London: Sage, 1996): 74-76; Scott Lash, "Reflexive Modernization: The Aesthetic Dimension," *Theory, Culture, and Society* 10, no. 1 (1993): 1-23; Mary Douglas, *Risk and Blame: Essays in Cultural Theory* (London: Routledge, 1992): 111; Mythen, "Risk, Reflexivity and Trust," 148.

I will show later in Chapter 8 that farmers in the Corn Belt rarely exhibit the distrust of scientific expertise and heightened perceptions of risk that Beck alleges when arguing in favor of GMO crops. Nor do farmers throughout this book view the introduction of advanced technologies as posing a danger as Beck predicts. In fact, farmers more often see such reflexivity as a continuation of an urban threat to rural identities. In other words, rural people in the Corn Belt view arguments consistent with reflexive modernity as the updated version of urban industrialism's tendency to regard rural people as backwards and in need of reform. As such, Beck's risk society must be filtered through rural practices of performative use and the experience of farmers with the pattern of audience through American history to truly understand how people in the Corn Belt view the world. Since at least the 1920s, Beck's monolithic reflexive modernity does not accurately describe the relationship most Corn Belt farmers have had with either science or technology.

### **Discourse Identity Bundling as Filling Gaps in Recent Scholarship on Class and Rural Resentment**

My theory of discourse identity bundling as forming a fluid and contested sense of self and my notion of "pattern of audience" promise more comprehensive and unifying ways to think about several recent works by scholars on class and rural resentment in America. In her recent book, *White Trash: The 400-Year Untold History of Class in America*, historian Nancy Isenberg explores the rigid class structures that have existed since the seventeenth century to challenge the common myth that the U.S. exists as a classless harbinger of equal opportunity. Isenberg shows how false narratives of U.S. history hide the true nature of American social structure on the ground that elites naturalize poor people as "waste people." I agree with Isenberg's main point that America has never existed as the upwardly mobile and classless society of myth nor of

official history, and I support her contention that a permanent white underclass has always existed as an ignored and exploited group. However, Isenberg neglects to offer the reader a general theory of class. Instead, she seems to have one monolithic notion of what constitutes “human rubbish” and views class as equivalent to a sort of economic “situatedness.” For Isenberg, to be “white trash” is simply to be very poor and not own land. She sees a constant thread through American history in which a permanent lowly white class exists as a result of landlessness.<sup>130</sup> I contend that while class and economic status are often related, they are not equivalent. Rather, I define class as a dominant notion of social status determined by culturally determined images that signal belonging in a “low” or “high” social group. For example, anyone in America in 2016 can simply look at a person on the sidewalk and form notions of his or her class even without knowing their financial situation or level of land ownership. Indeed, a person visiting the U.S. from another country may not even understand this dominant notion of whether such a person looks “low class” or “high class,” much as an American may not understand such distinctions in India or China. As Isenberg points out, people often do not discuss class, yet everyone knows the dominant notion of who counts as “low class” or “high class” and what those classes “look like.” In discussing Benjamin Franklin, Isenberg herself recognized that in eighteenth century Philadelphia, “Class was about more than wealth and family name, it was conveyed through appearances....” Franklin, Isenberg contended, “understood this. The first portrait of him, painted in 1746, did not show him in his leather apron sitting print type; nor was he pushing a wheelbarrow along the street, as he described himself—a dutiful tradesman—in his *Autobiography*. He was wearing a respectable wig and a fine ruffled shirt, and assumed all the

---

<sup>130</sup> Nancy Isenberg, *White Trash: The 400-Year Untold History of Class in America* (Viking: New York, 2016), xvi-xvii, 1-42.



airs of the ‘Better Sort.’”<sup>131</sup> Yet, when discussing class more abstractly, Isenberg maintains that it stands for a real economic condition tied to land ownership. Class, I alternatively argue, represents the ultimate social construct because one cannot find a justification for it in nature or in the real world. Rather, class exists entirely as a shared dominant social category determined by complex historical processes rather than as a real economic condition.

Surely, identity, of which class forms a subset, forms as a result of a more fluid and variable process over time than Isenberg allows. I contend that class, as well as other criteria for forming identity such as race or modernity, arises not out of pure economic realities, but as a result of a repeated performance on a daily basis by people for an audience. The observer of the performer must determine that person’s social belonging based on a cultural conception that everyone knows but that also is constantly being socially constructed. While a low class, a “white trash,” certainly has existed as a constant through American history as Isenberg contends, what counts as “low” and who gains inclusion as “trash” changes over time through constant social negotiation and contestation. For example, as I will discuss later in this book, when urbanization occurred in the U.S. beginning in the late nineteenth century and accelerating in the 1920s, land ownership became less important in determining social status as economic and social power shifted from the country to the cities. I will show that the rural-urban conflict of the 1920s resulted largely from the loss of social status that farmers experienced in American society from the late nineteenth to the early twentieth centuries. In addition, Isenberg tends to leave the reader with an overly simplified map of social hierarchy in which only three classes exist: low/“white trash,” middle, and elite. In reality, the constantly shifting social consensus that forms notions of class constructs more classes than this. Certainly the urban poor in Italian or

---

<sup>131</sup> Ibid., 72.

Irish immigrant neighborhoods and the rural “rube” of the South or Midwest both formed lower classes in the early twentieth century U.S., but few Americans would view these two groups as the same or even occupying identical rungs on the social ladder. Finally, Isenberg has taken criticism from some reviewers for completely ignoring the intersection between class and race in America and indeed black slavery only receives passing mention in her book while other race-based systems of subjugation remain absent.<sup>132</sup> My theory of discourse identity bundling avoids Isenberg’s omission because it allows the social construct of race as one factor among several (albeit an often important one) that individuals and society use to construct a shared notion of how to classify people (including how to answer the question “who am I?”). In other words, people confront dominant notions of the meaning of many factors all at once such as black or white skin, overalls and business suits, Southern or Northern accents, cars and tractors and a whole collection of other signals to determine questions like “who am I?” and “who is he or she?” The cultural meaning and importance of all of these social cues certainly does not stand as constant through time and they do not always conform to the amount of money or land people have, as Isenberg contends. In this book, I concern myself with one specific historical process of determining, and often contesting, the cultural meaning of being both rural and a farmer and the role technology plays in forming these notions.

---

<sup>132</sup> For reviews of Isenberg’s book that note her “references to race” as “fleeting and awkward,” see Carlos Lozada, review of *White Trash: The 400-Year Untold History of Class in America*, by Nancy Isenberg, *Washington Post*, June 23, 2016, Book Party; Thomas J. Sugrue, review of *White Trash*, Isenberg, *New York Times*, June 24, 2016, Book Review.

Isenberg's treatment of the history of "white trash" also tends to see lower class white people as victims of elites who exploit them for economic gains.<sup>133</sup> She seems content to see these groups from the perspective of the upper classes oppressing them and appears unconcerned with how these downtrodden people form their own identities. Surely, people occupying poor section of Appalachia, for example, do not see themselves as "waste." While Isenberg recognizes pride felt by lower class white people in belonging to a sort of ethnic group, she gives no mechanism for how people come to form identities and she certainly gives poor people no agency in the this process of constructing notions of the self. She provides no theoretical basis for thinking about why anyone oppressed in the horrible ways she describes would feel pride in anything. Seen this way, identity in these poor white communities seems like a social problem, a type of cultural Stockholm syndrome where poor people have resigned to accept their identities determined by their superiors in order to perpetually exploit them. Not only does this view adopt the pejorative views of elites about certain groups of people, it makes no room for resistance, confrontation, or class resentment. In his recent acclaimed book, *Hillbilly Elogy: A Memoir of a Family and Culture in Crisis*, author J.D. Vance avoids this tendency to view lower class white people in Ohio, Kentucky, and West Virginia in such fatalistic terms and, instead, attempts to explain identity from *within* that community. Vance sees a combination of working-class identity, including pride in belonging to a lower class, and economic decline after the collapse of the manufacturing economy as leading to support for political candidates who proffer anti-elitist or "anti-establishment" rhetoric. For Vance, recent politics shows the white underclass as guarding its own unique identity against the undermining efforts of the elite. Unlike Isenberg, Vance seeks to understand class resentment according to how people in that class have formed

---

<sup>133</sup> Isenberg, 17-42.

their own identities. Vance, however, incorrectly sees this working class resentment of elites as a recent phenomenon unique to the American “Rust Belt” and the South. He sees this resistance politics as linked to values contributing to social decay within the working class community as well as a contemporary loss of manufacturing jobs.<sup>134</sup> However, political scientist Katherine Cramer has argued that similar “rural resentment” against city dwellers exists in Wisconsin and other parts of the Midwest and that such alienation drove the recent election of Wisconsin Republican “Tea Party” governor Scott Walker.<sup>135</sup> Cramer argues that the identity of rural people contains “much more than an attachment to place.... It includes a sense that decision makers routinely ignore rural places and fail to give rural communities their fair share of resources, as well as a sense that rural folks are fundamentally different from urbanites in terms of lifestyles, values, and work ethic.” Rural consciousness, Cramer contends, “denotes a multifaceted resentment against cities.” She argues that political candidates advocating lower taxes and less social welfare programs attract many rural people because of what she calls “a sense of distributive injustices.” Namely, Cramer contends that support for Tea Party candidates arises out of rural notion that “systematic decisions” at the government level have resulted in people in the country “not getting their fair share.” Further, she identifies a widespread rural view of urban-based government employees as “lazy and undeserving,” who unjustly take resources from hard-working people in the country. This resentment of urbanites perceived as outside the rural “social group,” Cramer alleges, explains rural voting patterns even more than

---

<sup>134</sup> J.D. Vance, *Hillbilly Elogy: A Memoir of a Family and Culture in Crisis* (HarperCollins, New York, 2016).

<sup>135</sup> Katherine J. Cramer, *The Politics of Resentment: Rural Consciousness in Wisconsin and the Rise of Scott Walker* (University of Chicago Press: Chicago, 2016).

other factors relied on by political scientists such as party affiliations or the positions of candidates on particular issues.<sup>136</sup> As with Vance, Cramer offers an ahistorical analysis that sees rural resentment as a recent phenomenon. While Cramer notes that populism has always existed in rural America, she sees the particular resentment-based politics she identifies as a contemporary development. Unlike the populists of past generations, according to Cramer, rural people do not base their resentment against a powerful elite but, rather, towards urban actors perceived as getting too much of “the pie.” Unlike Isenberg, Cramer sees class as a socially constructed identity but she views rural resentment as arising out of real contemporary economic inequalities between cities and the country. She writes, “The United States is becoming increasingly urban, and increasingly racially and ethnically heterogeneous.” Further, Cramer writes, “because we live in a time when distrust in government is the norm, there is often a political benefit in running against government and in making the claim that government is out of step with the concerns of the public.”<sup>137</sup> In other words, Cramer sees rural resentment as resulting from recent U.S. political discourse promoting a distrust of bureaucrats and public officials.

I will argue in this book that rural resentment actually presents a very old phenomenon traced not wholly to economic causes. Rather, I contend that a pattern of audience has existed in America since at least the late eighteenth century involving a repeated social practice in which rural people perform their identities as moral producers for an audience of elite outside observers who evaluate the agrarian. Since the late eighteenth century, the two crucial questions in this repeated social practice is whether the agrarian is moral and whether he or she is “modern.” The

---

<sup>136</sup> Ibid., 5-16.

<sup>137</sup> Ibid., 13-18.

meanings of morality and modernity change over time based on social contexts and are contested. Rural resentment in the form described by Cramer has existed at least since the 1920s and has actually served as an important component of rural discourse identity bundles since then. While economic factors served as the catalyst for rural resentment during the rural-urban conflict of the 1920s, the real unarticulated cause of this resentment arose out of a repeated social practice, a “pattern of audience,” that pre-dates any economic development or even system of agricultural production. Identity, notions of modernity and morality, and interactions with an outside “other” drives rural resentment in the U.S., not any particular economic or political situation at one specific time. Technological use serves as an important means whereby rural people have reinforced their identities as moral and as modern. Resentment comes not from economic or political inequality alone but because rural people know that urban dwellers ignore, or do not find themselves fully convinced, by rural performances. In the process of this pattern of audience and repeated rural resentment, rural and urban dwellers contest the meaning of modernity in America.

In this chapter, I have placed this book within an historiography of modernity and the history of agriculture. I have identified a common view that sees farmers as Jeffersonian agrarians resistant to technological and social change, and regards modernity as one monolithic concept. I have sided with scholars who acknowledge multiple and localized versions of what it means “to be modern,” as well as those who have given farmers a role in bringing about technological change. In addition, I have explained how performative use enhances recent scholarship on class and rural resentment by introducing technology use as a means of forming and reinforcing often contested and changing identities. Now that I have thoroughly described the methodological and historiographical basis for this book, I now turn to my historical

narrative of the development of performative use among farmers in the Corn Belt. My story begins not in Iowa nor does it start during the post-World War II “Green Revolution.”<sup>138</sup> Rather, I begin with the eighteenth century with one of America’s “founding fathers,” Benjamin Rush, touring the Pennsylvania countryside to observe a particularly strange and mysterious group of German farmers.

---

<sup>138</sup> The Green Revolution was the use of new fertilizers, pesticides, and high-yield crop varieties from roughly 1945 to 1985 to achieve an increase in crop production. As discussed in chapter 8, organic discourses often identify World War II, which roughly corresponds to when microbiologist Norman Borlaug began his “Green Revolution” research, as the turning point where agriculture started to become immoral. For an overview of the history and impacts of the Green Revolution, see Ronald L. Phillips, *Normal E. Borlaug 1914-2009, A Biographical Memoir* (National Academy of Sciences, 2013), <http://www.nasonline.org/publications/biographical-memoirs/memoir-pdfs/borlaug-norman.pdf> (accessed 8/8/16); Prabhu L. Pingali, “Green Revolution: Impacts, Limits, and the Path Ahead,” *Proceedings of the National Academy of Sciences of the United States of America* 109, no. 31 (July 2012): 12302-12308.

## Chapter 3

### Setting the Stage: The Genealogy of Contested Modernity and the Twentieth-Century

#### Rural-Urban Conflict

*Agriculture is, perhaps, of all the useful arts that which improves most slowly amongst democratic nations. Frequently, indeed, it would seem to be stationary, because other arts are making rapid strides towards perfection. On the other hand, almost all the tastes and habits which the equality of condition engenders naturally lead men to commercial and industrial occupations.*

Alexis de Tocqueville, *Democracy in America*, 1840<sup>139</sup>

Growing up in the suburbs of Washington, D.C., few of my friends had even seen a “real” farm. These eastern urbanites vocally looked down on rural Americans as backwards. In the summers, many of my colleagues would travel to Europe, the Caribbean, and other exotic places. I went to Iowa. In a family with a father who became the first son to ever leave the farm and a mother with trepidations about air travel, we actually *drove* to Iowa. The family packed into a car and for hours passed field after flat field of corn and soybeans from eastern Ohio to the middle of Iowa. When we finally turned off the main highway and onto the road to my grandparents’ and uncle’s farms, the landscape did not change although my boredom had started to evolve into restrained anticipation as I looked out over the horizon. Finally, I received the annual announcement I had waited for over two long days of monotony when my father said in a clear voice with pride, “Son, see that field? That’s Brinkman land!” While my father meant the phrase to carry sarcasm, I must admit that suddenly the landscape literally changed for me.

Rows and rows of drab green corn on a flat landscape became bucolic plants majestically

---

<sup>139</sup> Alexis de Tocqueville, “What Causes Almost All Americans to Follow Industrial Callings,” in *Democracy in America*, ed. Richard D. Heffner (New York: Penguin Books, 1984), 213-216.



waiving in the wind to announce a clear blue sky above. I no longer saw corn, I imagined my grandfather starting out in his early twenties with oxen chasing the American dream, my father driving the old Farmall M as a teenager with the whole world in front of him. I saw everything I was taught I should be proud to be. Of course, the field was in reality no different than the rows of corn in eastern Ohio (hence my dad's joke), but it looked different to me. My perceptions were confirmed over the next few weeks of my "vacation" when I worked on the farm. My grandfather had moved on from the ox and the Farmall M to huge combines and tractors guided by global positioning systems, but the ox harness was still in the barn and the Farmall still parked in the machine shed in pristine condition so visitors could drive it, imagine what it was like in the "old days," and marvel at the fact that it still ran. Of course, the family also had to thoroughly inspect the car that we drove to Iowa. Years later when I could drive my own car to the farm, I felt ashamed to arrive in a Honda thinking that my Republican grandfather would look down on an imported car. To my surprise he met me with "Honda, those are great cars. I have one of those, too." When I pressed further and asked him why he drove a Japanese car he responded proudly, "They buy my corn."

Arriving at the farm where my dad grew up, I delighted in walking through the huge dairy barn, no longer in use, with my father who explained how he worked alongside his father and brother as a child. "The cows were here in front of this trough and we would pull this wire and hay would fall from the hay mow. Here is the icebox where we kept the milk cool. The cows always kept it warm in here even in the winter." Following the barn tour, I would go to the huge machine shed to sit on the most recent Case International tractors and combines. The door would open to reveal these huge beautiful red machines that seemed poised as if ready to leap into action. An assuring aroma of old corn and hay filled the air. I would climb up the side of

the largest combine I could find and open the door. To a ten-year old, the inside of the cab looked like something out of Star Wars. An impressive array of buttons, lights, levers, screens and gadgets surrounded a comfortable leather chair with arms. The whole cabin posed forward looking out through a huge slanted window in a way that made you feel like a god perched on top of the world. The same experience came when climbing into the enormous tractors. Next came a tour of the deluxe motor home. I would ask my dad “How many acres do they farm dad?” and he would boast “about 1500.” My uncle would invariably arrive in a large semi-truck with “Brinkman Farms, not for hire” painted on the side and brimming to the top with corn. Sometimes, he arrived with an empty truck and would pull up to the large grain bins to the left of the barn and pull a corn auger into position. In this case, we climbed the ladder on the side of the semi-truck and watched a steady yellow steam of corn shoot into the enormous truck bed and think, “this corn is going all over the world!” We knew the racing bushels above our heads were destined for China or Europe because they had already been sold as futures before they were even planted. While I knew the corn kernels had grown as a plant, I saw them more as dollar bills than natural objects and the hum of the auger seemed to groan “money, money, money....” Indeed, dipping my hand into the warm pile of grain and letting it flow through my fingers, it amazed me how uniform and identical each kernel was to the point that each seemed like mass-produced manufactured artifacts than anything produced by nature. Again, I felt proud that a few of us Brinkmans could produce so much so “perfectly” and feed people all over the globe. Yet, when I returned home to suburban Washington, D.C. and grocery store clerks found out we moved there from the Midwest we would get questions like, “did you have electricity?”

Compared to my suburban surroundings back east, everything was big, loud, manly, and, somehow more “real.” I had thoughts of my family emigrating from Germany with nothing but

the clothes on their backs (at least that's what the narrative said) and my grandfather starting out with only a few acres and an ox. "Look how far we've come," I thought. While I did not own a single piece of farm equipment, these monuments of steel somehow made me feel good about myself. I felt as if I had come from a long line of tenacious scrappers who made it, a self-image I confirmed with several days of what many would consider unglamorous and back-breaking labor. I picked up large rocks in a field behind one of these dust-producing machines in the middle of the summer, shoveled corn into a dangerous auger in a dusty corn bin, and cleaned out a pigsty in the frigid Iowa December. These dirty and dangerous jobs would always leave me in a good mood. I got the sense that I had found something inherent to being a Brinkman although I could not really articulate what that "something" was. Next, the family would eat lunch in the house, a hearty German lunch of cheese and meats, with the radio blaring crop reports. The conversation evolved around politics, crop prices, hauling grain, and hedging. My uncle would sometimes mention the names of men I had never met, but who formed a large team of advisors about taxes, chemical applications, and commodity markets. After two days in the car from Washington, D.C., I was on the other end of the world.

The barn had fallen out of use in the late 1960s, but in the year before his death in the mid-2000s, my grandfather invested thousands of dollars renovating it by covering it with aluminum siding. When asked in his last year about the future of farming, the old right-leaning farmer surprisingly expressed environmental concerns about soil depletion. He spent much of that year driving the old Farmall M performing tasks that did not really need to be done. Although he had a variety of ailments, he needed to drive the tractor and feel like a farmer in his last days. He reminded me of my great grandfather who, in his late nineties, told me over and over about the horses he used to farm with and all the skill you needed to handle large draft

horses. When asked why he was out in the cold, my grandfather's response was always "to see if it still runs."

---

In this chapter I seek to explore how farmers' performative technology use in the early twentieth century took the form that it did as well as the genealogy of rural modern identities in the Corn Belt. I will argue that two main developments prior to 1900 set the stage for how farmers would use technology to perform their rural modern identities in the twentieth century. First, Americans had established a pattern of audience or a repeated cultural practice of a "modern" social elite observing and evaluating a rural "other" who used material objects to perform an agrarian moral sense of self. This pattern of observation and performance constituted an unarticulated debate over the modernity and morality of the rural other. Second, the immigration of German farmers to the U.S. and their migration from Pennsylvania to the Corn Belt in the eighteenth and nineteenth centuries established an identity of traditional German agrarianism. This bundle of German discourses and identities would combine with Jeffersonian agrarianism to form a new rural modern identity in the early twentieth century in response to the threat of urban industrialism. In order to describe these two important developments, I analyze evaluations of German farmers in Pennsylvania by Benjamin Rush and other elites in the late eighteenth century. I then flesh out the characteristics of traditional German agrarianism as it existed in frontier Iowa in the late nineteenth century through an examination of a German schoolteacher's account of letters he received from students who had immigrated to the Corn Belt. These letters reveal a transitional discourse of traditional German agrarianism and early modern sensibilities on the eve of the rural-urban conflict in which farmers would develop a more distinct rural modern identity.

Before commencing my genesis narrative, I would like to briefly describe how I theorize identity. How and why, after all, do people settle the question, “who am I?” Too many historians and sociologists have discussed the notion of identity in too great a depth to repeat in a study primarily concerned with the history of agricultural technology.<sup>140</sup> For my purposes, I regard

---

<sup>140</sup> For scholars theorizing identity in a variety of domains, see Ramsey, Jr., *Race Music: Black Cultures from Bebop to Hip Hop*, 35-39; Benjamin B. Ringer and Elinor R. Lawless, *Race-Ethnicity and Society* (New York: Routledge, 1989); Stuart Hall, “Ethnicity: Identity and Difference,” *Radical America* 23, no. 4 (1987): 9-20; George Lipsitz, *Time Passages: Collective Memory and American Popular Culture* (Minneapolis: University of Minnesota Press, 1990); Erving Goffman, *Stigma: Notes on the Management of Spoiled Identity* (New York: Simon and Schuster, 1963); Amy Gutman, ed., *Multiculturalism: Examining the Politics of Identity* (Princeton, NJ: Princeton University Press, 1994); Arnold Ludwig, *How Do We Know Who We Are? A Biography of the Self* (Oxford: Oxford University Press, 1997); Charles Taylor, *The Ethics of Authenticity* (Cambridge, MA: Harvard University Press, 1991); Ann Swidler, “Culture in Action: Symbols and Strategies,” *American Sociological Review* 51 (1986): 273-86; Michael Lienesch, *In the Beginning: Fundamentalism, the Scopes Trial, and the Making of the Antievolution Movement* (Chapel Hill, NC: The University of North Carolina Press, 2007), 7-33; Jean L. Cohen, “Strategy or Identity: New Theoretical Paradigms and Contemporary Social Movements,” *Social Research* 52 (1985): 663-667; Karen A. Cerulo, “Identity Construction: New Issues, New Directions,” *Annual Review of Sociology* 23 (1997): 385-409; Hank Johnson, Enrique Larana, and Joseph R. Gusfield, “Identities, Grievances and New Social Movements,” in *New Social Movements: From Ideology to Identity*, ed. Larana, Johnston, and Gusfield (Philadelphia: Temple University Press, 1994), 3-35; Adele E. Clarke et al., “Biomedicalization:

identity as a sense of self that is fragile and must be either ever changing or constantly reinforced through interaction with the world. This malleable concept of identity formation embraces the idea that we take signals from discourses and dominant cultural images to help tell us who we are and how we should act and think.<sup>141</sup> As stated succinctly by philosopher and bioethicist Carl Elliott, “The notion that identity is something that you work out for yourself automatically brings about a certain tension, because identity can never be wholly inwardly generated. It must be developed in dialog with others.”<sup>142</sup> While Elliott does not explicitly discuss the nature of this “dialog,” he tends to view it not as a literal conversation between people but as a sort of unarticulated signaling process. In short, Elliott alleges that particularly in American society driven by competition and media images, we do not have freedom to decide who we are because we care about what people think about us. For Elliott, the signals and images that bombard us on a daily basis in a consumer culture create unexpressed ideas about what actions will garner the most approval from others.<sup>143</sup> In addition, I make use of the notion that the concept of self also often requires an “other.” As the naturalist John A. Livingston explained “The concept of ‘self’

---

Technoscientific Transformations of Health, Illness, and U.S. Biomedicine.” Clarke, et al., eds. *Biomedicalization: Technoscience, Health, and Illness in the U.S.* (Durham, NC: Duke University Press, 2010): 80-83; Sandra Harding, *Whose Science? Whose Knowledge?: Thinking from Women’s Lives* (Ithaca, NY: Cornell University Press, 1991), 272-277.

<sup>141</sup> For a discussion of the notion of culture as dominant images that confront people on a daily basis see Gary Downey, “What is Engineering Studies For? Dominant Practices and Scalable Scholarship,” *Engineering Studies* 1, no. 1 (2009): 55-76.

<sup>142</sup> Elliott, *Better than Well: American Medicine Meets the American Dream*, 41.

<sup>143</sup> *Ibid.*, 150.

is another expression of dualism. It dichotomizes the world by requiring the additional concept of ‘other’-or, if you prefer, subject and object. The twin notions are mutually reinforcing.” In other words, to conceive of who you are (the subject), you need to know who you are not (the object).<sup>144</sup>

In this book, I find the notion of discourse identity bundles more useful than dialog to describe this signaling process. While exceptions to the rule certainly exist, most people form identities based on *packages* of language and action that society has tended to bundle together and that, in turn, suggest a pre-determined identity. These bundles of discourses and identities become embodied as people strategically construct a moral self. In other words, most individuals need to feel that they are living the “right” way through what Elliott calls “the affirmation of ordinary life.”<sup>145</sup> People may reject these bundles or alter them as individuals or groups, but they must confront and deal with these dominant discourse identity bundles that exist on a daily basis. As Elliott states, “You depend on culturally agreed-upon signals for the messages you send” and “the meaning of these cultural signals is constantly changing.”<sup>146</sup> Discourse can consist of language, images, or actions. As noted by Elliott, people carry these discourse identity bundles unconsciously. Unlike Elliott, I also contend that people form identities not simply in dialog with other people or even consumer products, but with material objects that carry deep cultural and symbolic meanings related to a whole suite of social and historical factors. Straying even further from Elliott’s view, I regard bundles of discourses and

---

<sup>144</sup> John A. Livingston, “Other Selves,” in *Rooted in the Land: Essays on Community and Place*, ed. William Vitek and Wes Jackson (New Haven, CT: Yale University Press, 1996), 134-139.

<sup>145</sup> Elliott, *Better than Well: American Medicine Meets the American Dream*, 152.

<sup>146</sup> *Ibid.*, 116-117.

identities as not simply coming from the manipulative aims of advertisers, even in a consumer culture such as the U.S. Rather, I take a similar approach to the political scientist Katherine Cramer, who views class and identity as, “not something that people just have-it is something that they *do*. They give meaning to their social-class status through the food they eat, the clothes they wear, the sports they play, and so on.” Cramer eloquently explains, “People give meaning to their identities through their everyday life and interactions with others, and those meanings in turn structure how they make sense of the world.”<sup>147</sup>

Technological use can constitute one instance of unarticulated discourse that signals to people who they are. I argue in this book that in rural farming communities of the U.S. Corn Belt, technology serves as a particularly important way that “people give meaning to their identities through their everyday life.”<sup>148</sup> In the American context, where science and technology serve as one signal of modernity and where Jeffersonian ideology tends to imbue traditional agrarian ways of life with inherent morality, each instance of material use in the rural U.S. has the potential to construct a discourse of either rural traditionalism or modernity. As such, technology serves as an important site for a broader contestation over rural identities. David Edgerton notes a “reheated futurism” associated with new technologies throughout U.S. history.<sup>149</sup> Similarly, Americans have repeated an often-unarticulated debate over whether farmers and rural residents should see themselves as “hicks” or “high tech.” The discourses and ideologies employed in this rehashed conflict over rural identities change according to different social contexts, but the debate remains under the surface of articulated political, economic, and

---

<sup>147</sup> Cramer, *The Politics of Resentment*, 15.

<sup>148</sup> *Ibid.*

<sup>149</sup> Edgerton, *The Shock of the Old: Technology and Global History Since 1900*, x.



scientific rhetoric about farming and rural communities. The following discussion traces the genealogy of this pattern of observance and performance to determine whether the “yokel/rube” or the “sophisticated/modern producer” should serve as the dominant image of rural people. This repeated cultural pattern of contesting rural identities through performance accelerated in the 1920s, when a broader rural-urban conflict affected many aspects of life in the Corn Belt from politics to popular culture. This period of rural-urban conflict, which I explore in greater depth in Chapter 4, led to a more assertive effort by some farmers in the American Midwest to help develop a distinctly rural version of modernity. Many rural Americans used technology to claim their own version of *rural capitalist modernity* as a means of resisting efforts of others outside of the farm to assert their own version of *urban industrial modernity* (which I also call *urban industrialism*) based on the view of farmers as unsophisticated yokels in need of reform. However, the rural-urban conflict of the 1920s simply accentuated a familiar social practice of “urbane” Americans evaluating and critiquing rural denizens, their work processes, and their way of life. The tension in American culture between the dominant images of the farmer as an “ignorant yokel” on one hand or a “sophisticated producer” on the other has a genealogy that dates to the beginning of the republic. Even before the rural-urban conflict of the 1920s, material objects served as important props used by rural performers in working out this conflict over agrarian identities.

### **The Seeds of Contested Modernity and the Pattern of Audience**

The tension between the dominant image of the backward rural agrarian and the sophisticated rural user of farming techniques has a long history in the U.S. Well before the 1920s when Americans began associating modernity with urban dwellers and before

“technology” replaced the category of “material” or “useful arts,”<sup>150</sup> upper class travelers through the northern countryside observed agricultural practices they associated with a modern sensibility (however it was defined at the time) among people they considered less sophisticated.<sup>151</sup> The conflict over discourses of modernity in the early twentieth century between rural farmers and urban reformers has a genealogy rooted in the eighteenth century.<sup>152</sup> As too many encounters existed to provide a comprehensive history of this pattern of audience in one chapter, I chose instead to explore one example in great detail in rural Pennsylvania in the 1780s between Benjamin Rush and his German-American neighbors. The encounter from Rush’s aristocratic observer-perspective offers a rich case study of the entanglement of enlightened rationalism, ideas about progress, and experimentation borrowed from natural

---

<sup>150</sup> For an in-depth analysis of how “useful” arts became “technology” in the early twentieth century see Eric Schatzberg, “Technik Comes to America,” *Technology and Culture* 47 (2006): 486-512. Schatzberg argues that “technology” became a keyword from 1900 to 1930 primarily as a result of “the writings of American social scientists who imported elements of the German discourse of Technik into the English term technology, thus shifting the latter from its original definition as the science or study of the useful arts to a new one that embraced the industrial arts as a whole.” *Ibid.*, 487.

<sup>151</sup> For a detailed discussion of the power dynamics that lead to the replacement of the phrase “material arts” with “technology,” see Lerman, “Categories of Difference, Categories of Power Bringing Gender and Race to the History of Technology,” 893-918.

<sup>152</sup> For a discussion of using genealogical analysis of knowledge and power in an historical context, see Michel Foucault, *Security, Territory, and Population: Lectures at the Collège de France 1977-1978* (New York: Pelgrave Macmillan, 2007), 117.

philosophy with conflicts over class and culture.<sup>153</sup> When Rush, a natural philosopher, physician, and statesman commenced his expedition of the Pennsylvania countryside in 1789 to conduct a “natural history” of “the German inhabitants,” two distinct agrarian ways of life had already established themselves that had few contacts with one another. Rush’s *Account of the Manners of the German Inhabitants* opens a window into the culture of German agrarianism and highlights differences between traditional peasant German and American/English aristocratic agrarian traditions.<sup>154</sup> In following people and their agrarian ideologies rather than technologies, one can begin to establish a social and cultural continuity for the way farmers use artifacts and techniques performatively to act out and form identities as “modern” from the late eighteenth century into the twentieth century.<sup>155</sup> These two discordant agrarian cultures existing along-side one another in the early Mid-Atlantic, one enlightened and aristocratic and the other traditional and peasant, constitute one example of the genealogy of later competing discourses of modernity

---

<sup>153</sup> This paper is not examining Amish or Mennonite populations, but more mainstream or majority German immigrant farming populations.

<sup>154</sup> Benjamin Rush, *An Account of the Manners of the German Inhabitants of Pennsylvania, Written 1789*, ed. Israel Daniel Rupp (Philadelphia, PA: Samuel P. Town, 1875).

<sup>155</sup> For example, the German population in Iowa grew from 7,101 in 1850 to 324,069 in 1890 with the next closest immigrant group, the Irish, growing from 4,855 to 37,353 respectively. Many American born Iowans were also of German descent, Leland L. Sage, *A History of Iowa* (Ames, IA: Iowa State University Press, 1974), 93. Germans constituted a of majority of foreign-born residents in Illinois in 1850 at 35.86%, Douglas K. Meyer, *Making the Heartland Quilt: A Geographical History of Settlement and Migration in Early-Nineteenth Century Illinois* (Carbondale, IL, 2000), 232-233.

underlying the rural-urban conflict. Rush's trip through the German-American countryside for the specific purpose of observing the German farmer was just one of several such excursions by elites in the eighteenth century. These journeys established a *pattern of audience* in which the observer would be called upon to evaluate prosperous peasant agrarianism as "modern" or "not modern," however that sensibility was defined by the observer, and the farmer would use agricultural methods and artifacts *performatively* to project his own identity and to challenge the version of modernity imposed by his urbane audience.<sup>156</sup> This rehearsed pattern, often operating through the formation of embodied tastes for both parties, would influence rural identities and rural inventions and uses of agricultural methods and technologies in America, particularly in the twentieth century.

In spite of the difficulty of definitively showing a direct link between Rush's experiences and later urban observations of rural life, I argue that this process of elite observation and agrarian performance repeats itself through American history where it becomes influenced by different historical contexts. Even if one rejects a continuity between aristocratic views of traditional German farmers in the eighteenth century and later urban critics of rural life in the 1920s, the scholar can still maintain that consistent features of life in the U.S. existed in both periods. For example, the formation of class around ideas of modernity and dilemmas posed by encounters with immigrant cultures creates an identifiable and continuous pattern of audience. Further, I argue that the same German agrarianism observed by Rush in the eighteenth century migrated and immigrated into the Corn Belt from Pennsylvania, as well as directly from

---

<sup>156</sup> While other agrarian cultures undoubtedly existed, I focus on eighteenth century German and American cultures in Pennsylvania because my interest in farming in the rural Midwest requires a focus on German and upper class American influences.

Germany, in the nineteenth and early twentieth centuries. This traditional German agrarianism would continually encounter other actors in American society attempting to evaluate whether this immigrant “other” fit into what it meant to be “modern,” whether that term fit Rush’s conception in the eighteenth century or the ideas of urban Americans in the 1920s. Several other scholars have argued that the area where German farmers settled in Pennsylvania in the eighteenth century formed “the cradle of the Corn Belt.”<sup>157</sup> The historian Edward Higbee, for instance, explained,

Early in the eighteenth century an industrious group of immigrants from the German and Swiss Rhineland came to settle in the shale and limestone lowlands of what are now the counties of Chester, Lancaster, and York. These people built fine barns, bred high-grade livestock, and were adept at maintaining soil fertility by the use of ground limestone, gypsum, and animal manures. They were successful at clover culture, and practiced crop rotation which generally included corn, wheat, barley, oats, and clover meadows. They were good dairymen as well as cheese and butter makers and kept hogs to dispose of such dairy wastes as skim milk, buttermilk, and whey... The

---

<sup>157</sup> Spencer and Horvath, “How Does an Agrarian Region Originate?” 75-76, interpreting the work of Higbee. Spencer and Horvath build on Higbee’s argument that German immigrant agrarianism formed the “cradle of the Corn Belt” by identifying “significant centers in the evolution of the Corn Belt system” as the Connecticut Valley, Southwest Pennsylvania, the Kentucky Bluegrass area, and the Nashville River Basin.

crop and animal husbandry practices of these farmers of early Pennsylvania set the style of the modern Corn Belt.<sup>158</sup>

While Higbee focuses primarily on agricultural methods, other scholars of Corn Belt farming have also noted the heavy influence of German cultural values in shaping work processes and social relations. As I will discuss more in Chapter 8, Sonya Salamon, for example, notes the significant persistence of traditional German marital relations and gendered practices of land ownership and transfer within Corn Belt farm families in the late nineteenth and early twentieth centuries. Salamon argues that these German customs gave women a significant role in production processes.<sup>159</sup> Before outlining the characteristics of German agrarianism, one must understand the origins of the pattern of audience. I begin by describing the perspectives of Rush and other elite observers of German rural life in eighteenth century America.

*Enlightened Aristocratic Agrarianism and the Philadelphia Society for the Promotion of Agriculture*

Rush hailed from a group of American elites dedicated to the broader Enlightenment project of perfecting man and promoting progress through greater rationality, quantification, and knowledge through experimental methodology. For gentlemen such as Rush in the eighteenth century, this “modern” worldview extended beyond natural philosophy to a wide variety of domains, including agriculture. Rush and his elite colleagues formed the geographic outer edge

---

<sup>158</sup> Edward Higbee, *American Agriculture: Geography, Resources, Conservation* (New York: John Wiley, 1958), 233.

<sup>159</sup> Sonya Salamon, *Prairie Patrimony: Family, Farming and Community in the Midwest* (Chapel Hill: University of North Carolina Press, 1992), Ch. 5.

of a broader informal network of elites centered in Europe, the “Republic of Letters,” who “submitted themselves to a moral economy of obligations and responsibilities that transcended the boundaries of nation.”<sup>160</sup> Thomas Jefferson, for instance, personified these gentlemanly farmers. As I will discuss later in this book, while Jeffersonian agrarianism would later advance resistance to technological change, Jefferson himself viewed his farming activities through the lens of both the European Enlightenment and the strict English class system. Jefferson hired working class whites or used slaves to work his land while he experimented with new techniques taken from readings on agronomy and husbandry published in Europe and kept meticulous records. He even designed a new plough in 1794 featuring a less resistant moldboard, but he never actually used it as he considered such manual labor as inappropriate for a gentleman of his high social rank.<sup>161</sup>

On February 11, 1785, Rush and other men of letters in Pennsylvania and surrounding states formed the Philadelphia Society for the Promotion of Agriculture (the Society). The twenty-three founding members included four signers of the Declaration of Independence, including Rush, and two future members on the Convention that drafted the United States Constitution. Benjamin Franklin, who had founded the American Philosophical Society in 1744, later became a member of the Society as did the author of *Common Sense*, Thomas Paine. Samuel Powel, the mayor of Philadelphia, served as the Society’s first president. While the Society failed to organize enough financial resources to publish its own journal, unlike some of the European agricultural societies, its Committee of Correspondence published articles and

---

<sup>160</sup> Martin Rudwick, *Bursting the Limits of Time: The Reconstruction of Geohistory in the Age of Revolution* (Chicago: University of Chicago Press, 2005), 31-32.

<sup>161</sup> Isenberg, *White Trash*, 85-88.

letters in local periodicals and newspapers including the *Pennsylvania Gazette*, the *Pennsylvania Mercury*, the *Independent Gazetteer*, the *Pennsylvania Packet* and *Daily Advertiser* [sic], and the *Delaware Gazette*.<sup>162</sup>

The Society conceptualized “agriculture” in narrow terms to mean anything pertaining to practical improvements in growing crops, raising animals, producing products, or farm infrastructure such as farm design, fencing, or barn construction. Agriculture did not appear to include more philosophical studies of the earth and the Society did not concern itself with improvements in business practices, although it did consider mill construction within the purview of agriculture.<sup>163</sup> Rush and the elites of the Society attempted to direct agricultural improvement and experimentation by announcing prizes for very specific activities. One announcement for prizes on April 5, 1785 read, “For the greatest quantity of ground, well fenced, in locus trees or poles, of the sort used for posts or trunnels, grown in 1789, from seed sown after Feb. 8, 1788, not less than one acre, nor fewer than 1500 per acre - a gold medal.”<sup>164</sup> Several

---

<sup>162</sup> Manuela Albertone, “The American Agricultural Societies and the Making of the New Republic, 1785-1830,” in *The Rise of Economic Societies in the Eighteenth Century*, ed. Koen Stapelbroek and Jani Marjanen, (New York: Pelgrave Macmillan, 2012): 339-369; Lucius F. Ellsworth, “The Philadelphia Society for the Promotion of Agriculture and Agricultural Reform, 1785-1793.” *Agricultural History* 42, no. 3 (1968): 189-200.

<sup>163</sup> *Minutes of the Philadelphia Society for the Promotion of Agriculture, from its Institution in February, 1785, to March, 1810* (Philadelphia: John C. Clark & Son Printers, 1854), 71.

<sup>164</sup> *Ibid.*, 46; a “trunnel,” according to the *Collins English Dictionary*, is a dowel used for pinning planks of timbers together. *Collins English Dictionary*, s.v. “trunnel.”

<http://www.collinsdictionary.com/dictionary/english/trunnel> (accessed 5/3/16).



prize announcements called for agricultural experiments according to detailed specifications such as, “For an account of a vegetable food that may be easily procured and preserved, and that best increases milk in cows and ewes, in March and April, founded on experiment - a gold medal.”<sup>165</sup> The Society remained preoccupied with several agricultural improvements through the late eighteenth century. One consisted of “recovering old gullied fields to an hearty state;” another was preventing damage to crops by insects, particularly “the Hessian fly.” The Society also emphasized using oxen instead of horses for plowing and the use of artificial fertilizers, particularly gypsum or “Plaster of Paris.”<sup>166</sup> In experimenting on using oxen, the Society typically sought to incorporate the Enlightenment ideal that *everything* should be noted and measured:

In relating these experiments, it will be proper to describe the age and size of the oxen, their plight, the kinds and quantities of their food, the occasions, manner and expense of shoeing them: in travelling, the kinds of carriages used, the weights of their loads, and seasons of the year, and the length and quality of the roads; and in plowing the size and fashion of the plough, the quality of the soil, the depth of the furrows, and the quantities plowed; and, in every operation, the time expended and number and sorts of hands employed in performing it...<sup>167</sup>

---

<sup>165</sup> *Minutes of the Philadelphia Society for the Promotion of Agriculture, from its Institution in February, 1785, to March, 1810*, 71.

<sup>166</sup> *Ibid.*, 61, 65-67, 72.

<sup>167</sup> *Ibid.*, 47.

In awarding prizes, the Society held a very high standard for originality that almost amounted to arrogance and condescension towards contributors. In the January 12, 1790 minutes, the Society notes a rejection of an application by “a Southern Farmer” for methods preventing damage of crops by insects because in his notes he “does not distinguish between the Hessian fly...and the common wheat fly” and because his technique of destroying the eggs of the insects “is not of his invention.”<sup>168</sup> Overall, the Society sought to use enlightenment experimentation to make American agriculture and the American countryside “look” English, from making cheeses in the “Cheshire” style to experiments erecting hedgerows across Pennsylvania.<sup>169</sup> For the enlightened mind, the model for rationalism was gentlemanly Europe whether in natural philosophy or in agriculture.<sup>170</sup>

#### *Traditional/Peasant German Agrarianism in Pennsylvania*

While the members of the Society lamented the anti-modern American dirt farmer who chose subsistence farming over enlightened agriculture, they encountered another “other” whose agrarian tradition achieved a high level of agricultural efficiency while similarly rejecting the

---

<sup>168</sup> Ibid., 57.

<sup>169</sup> Ibid., 47.

<sup>170</sup> For a detailed and well-written work on the importance of eighteenth-century France to eighteenth-century enlightenment culture including natural philosophy see Jessica Riskin, *Science in the Age of Sensibility: The Sentimental Empiricists of the French Enlightenment* (Chicago, IL: University of Chicago Press, 2002): Ch. 1, Ch. 3.

Enlightenment ideals of Rush and his fellow savants.<sup>171</sup> As early as 1743, Governor George Thomas of Pennsylvania estimated that German immigrants comprised 60% of the European population, and Rush noted that, “they have, by their industry, been the principle instruments of raising the state to its present flourishing condition.”<sup>172</sup> The success and “industry” of the German farmer in Pennsylvania, which by 1751 had led all colonies in agricultural exports, posed a challenge to Rush and the elites of the Society. If the basis of the new American agricultural identity was to be the enlightened modernity of gentlemen, how did the Germans, who formed an efficient agrarianism through following tradition and tacit knowledge rather than enlightened experimentation, fit into this “modern” American identity?<sup>173</sup> Rush responded to this quandary the way any enlightened gentlemen of the eighteenth century would. He set out in the 1780s to conduct a natural history of these strange, but productive people and record everything in great detail from their farming methods, to their views on marriage, to their

---

<sup>171</sup> For a description of how members of the Society looked down on American “dirt farmers” as stalling the social and economic development of the new nation, see Ellsworth, “The Philadelphia Society for the Promotion of Agriculture and Agricultural Reform, 1785-1793,” 189-200.

<sup>172</sup> Rush, *An Account of the Manners of the German Inhabitants of Pennsylvania, Written 1789*, 5.

<sup>173</sup> Sociologist Harry M. Collins describes Michael Polyani’s conception of tacit knowledge as an art that cannot be transmitted through transcription but only passed on by example or by doing from master to apprentice. The person holding tacit knowledge may not even consciously know he or she possesses it. See H.M. Collins, *Changing Order: Replication and Induction in Scientific Practice* (Chicago, IL: Chicago University Press, 1992), 77 n.5.

construction of houses. The resulting *An Account of the Manners of the German Inhabitants of Pennsylvania* in 1789 highlights many of the discrepancies between German peasant and American elite agrarianism that would form one genealogical basis for later contests over who got to define modernity in an American rural context as part of a broader rural identity, at least in the Midwest.<sup>174</sup>

Rush constituted a fitting representative of the landowning-enlightened-elite in America. Born in Pennsylvania on December 24, 1745, Rush attended Princeton College in New Jersey and then studied medicine and what would now be designated as chemistry in Philadelphia, London, Edinburgh, and Paris. While in the Scottish capital in 1766, he studied with Joseph Black who had discovered carbon dioxide and the physician William Cullen, whose patients included the philosopher and historian David Hume and who unquestionably adopted the new empirical method in medicine. Rush's own dissertation consisted of a series of experiments challenging the conventional medical theory that digestion occurred chiefly as a result of fermentation within the stomach.<sup>175</sup> While in Paris in 1769, Rush admired the physiocratic thinkers who associated all national wealth with the productivity of land, and he engaged in philosophical conversations socially with Diderot.<sup>176</sup> Appointed Professor of Chemistry in 1769 at the Philadelphia Medical College, Rush published the first American-written chemistry text,

---

<sup>174</sup> While Germans at the time occupied many occupations, an 1838 survey found that the number of farmers doubled all other occupations combined. Rush, *An Account of the Manners of the German Inhabitants of Pennsylvania, Written 1789*, 11.

<sup>175</sup> Alyn Brodsky, *Benjamin Rush: Patriot and Physician* (New York: St. Martin's Press, 2004), 47-56.

<sup>176</sup> *Ibid.*, 73-74.

his *Syllabus of a Course of Lectures on Chemistry*, in 1770.<sup>177</sup> He also authored research articles on “spasmodic asthma” in children, known today as croup.<sup>178</sup> In 1775, Rush produced saltpeter from tobacco stalks through experiment and then headed efforts to manufacture domestic gunpowder for the Continental Army.<sup>179</sup> Rush signed the Declaration of Independence in 1776 and served as Surgeon General of the Continental army beginning in 1777. When he embarked on his study of “German inhabitants” in 1789, he served as the Treasurer of the U.S. Mint, a position he held since 1779. If the young backwater of America could claim to have Men of Letters, Rush was a prominent member.

Rush gives a positive account of the Germans from the beginning to end of his account, partially because other gentlemen of his rank, such as the French aristocrat Théophile Cazenove, often lamented the German-American farmer for being ignorant, cheap, tied to Old World superstitions, and maintaining an insularity that rejected a more civic-minded republicanism.<sup>180</sup> One gets a sense that Rush aimed to rehabilitate a group that he viewed as making his commonwealth so productive. Perhaps more importantly, Rush saw the German immigrant narrative as contributing to the formation of a broader identity regarding America as a land of opportunity. While one may expect this “underdog” immigrant identity as grounded more in a

---

<sup>177</sup> Ibid., 50.

<sup>178</sup> Ibid., 94

<sup>179</sup> Ibid., 130.

<sup>180</sup> Although Cazenove’s account was written in 1794 after Rush’s document, his negative impression of German farmers as backwards exemplified some gentlemanly accounts of the period. Théophile Cazenove, *Cazenove Journal, 1794*, ed. Rayner Wickersham Kelsey (Haverford, PA: The Pennsylvania History Press, 1922).

later twentieth-century mythos, it surprisingly appears in the early pages of Rush's account where he notes that most Germans came to the colonies as indentured servants, even having to sell their children. Rush further observes, "Many, who at home, had owned property, and converted it into money, were robbed in transitu, [*sic*] by ship owners, importers, and sea captains." In spite of these hardships, Rush concludes, "yet...from this class have sprung some of the most reputable and wealthy inhabitants of this province."<sup>181</sup> Many other Germans had literally been sold by German princes to Hessian and other mercenary units in the Revolutionary War.<sup>182</sup> As I will demonstrate in Chapters 4 and 8, this immigrant narrative reinforced later associations between machinery, independence, and a family legacy of "innovative" technology use. In other words, such stories about immigration would contribute to farmer's ideas of themselves as "inborn innovators" that formed important aspects of twentieth-century discourse identity bundles of rural globalized ultramodernity in the rural Midwest.

The positive impression on Rush came, however, primarily from the fact that the Germans had rendered the Pennsylvania countryside into the kind of ordered, rational, and efficiently productive place that Rush and other gentlemen strived for, but without the rationalist experimentation of the Society. As Rush states "The Germans taken, as a body, especially as farmers, are not only industrious and frugal, but skillful cultivators of the earth...The German farm was easily distinguishable from those of others, by good fences, the extent of orchard, the fertility of the soil, productiveness." Rush specifically noted, "The Germans seem more adapted

---

<sup>181</sup> Rush, *An Account of the Manners of the German Inhabitants of Pennsylvania, Written 1789*, 6-7.

<sup>182</sup> *Ibid.*, 56-57.

to agriculture and improvement of the wilderness; and the Irish, for trade.”<sup>183</sup> Rush commented that the Germans took over failed farms from Scotch-Irish settlers, “and often double[ed] the value of an old farm in a few years.”<sup>184</sup>

Rush recorded specific farming and cultural practices which, he believed, made traditional German agriculture particularly productive. First, the Germans’ culture of utility led to investment in productive infrastructure rather than in the home. The German farmer showed status through the size of his barn, the condition of his fences, and the size of his animals, not through a “frivolous” display of wealth through his house or his clothing. For the German-American farmer, technologies of utility and productivity were moral ways of displaying wealth and achieving what historian Harold Cook calls “an objectification of self.”<sup>185</sup> Rush noted that while many American farmers invested in their homes and allowed animals to range freely, the Germans first invested in large impressive barns, which protected animals from the weather, conserved their energy for harvest, facilitated collection of manure for fertilizer, and allowed for greater control over feeding. This use of manure combined with plaster of Paris or lime, made with kilns on the farm itself, rendered the German farmer’s land much more productive.<sup>186</sup> In

---

<sup>183</sup> Ibid., 10-11.

<sup>184</sup> Ibid., 13.

<sup>185</sup> Cook explores social and cultural conceptions of moral displays of wealth in Dutch consumer and merchant culture in the sixteenth and seventeenth centuries. Harold J. Cook, *Matters of Exchange: Commerce, Medicine, and Science in the Dutch Golden Age* (New Haven, CT: Yale University Press, 2007), 14-15, 43, 68-69.

<sup>186</sup> Rush, *An Account of the Manners of the German Inhabitants of Pennsylvania, Written 1789*, 12, 14, 16.

contrast, Cazenove, a French elite, did not conceptualize this German cultural practice of displaying wealth through utilitarian objects of production as a virtuous or moral display of prosperity. In describing the small and cramped German home, Cazenove stated, “Probably one of the causes of this slovenliness and lack of comfort is that they do not know any better.”<sup>187</sup>

Second, the Germans modified the American “girdle and belt” method for clearing new land. Instead of removing a ring of the outer bark layer, resulting in tree death within a year, the Germans physically pulled the tree out by the roots, which allowed earlier cultivation, and then burned them, leading to longer fertility and softer soils. These more pliable fields also avoided expensive plow repair.<sup>188</sup> In choosing new land, Rush indicates the Germans had some kind of folk or tacit knowledge that allowed them to accurately evaluate the future productivity of soils. The German method of predicting soil fertility, therefore, remained a mystery to Rush. Third, the Germans saved their best grain and distilled beverages for sale rather than personal consumption, preferring instead what Rush referred to as “Sourcroust” and other vegetables derived from kitchen gardens utilizing ancient horticulture techniques only in their infancy in England.<sup>189</sup> Fourth, as Cazenove pejoratively described, the Germans “were thrifty to the point of avarice” and according to Rush, “are afraid of debt.”<sup>190</sup> For Rush, the German’s thrifty nature led to increased productivity in a number of ways. For example, the Germans acted as “great economists of their wood,” a practice made easier by the use of porcelain stoves and the design

---

<sup>187</sup> Cazenove, *Cazenove Journal*, 84.

<sup>188</sup> Rush, *An Account of the Manners of the German Inhabitants of Pennsylvania, Written 1789*, 14-15.

<sup>189</sup> *Ibid.*, 20-24.

<sup>190</sup> *Ibid.*, 23; Cazenove, *Cazenove Journal*, 34.



of homes with the fireplace in the middle of the structure.<sup>191</sup> This thrifty use of firewood conserved the energy of draft horses used to haul and cut the wood. The German draft horse, therefore, was better bred, better fed, and better rested than the American counterpart.<sup>192</sup>

Fifth, Rush noticed that, “unlike their English and Irish neighbors, they [the German farmers] never, as a general thing, had colored servants, or slaves.”<sup>193</sup> In addition, the “Germans seldom hire men to work on their farms” in spite of their wealth.<sup>194</sup> The German farmers satisfied labor shortages instead by suspending gender roles and allowing women to work in the fields, by having large families, and by maximizing the production value of draft animals. Sixth, the Germans designed the Conestoga wagon, made famous by Westward expansion in the nineteenth century, pulled by a renowned breed of draft horse. This wagon and horse combination allowed the German farmer to carry up to 3,000 pounds of product to markets in urban areas over rough roads. As Rush described “in the months of September and October, it is no uncommon thing...to meet in one day fifty or one hundred of these wagons, on their way to Philadelphia.”<sup>195</sup> Seventh, Rush noted a work ethic so strong and so engrained that while English and American men inquired as to the dowry of future brides or the wealth of their

---

<sup>191</sup> For a more thorough discussion on the centrality of stoves in the household economy of pre-twentieth-century America as well as design differences between German/Scandinavian and English/American stoves see Cowan, *More Work for Mother*, 20-26, 54-62.

<sup>192</sup> Rush, *An Account of the Manners of the German Inhabitants of Pennsylvania, Written 1789*, 17-18.

<sup>193</sup> *Ibid.*, 23.

<sup>194</sup> *Ibid.*, 24.

<sup>195</sup> *Ibid.*, 26-27.

families before the marriage, the German suitor concerned himself only with the young woman's work habits. Rush described several maxims governing German behavior including "Eine fleissige Hausfrau ist die beste Sparbuechse" (an industrious housewife is the best money safe) or "To fear God, and to love work." Finally, the Germans placed great value on ownership of personal property and the ability to give sons land at marriage whereas the English-American population at the time featured a large number of landless young English-American men.<sup>196</sup> Rush does not give a detailed explanation of why many English-American families did not pass land onto all of their sons. While Pennsylvania and most northern states had multigeniture intestate inheritance laws in the late eighteenth century, most southern states retained the English common law practice of primogeniture until the late 1780s or early 1790s.<sup>197</sup> Therefore, Rush may have been comparing German inheritance practices to American-English families in the South in this portion of his account. Alternatively, he may intend to indicate that many Anglo-Pennsylvanians retained primogeniture in their wills notwithstanding state law allowing for inheritance by multiple children in the absence of a valid will.<sup>198</sup> Most likely, Rush means to

---

<sup>196</sup> Ibid., 30; Cazenove, *Cazenove Journal*, 44. For a discussion of how the English and American custom of holding onto land until death resulted in large numbers of landless young men, see James Henretta, "Families and Farms: Mentalité in Pre-Industrial America," *William and Mary Quarterly* (1978), 6-7.

<sup>197</sup> Lee J. Alston and Morton Own Schapiro, "Inheritance Laws Across Colonies: Causes and Consequences," *The Journal of Economic History* 44, no. 2 (1984): 277-287.

<sup>198</sup> "Primogeniture" is the common-law right of the firstborn son to inherit his ancestor's estate, usually at the expense of his younger siblings. "Multigeniture" is the division of wealth among all sons, or perhaps all children. "Intestate succession" is the method used to distribute property

indicate that German farmers gifted land to all of their sons well before the father's death allowing for more children to farm their own land sooner than their English neighbors who had to wait for testate succession.<sup>199</sup> In any event, this German cultural practice of property gifting to all of the male heirs rather than just a few allowed the accumulation of traditional tacit knowledge over several generations. German farmers preserved agricultural knowledge through land gifts that would motivate their children to continue farming.

While Rush found the productivity and efficiency of German farming impressive and hailed the German-American countryside as exemplifying the ordered, rational, aesthetic that Rush and his fellow elites found appealing, he struggled with determining whether this agrarian culture was truly modern or enlightened under his own conception of what it meant to be “modern” or “enlightened.” Rush noted the complete rejection among the Germans of any attempts at formal secular education, and acknowledged a reputation that “the Germans are deficient in learning.” Cazenove more bluntly described “the total lack of education of the farmers.”<sup>200</sup> Even more surprising to Rush was the German farmers’ reliance on what to an enlightened mind could only be described as ancient superstition rather than reasoned rationalism. Rush wrote, “The German farmers are very much influenced in planting and

---

owned by a person who has died without a valid will. Bryan A. Garner, *Black's Law Dictionary* (St. Paul, MN: West Group, 1999), s.v. “intestate succession,” “primogeniture;” Alston and Schapiro, “Inheritance Laws Across Colonies: Causes and Consequences,” 277.

<sup>199</sup> See for example, Henretta, “Families and Farms: Mentalité in Pre-Industrial America.”

<sup>200</sup> Rush, *An Account of the Manners of the German Inhabitants of Pennsylvania, Written 1789*, 40; Cazenove, *Cazenove Journal*, 34.

pruning trees, also in sowing and reaping, by the age and appearance of the moon” as well as a theory “that wood not felled at a full moon, is very soon attacked by worms and soon rots.”<sup>201</sup>

Rush therefore describes two distinct agrarian cultures that would form the genealogical basis for the later rural-urban conflict. Early in the twentieth century, modernity would become a more prominent and important ingredient in a broader American identity and discourse, although taking different forms than Rush’s aristocratic eighteenth-century conception. Rush and his Society proffered an agrarianism marked by an elite Enlightenment culture which embraced the experimental method and progress but with a clear aristocratic paternalism and view that the reasonable rich could best show everyone else how to conduct agriculture in a properly modern way. In contrast, German agrarianism features a traditional peasant culture with an association between work and independence reinforced by what we would call today a “rags to riches” immigration narrative and agricultural practices that would be seen as efficient and productive by their aristocratic contemporaries, but perhaps still not truly “modern.”

Natural histories of the German farmer conducted by eighteenth century elites and savants such as Rush and Cazenove established a *pattern of audience* that would repeat itself through the rest of American history whereby the elite, ultra-rich, and “modern” would observe and judge the prosperous peasant farmer as either “modern” or backwards. The farmer would, in turn, use methods and technologies *performatively* to establish his own identity and, particularly in the twentieth century, reassert his own notions of modernity itself (Figure 3.1a, 3.1b). In fact, Rush frequently noted negative views of German-American farmers by others of his social rank

---

<sup>201</sup> Rush, *An Account of the Manners of the German Inhabitants of Pennsylvania, Written 1789*,

as anti-modern, foreshadowing later rural yokel stereotypes employed by urban reformers, academics, bureaucrats, and writers. For example, Rush declares, “our Germans are stigmatized as dolts” and at one point refers to the German farmers as “our much-abused ‘Pennsylvania Dutchmen.’”<sup>202</sup> He cites a Buffalo newspaper article describing the “German Farmers of Pennsylvania” as a “fragment of the middle ages, uneducated, and uncultivated.”<sup>203</sup> Rush also cites a letter from Benjamin Franklin to Peter Collinson on May 9, 1753, in which Franklin characterizes the German farmers in Pennsylvania as “the most stupid of their own nation.”<sup>204</sup> This idea that those who toil on farms are the “stupid ones” foreshadows later twentieth-century discourse viewing Midwest farmers who chose to *stay* on farms rather than migrate to urban centers as “the stupid ones who were left behind.”<sup>205</sup>

---

<sup>202</sup> Referring to a German as a Dutchman may very well have been a racist term in the eighteenth century.

<sup>203</sup> Rush, *An Account of the Manners of the German Inhabitants of Pennsylvania, Written 1789*, 65.

<sup>204</sup> *Ibid.*, 63.

<sup>205</sup> For a discussion of early twentieth-century rural stereotypes see James H Shideler, “‘Flappers and Philosophers,’ and Farmers: Rural-Urban Tensions in the Twenties,” *Agricultural History* 47, no. 4 (1973): 289 and Patnode, “‘What These People Need is Radio:’ New Technology, the Press, and Otherness in 1920s America,” 286.



**Figure 3.1a:** Satires reflecting the view of Germans as stupid, slovenly and unrefined held by many in the English speaking world in the seventeenth and eighteenth centuries. The drawing to the left comes from British artist James Gillray in 1803. The drawing on the right was a Know-Nothing cartoon published in the U.S. in the 1850s pairing the German with the “lowly” Irishman, both of whom threaten to bring stupidity and drunkenness to an otherwise pure Anglo-America. James Gillray, *Germans Eating Sour-Krout*, 1803. Print, 258 mm x 360 mm. The British Museum. <http://www.britishmuseum.org>. (accessed 3/29/16); “Know-Nothing Anti-Immigrant Cartoon,” artist unknown, c. 1850. The Granger Collection. <http://www.socialstudies.com>. (accessed 3/29/16). Both of these figures are in the public domain.



**Figure 3.1b:** German-born American artist Lewis Krimmel seeks to paint a vastly different image of the German farmer as opposed to the backward Germans depicted in Figure 3.1a above. Krimmel’s 1820 German agrarian residing in rural Pennsylvania is a prosperous but humble patriarch. Krimmel obviously aims to

create a dominant image of the German farmer as moral by associating him with financial success, modesty, and family. Lewis Krimmel, *Country Wedding*, 1820. Oil, 16 3/16 in. x 22 1/8 in.

<http://www.artexpertswebsite.com/pages/artists/krimmel.php>. (accessed 3/26/16). This figure is in the public domain.

Even when attempting to rehabilitate the German-American farmer, Rush often does so as a backhanded compliment such as “there are other things, besides political soundness, valuable in a citizen” and “there is no false mental glitter about them: in a word, they are rather men of sound judgment, than brilliant rhetoricians or one sided ideologists.” Rush encourages his enlightened reader to “learn to respect the excellent sense they display in the ordinary concerns of life.”<sup>206</sup> Yet, the German-American farmers of Pennsylvania were the first Americans to produce and read what amounted to a twentieth-century-style agricultural journal. While Rush and the members of the Society were infrequently publishing advances in agricultural techniques in local newspapers, the Pennsylvania German paper *Die Germantäuner Zeitung* published a whole series of articles in 1787 and 1791, with detailed descriptions of how to prepare land with artificial fertilizers during plowing, care for orchards, use manure more effectively, improve the quality of potato crops, and make meadows more productive. The journal also proposed new and improved methods on cultivating fodder and feeding stalled cattle. Other articles detailed the entire process of fruit farming or manufacturing artificial fertilizer. Another German newspaper in Pennsylvania, *Neu Unpartheyische Lancäster Zeitung* contained similar articles on agricultural methods while another paper, *Straatsbote*, featured numerous advertisements for chaff separators, harvest cradles, scythes, and sickles designed by German inventors similar to ads in later twentieth-century American farm journals for

---

<sup>206</sup> Rush, 67-69.

agricultural technologies.<sup>207</sup> In 1790, the paper *Neu Unpartheyische Readinger Zeitung* even published a paper by George Morgan of the Society who received a prize for model barn and barnyard design.<sup>208</sup> In spite of Rush's account in 1789, and notwithstanding the impressive productive capacity of German farming methods, few Society members showed a similar interest in gaining knowledge from the backward, anti-modern, German-American farmer. A thorough search through the minutes and writings of the Society shows little mention of this substantial body of German agricultural knowledge existing right in Philadelphia's backyard. One notice produced by the Society to instruct young farmers on how to best start a farm in 1819 cited several methods "to be found in European books" but nothing about their productive German neighbors.<sup>209</sup>

To the Germans, the "other" of the eighteenth century had been the British and the German princes who interfered with their property, family, and work. The German farmers were "among the first to shoulder the gun" in the Continental Army not because of the kind of patriotism that inspired Rush and his colonial colleagues, but because the British represented a threat to German private property. The eighteenth-century German agrarian viewed work as much more than a prideful occupation, but as a sacred act that reinforced bonds between God,

---

<sup>207</sup> Leo Bressler, "Agriculture Among the Germans in Pennsylvania During the Eighteenth Century," *Pennsylvania History* 22, no. 2 (1955): 103-133; *The Pennsylvania-German Society*, Vol. 29 (Philadelphia: Pennsylvania-German Society, 1922), 131.

<sup>208</sup> *The Pennsylvania-German Society*, 129-130.

<sup>209</sup> "Agriculture: Notices for a Young Farmer, From the Memoirs of the Philadelphia Agricultural Society," *The American Farmer, Containing Original Essays and Selections on Rural Economy and Internal Improvement* (June 25, 1819): 1, 13.



the family, and the land itself. Rush indicates that the Germans avoided the use of slaves because slavery was irreconcilable with religion.<sup>210</sup> In addition to violating scripture, having another person that did not belong to your family work on your land, according to the German agrarian ideal, was an immoral way to make a living. Hence, the Germans also avoided using hired labor. Perhaps slavery also reminded Germans of indentured servitude and military impressment, the polar opposite of the free independent German morally cultivating his own land with his own family. Rush states that for the German farmer “His first object, is to become a freeholder. The highest compliment that can be paid to them, on entering their house, is to ask them: Is this house *yours*? [Emphasis added].”<sup>211</sup> In this sense, the German barn, fences, and well-managed fields were symbols of the German farmers’ work ethic, independence, and morality. After interviewing several German farmers, Rush concluded, “I am persuaded, that no chains would be able to detain them from sharing in the freedom of their Pennsylvania friends and former fellow subjects ‘We will assert our dignity’ (would be their language).”<sup>212</sup> Rush’s quote indicates a strong cultural practice of performing a “dignified” self-image through work and improvements in personal property. The prosperous look of their property confirmed the moral righteousness of the German-American farming way of life.<sup>213</sup> Other observers of German

---

<sup>210</sup> Rush, 63.

<sup>211</sup> Ibid., 32.

<sup>212</sup> Ibid., 56.

<sup>213</sup> While this association between farming and morality mirrors the view of the Jeffersonian Democrats of the era, it had not yet gained a Jeffersonian association with patriotism or ideas about democratic citizenship. This agrarian morality grew out of a completely independent German agrarian tradition.

agrarians in early America noted the contrast between the German agrarian's view of work and property and that of lower class English immigrants. The trustees of the Georgia colony, led by James Edward Oglethorpe, for example, actively sought to draw German immigrants in the early eighteenth century in an effort to establish a large class of working class whites as a way of resisting the importation of a slave-based plantation economy from South Carolina. As historian Nancy Isenberg explains, the trustees of Georgia aimed to create a sanctuary for "free white people" without the injustices of indentured servitude. In addition, many elites such as Oglethorpe believed that slavery "ruined the industry of our White People." In other words, lower class English immigrants eschewed farm labor and preferred laziness because they associated work in the fields with slavery. As Rush also noted in his treatise on Germans in Pennsylvania, many poor Englishmen would simply squat on inferior land and barely break the soil "preferring to steal and starve rather than work in the fields," lest they might "look like slaves." If Englishmen in early Georgia had means, they would often flee to South Carolina where they could purchase slaves to perform farm labor. The German and Scandinavian immigrants, on the other hand, would gladly "dirty their hands" by engaging in farm labor and make poor land productive. Oglethorpe wanted to avoid what he saw as a vicious cycle in which slavery encouraged idleness among the white lower classes, which in turn reinforced vast income inequalities between the large planters and everyone else.<sup>214</sup> German agrarianism, Oglethorpe hoped, would break this cycle by divorcing work from slavery, leading to a large industrious white working class. While Oglethorpe's plan of avoiding a slave-based plantation economy in Georgia failed by the late eighteenth century, his strategy reveals the existence of the same distinct German agrarian identity noted by Rush in Pennsylvania. Oglethorpe's courting of

---

<sup>214</sup> Isenberg, *White Trash*, 56-63.

German farmers also reveals a recognized contrast in the sense of self among German and English peasant classes in eighteenth century America across colonies or states. As accounts of elites such as Rush and Oglethorpe suggest, these two peasant cultures not only had different methods of production, but also vastly divergent views of the relationship between work, property, status, and morality.<sup>215</sup>

This German agrarianism was the rural ethos that migrated along with the eighteenth-century German farmers' descendants, as well as with new German immigrants, as they settled the upper Midwest in the nineteenth century. As one historian described the typical immigrant to frontier Iowa in the 1850s "he would more likely have come from one of the west German states than from any other part of Europe" and many of the American-born arrivals immigrated from Pennsylvania, Ohio, and Indiana where German-Americans comprised the largest ethnic group.<sup>216</sup> As late as the 2013 census, 35.7% of Iowans reported German heritage, more than double the number of Iowans reporting heritage from any other single European nationality, including Irish-Americans at only 13.4%.<sup>217</sup> In the 2013 census, the Corn Belt as a whole as well as Pennsylvania still reported a much larger percentage of the population as having German

---

<sup>215</sup> Isenberg does not use the term "German agrarianism" or fully conceive of a German agrarian identity or even rural ethos. German agrarianism is the author's term and concept. Isenberg only notes that these German, Swiss, French Huguenot, and Scottish Highlander immigrants in Georgia "seemed prepared for lives of hardship, arriving as whole communities of farming families." Isenberg, *White Trash*, 58.

<sup>216</sup> Wall, *Iowa: A Bicentennial History*, 54-55.

<sup>217</sup> *Iowa.gov State Data Center*, "Iowa Quick Facts: Social Characteristics,"

<http://www.iowadatacenter.org/quickfacts>. (accessed 3/31/16).

heritage than Southern states with states like Wisconsin reporting a German-American population as high as 41%. Virtually every county in each Corn Belt state reported German-Americans as the largest ethnic group. (Figure 3.2).<sup>218</sup> Many migrants to Iowa in the mid-nineteenth century from states claiming lower rates of German heritage, such as Virginia, shared the German distrust of slavery as an “abhorrent” institution of the upper classes similar to the old European monarchy. Many of these migrants “would be highly suspicious of bankers, lawyers, and most politicians,” in other words, distrustful of elites such as Rush and Cazenove.<sup>219</sup> The German farmer even in the eighteenth century especially thought his lifestyle more moral than the government positions held by Rush and other elites. Indeed as early as 1794, Cazenove noted that most German farmers distrusted government officers as “too many and overpaid,” an attitude held by Midwest farmers towards government bureaucrats in the twentieth century.<sup>220</sup>

In addition to this demographic evidence supporting the prominence of German agrarianism in the Corn Belt, letters from Germans immigrating to Iowa show a similarity to the attitudes among the farmers observed by Rush. For example, the German teacher Johannes Gillhoff compiled stories from letters by his former students who had immigrated to rural Iowa in the late nineteenth century into one fictitious character, Jürnjakob Swehn in *Letters of a*

---

<sup>218</sup> U.S. Census Bureau, “German Roots,”

[https://www.census.gov/content/dam/Census/library/visualizations/2016/comm/german\\_roots.jpg](https://www.census.gov/content/dam/Census/library/visualizations/2016/comm/german_roots.jpg) (accessed 1/21/17). See also “German Americans-The Silent Minority,” *The Economist*, February 7, 2015, <http://www.economist.com/news/united-states/21642222-americas-largest-ethnic-group-has-assimilated-so-well-people-barely-notice-it> (accessed 3/31/16).

<sup>219</sup> Wall, *Iowa: A Bicentennial History*, 54-55.

<sup>220</sup> Cazenove, 34-35.

*German American Farmer*. While some regard Swehn as a composite of several different farmer immigrants from Gillhoff's Mecklenburg, Germany to rural Iowa, other scholars have argued that Swehn is actually Carl Wiedow from Glaisin, Germany, who settled in Clayton County, Iowa in the 1860s. Written in Low German, students in northern Germany read Gillhoff's stories widely through the early twentieth century. The book reveals that several aspects of German agrarianism encountered by Rush in 1789 also appeared in frontier Iowa in the nineteenth century. First, Swehn still sees the world largely through ancient folk and religious lenses originating in his small German village of peasants and shows little modern sensibility even when discussing the acquisition of new farm machinery. When mentioning new farm equipment, Swehn tends to simply list items rather than discuss greater efficiency or present artifacts as a means of achieving progress. In recalling his attendance at the 1893 Chicago World Fair, Swehn notices the personalities of certain people at the exhibits rather than new artifacts or methods presented. In many ways, Swehn may represent a transitional figure between traditional German agrarianism and rural capitalistic modernization in that he tends to self-reflect on his farming methods. Swehn changes when he finds better work processes or farming techniques that differ from those used in his native Mecklenburg, but he does not appear to define his identity in terms of innovativeness, mechanical savvy, or business acumen. "I said to myself," Swehn wrote "you have been a real dummkopf... You have to get a different schooling to work in America. Jürnjakob, you have to put your brain to work, otherwise nothing is ever going to come of you." By "using his brain," however, Swehn did not mean adopting some of the modern techniques or scientific method urged in the eighteenth century by Rush's Society. When faced with a desire to solve a pig over-population problem by feeding pork to his chickens, Swehn, for instance, did not consult studies in farm journals or appeal to any formal

knowledge about poultry feeding that looked “scientific” or rational. Instead, his only reservation against the practice came from the religious beliefs of villagers back in Germany that “God’s order is that chickens eat rye and corn and bread and ‘taters. It’s against God’s order for a chicken to eat a pig.”<sup>221</sup> Similarly, Swehn calculates farm profits through a clumsy use of basic math according to old multiplication tables he brought with him from Mecklenburg, not through anything resembling modern accounting methods. Thus, Swehn constructs his sense of self wholly around localized ethnic and religious identities that have little to do with privileging reason or the “new.” In discussing these production decisions, Swehn almost always looks to tradition rather than looking towards the future.

Second, Swehn sees his farm and his productivity as the only moral displays of success. When, for example, he discovered that his son in college at the University of Iowa had started wearing “a gold watch, a gold ring with a big stone, a gold tiepin, and all such things as that,” Swehn scolded him with a long immigrant narrative about how the family originated as impoverished peasants to demonstrate that the jewelry “doesn’t fit into our family.” As with his rationale for many of his production methods, Swehn also saw the jewelry through a religious lens as violating the “ninth and tenth commandments.”<sup>222</sup> Instead of these immodest ways of dressing, he boasted of success in his letters by recalling the number of cattle he owned, the amount of his acreage, and the machinery he had accumulated, always reminding Gillhoff, “And it all costs plenty of sweat.”<sup>223</sup> The impressive list of mechanized equipment includes a

---

<sup>221</sup> Johannes Gillhoff, *Letters of a German American Farmer*, trans. Richard Lorenz August Trost (Iowa City: University of Iowa Press, 2000), 29.

<sup>222</sup> *Ibid.*, 47.

<sup>223</sup> *Ibid.*, 40.

“cornpicker,” “haymower,” “hayrake,” “hayloader,” “cornplanter,” “cultivator,” and manure loader.<sup>224</sup> In spite of this long list of expensive items, Swehn regarded them as far more virtuous than his son’s watch because they all produced grain. Still, Swehn does not view these machines in same way as modern capitalistic farmers would in the early twentieth century. While serving as productive symbols of success, Swehn still sees the machines as tools in the same way he views other objects of production on the farm. He does not regard them as special or attach to them a privileged status among his collection of artifacts. Swehn never uses the term “technology” or “innovative” or “progressive” or even “newest” or “up-to-date” to describe his farm machinery. Swehn does not define himself in terms of using the most current machinery. He displays no tendency to fetishize mechanical farm equipment by discussing it more than other tools, land, or buildings. Nor does Swehn show any desire to learn how his machinery works and he does not redesign or repurpose hardware to gain a competitive advantage over his neighbors. In fact, he exhibits little awareness of the existence of markets or the need to advertise as a modern capitalist would and he has not grasped business concepts such as margin, capital depreciation, returns on investment, or futures. Thus, Swehn adheres to the traditional German agrarian practice of displaying wealth through productive tools, but he still has not adopted a modern capitalistic identity.

Third, Swehn exhibits a fierce independence and distrust of authority resulting from his experience as, first, a serf in Germany and then as a hired man in a noble system of land ownership that prevented him from acquiring his own property. Although serfdom ended in Mecklenburg in 1820, local dukes still controlled almost every aspect of Swehn’s life, including

---

<sup>224</sup> Ibid., 38-39.

what tools he could use and what church he had to attend.<sup>225</sup> Swehn continuously reminds Gillhoff that he owns his own land, farm buildings, animals, and equipment.<sup>226</sup> When approached by “Yankee” businessmen arriving to his farm in cars to contract for the sale of agricultural commodities, Swehn dismisses them as distrustful “Cream Barons” and “Butter Kings” “shopping for a Low German dummkopf.” He then concludes proudly “He’ll need to get up earlier in the morning to fool me, and he’s making no impression on me with that new car.”<sup>227</sup>

Fourth, Swehn and his wife seem to farm together and share decisions about the production processes on the farm. The marital relationship strikes the twenty-first-century reader as surprisingly equal. Swehn ultimately decided to not feed pigs to chickens after consulting with his wife who scolds him as an equal “Jürnjakob, you are one dummkopf of a Deutschman. And if you get another idea like that, make sure you don’t tell me.”<sup>228</sup> Fifth, Swehn shows distrust of people from outside the farm and experiences awkward discomfort in downtown Chicago, though he had not yet acquired the same sense of alienation that Corn Belt residents would express towards their urban cousins twenty years later as part of the rural urban conflict (discussed in Chapter 4). He admitted he “created plenty disturbance” when visiting Chicago including knocking over a street vendor’s banana stand and stepping on an urban dweller’s hat. “I need open country where little children, police, banana branches, and top hats don’t get in my way,” Swehn recalled.<sup>229</sup> When returning to Chicago to find a woman to do house work to allow

---

<sup>225</sup> Ibid., vii-viii.

<sup>226</sup> Ibid., 5, 25, 40.

<sup>227</sup> Ibid., 27.

<sup>228</sup> Ibid., 29.

<sup>229</sup> Ibid., 82.



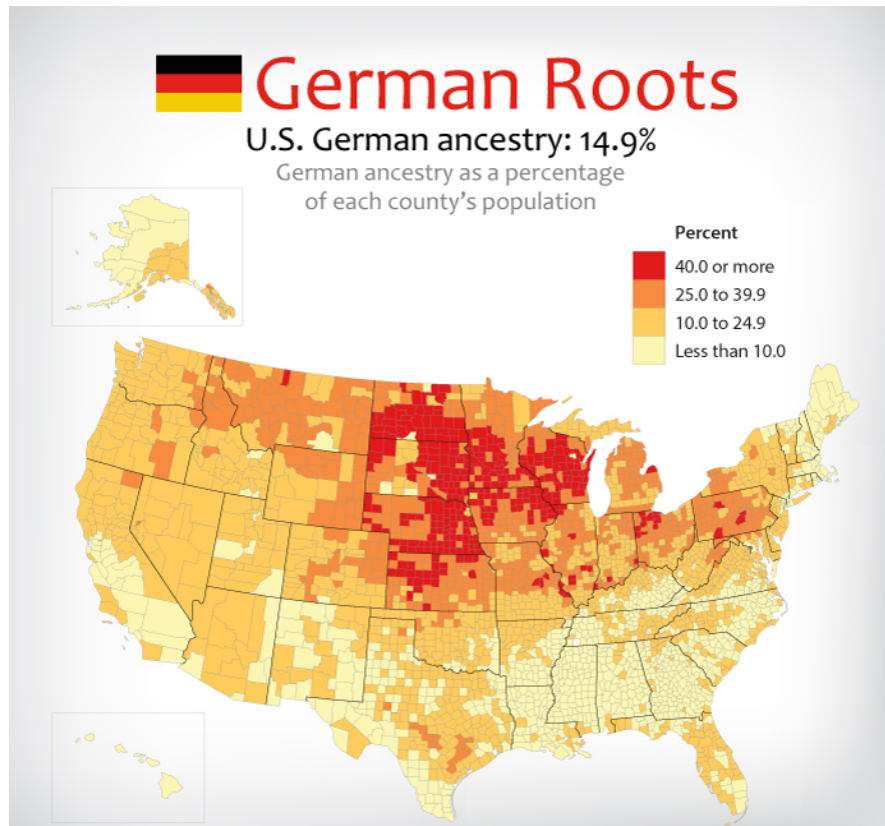
his wife to engage in even more farm labor, he fails to acquire an employee. Swehn explains to his wife, “there are whole regiments of women on the streets. But I’m ‘fraid to talk to ‘em. They walk around in high-class white dresses. Ja wohhl, you would make big eyes at this.”<sup>230</sup> In other words, Swehn finds the city strange and intimidating, but not necessarily socially or economically oppressive. He still internalizes Anglo-American stereotypes against Germans, not urban yokel images about rural life more generally. Therefore, Swehn offers a picture of some features of agrarianism that would later play important roles in the ways rural Americans interacted with technology as the twentieth century progressed and contextual factors such as modernity and the rural-urban conflict would reach Iowa and other parts of the Corn Belt. Again, Swehn’s experience as an immigrant shows the same negative views of German agrarianism as expressed by Cazenove and Rush as ignorant and anti-modern when observed by Americans occupying higher social ranks. Swehn reminiscing about his arrival in the U.S. characterized how most Americans regarded Germans in the late nineteenth century as, “Here comes another one of those dumb Deutschmans, not a red cent to his name.”<sup>231</sup> Swehn throughout the book sees success in agriculture as the most effective way to overcome these stereotypes.<sup>232</sup>

---

<sup>230</sup> Ibid., 36.

<sup>231</sup> Ibid., 6.

<sup>232</sup> Ibid., 23.



**Figure 3.2:** This 2012-2014 U.S. census map reflects the proliferation of German heritage in Pennsylvania and the Corn Belt compared to southern states. The type of German agrarianism described by Rush thus migrated westward into the Corn Belt in the nineteenth and early twentieth centuries. U.S. Census Bureau, “German Roots,” [https://www.census.gov/content/dam/Census/library/visualizations/2016/comm/german\\_roots.jpg](https://www.census.gov/content/dam/Census/library/visualizations/2016/comm/german_roots.jpg) (accessed 1/21/17). This map is in the public domain. See also “German Americans-The Silent Minority,” *The Economist*, February 7, 2015, <http://www.economist.com/news/united-states/21642222-america's-largest-ethnic-group-has-assimilated-so-well-people-barely-notice-it> (accessed 3/31/16).

Thus, a conflict was brewing in rural Pennsylvania and frontier Iowa in which the enlightened aristocratic observers, in the form of urban reformers in the twentieth century, would eventually replace the British and the German princes as the “other” and attempt to tell the independent German’s children what to do with their own property in the name of modernity. In other words, by the early twentieth century, when money and power had concentrated in cities

and within central government, this “other” became urban reformers who enforced their own version of urban industrialization on the decedents of the German agrarians settling in the Midwest Corn Belt. Drawing on their own German-American agrarian tradition as well as Jeffersonian agrarianism emanating from the American Southeast, and reinforcing the same cultural values of personal property, family, and control over work processes, these Midwesterners resisted this urban version of modernity with their own discourse of rural capitalistic modernity. Added to barns and fences as representing their work ethic and rural independence were tractors, cream separators, and combines. The German agrarians in the Corn Belt came to define themselves in terms of these objects in a new way as reinforcing not only their capacity to succeed but to *be modern*. In short, while new contested notions of modernity emerged by the twentieth century that differed from Rush’s conception, these versions of twentieth-century modernity overlaid two opposing cultures that had begun to evaluate and deal with one another in the eighteenth century. Thus, Rush noted far more than a list of agricultural methods. He traced how the seeds of later contestations over modernity were sown in the seemingly peaceful Pennsylvania countryside.

## Chapter 4

### The Rural-Urban Conflict as a Contest between Rural Capitalistic Modernity and Urban Industrialism

*Suspicious of the expert, he [the farmer] is at the same time more receptive to new ideas, new machinery, new products, and new methods than either industrial management or labor.*

Joseph Frazier Wall, *Iowa: A Bicentennial History*, 1978<sup>233</sup>

In the late summer of 1923, hundreds of farm families loaded into their new Ford and Packard automobiles and headed for DeKalb, Illinois. Other farm families piled into trains and some even walked, increasing the small town's population of 5,000 to over 30,000 people. The hundreds of families came not for a sporting event or to see a famous politician speak, but to help celebrate the tenth anniversary of the DeKalb County Farm Bureau, which boasted of being the first county farm bureau in the U.S. "marking a new scientific and business era in farming" and leading to the founding of a similar "movement" "in "1,600 other countries and to 46 other states." The celebration included "bands, and parades, and exhibits of modern farm implements and methods," but the main attraction featured a pageant involving over four thousand people representing every county in Illinois. Almost everyone in DeKalb county helped with the pageant directed by Nina Lamkin, a dramatic organizer of Community Service, a national organization helping communities organize large-scale theatrics. The pageant entitled "Forward! Farm Bureau" contained four episodes - "The birth of an idea," "the growth of an idea," the "development of an idea," and "the future of an idea" in which the stars of the show, a farmer,

---

<sup>233</sup> Wall, *Iowa: A Bicentennial History*, 128.

his wife, and two sons experienced the modernization of agriculture first hand. Action took place around the farm home and went through “a series of changes and improvement until finally it evolved into the most up-to-date of 1923 farm homes.” The real stars in the pageant were evolving technologies and production methods. First, the fictitious family saw the coming of the mail carrier, then the installation of telephones, the pruning and spraying of fruit trees with pesticides, the building of large grain silos, and the sale of cattle to distant markets with use of modern metal paddocks. One audience member described the scenes as “Modern equipment was added piece by piece, including a washing machine, an automobile, and eventually a radio set. The county adviser came to test the soil, shrubbery was planted in the yard, the house and barn were painted and the fence was improved.”

The play also featured child actors dressed in costumes representing “old friends” or threats of nature overcome by modern technology - “the chinch bug, the Hessian fly, and the grasshoppers, as well as poor seed, depleted soils, early frost and other conditions.” The pageant concluded with over sixty floats demonstrating the DeKalb Farm Bureau’s vision of an even more modern future. As one observer, Mabel Travis Wood, exclaimed, “A pageant has always been the best way to illustrate progress.” Nor was the DeKalb pageant unusual, as many smaller towns had organized similar demonstrations throughout the Midwest.<sup>234</sup> But Mabel Wood was wrong in her assessment that pageants of the kind in DeKalb, Illinois would prove the best method of demonstrating “progress.” Rather, farm families in DeKalb, Illinois and thousands of other places throughout the Corn Belt would cast themselves in the role of the performers in “Forward! Farm Bureau,” with an audience of even more than 30,000. Their farms, homes,

---

<sup>234</sup> Mabel Travis Wood, “A Pioneer Farm Bureau Celebrates,” *Better Farming* 46, no. 4 (August 1923): 3.

barnyards, and machine sheds would serve as their stage with tractors, cream separators, radios, hybrid corn, and electric appliances as their props. These farmers and “farmwives,” through the mundane everyday use of material objects rather than grand theatrical productions, would stage a “pageant” even more impressive and more significant to the future of the way people in the developed world would eat than Nina Lamkin could possibly have envisioned.<sup>235</sup> This book will argue that these actors are, in fact, not finished with the performance.

---

To this point, I have shown that scholars and writers in many fields have perpetuated the dominant image of the farmer as resisting modernity and progress in the name of Jeffersonian agrarian ideals well into the twentieth century. As I have argued, this view that all farmers resisted change resulted largely from an uncritical adoption of urban discourses deriding rural Americans, which accelerated during the rural-urban conflict of the 1920s. In this chapter, I shift from an analysis of literature to my historical narrative of how these negative views of rural America, along with multiple rural modernities, emerged from this conflict between Midwest agrarians and “city folk.” These negative urban discourses arose, in part, to alleviate

---

<sup>235</sup> In this book I use the terms “farmwife” and “farmwives” only because that is how women on Corn Belt farms have referred to themselves from the early twentieth century to the present. As a result of one of my arguments in this book that women on Midwest farms have largely viewed themselves as modern producers, I consider the term “farmwife” and “farmwives” to mean the equivalent of “female farmer(s).” In addition, I sometimes refer to a farmer as “her” or “she” in my analysis in order to reinforce the fact that I personally regard the word “farmer” as non-gendered.

ambivalence many urbanites felt over their decision to leave rural life. Unlike notions of modernity held by Benjamin Rush and other Americans in the eighteenth and the nineteenth centuries, modernity only became strongly associated with urban living when new mass communications technologies combined with the accelerated pace of migration of rural denizens to cities in the early twentieth century.<sup>236</sup> Closer historical analysis, however, reflects contesting and shifting agrarian discourses and identities in which many farmers embraced modern sensibilities while giving them a distinctly rural flavor as a way of responding to negative urban stereotypes.

If one uses the push-pull metaphor commonly deployed to conceptualize immigration and migration, a discourse of urban superiority functioned to strengthen the pull of the city beginning in the early twentieth century.<sup>237</sup> Negative views of farmers by urban Americans had begun to intensify in the early twentieth century when high farm commodities prices caused manufacturers to accuse farmers of keeping food supplies low through laziness and inefficiency.<sup>238</sup> When commodities prices fell in the 1920s and rural people began migrating to cities, these negative attitudes accelerated to assuage regrets many new urbanites had over

---

<sup>236</sup> For a further discussion of contextual factors that led to a discourse of urban superiority see Patnode, “‘What These People Need is Radio:’ New Technology, the Press, and Otherness in 1920s America,” 286-287.

<sup>237</sup> See for example Jonathan Wagner, *A History of Migration from Germany to Canada, 1850-1939* (Vancouver, CN: UPC Press, 2006), 8.

<sup>238</sup> Saloutos and Hicks, *Agricultural Discontent in the Middle West: 1900-1939*, 21-22.

abandoning rural life.<sup>239</sup> A new vocabulary of condescension, in which farmers were known as bumpkins, hicks, yokels, and rubes reflected this notion of urban superiority as did “rube songs” popular in the 1920s mocking farmers as stupid, closed-minded, and unsophisticated.<sup>240</sup> These writers used markedly similar language to the aristocratic Théophile Cazenove, who wrote about

---

<sup>239</sup> Commodities prices fell in the 1920s for several reasons including increased supply through mechanization; decreased demand for American commodities in Europe caused by a slower rate of European population increase combined with renewed agricultural production in Europe after World War I; and the fact that consumption of food after World War I in the U.S. became income and price inelastic. Giovanni Federico, “Not Guilty? Agriculture in the 1920s and the Great Depression,” *The Journal of Economic History* 65, no. 4 (December 2005): 951; Frederick C. Mills, *Economic Tendencies in the United States: Aspects of Pre-War and Post-War Changes* (Washington, D.C.: National Bureau of Economic Research, 1932), 315-374. Farmers had also incurred greater debts in order to increase the amount of land in cultivation at the urging of the federal government to satisfy rising global demand for American farm products during World War I. A lack of banking regulations allowed rural banks to extend farmers too much credit prior to 1920. Thus, after the war, farmers faced both a surplus supply of commodities and increased debt. Marcus M. Witcher and Joseph Horton, “From Prosperity to Poverty: The Story of American Economic Decline During the 1920s,” *Journal of Applied Business and Economics* 14, no. 4 (2013): 79-80.

<sup>240</sup> Shideler, “‘Flappers and Philosophers,’ and Farmers: Rural-Urban Tensions in the Twenties,” 289.



German agrarians more than one hundred years earlier. This time, in the 1920s, the elite critics of farmers promoted an urban rather than an ethnic superiority.<sup>241</sup>

Although many writers lionized farmers in eighteenth-century America in heroic terms, as noted by Randall Patnode, they wrote favorably about mostly the Anglo-American farmer in the north who comprised the population's majority. Once these Anglo-American farmers joined German and other immigrant farming groups to become a minority "other," observers assigned them almost identical pejorative characteristics as used by Cazenove and, to a lesser degree, Rush in the late eighteenth century. For example "Giddyap Napoleon," written in 1907 by Benjamin Hapgood Burt, depicts an uneducated farmer who becomes drunk at a state fair and gives away his bull while expressing ignorance of his son's more glamorous life in Philadelphia.<sup>242</sup> This view of farmers as unsophisticated and anti-modern also pervaded the work of urban writers and scholars in the 1920s. In "The Husbandman," first published in the *American Mercury* in 1924, Henry L. Mencken described the farmer as "a serious fraud and ignoramus, a cheap rogue and hypocrite, the eternal Jack of the human pack," unable to understand any political and economic issue beyond his own self-interests.<sup>243</sup> In the *Wireless Age* magazine, one urban actress described rural America with "its warped outlook on life, its

---

<sup>241</sup> Patnode, 'What These People Need is Radio: New Technology, the Press, and Otherness in 1920s America,' 286-287.

<sup>242</sup> *The Folklorist*,

[http://www.folklorist.org/song/Wal\\_I\\_Swan\\_\(Giddyap\\_Napoleon,\\_Ebenezer\\_Frye\)](http://www.folklorist.org/song/Wal_I_Swan_(Giddyap_Napoleon,_Ebenezer_Frye)). (accessed 3/17/16).

<sup>243</sup> Henry L. Mencken, "The Husbandman," *A Mencken Chrestomathy* (New York: Knopf, 1924), 360-364.

ignorance of current events, its mean and petty superstitions.”<sup>244</sup> During a speech to a group of Corn Belt teachers in St. Paul, Minnesota in 1921 by the managing editor of the farm journal, *Farmer’s Wife*, Ada Melville Shaw recounted how mainstream non-farm-journal media “took account of farms and farmers chiefly from the standpoint of condescension toward men and women who made daily close contact with the dirt of the field, the barn, the chicken yard, the hog pen; or, from the standpoint of the farmer as a comic or picturesque contribution to a certain type of fiction.”<sup>245</sup>

Many farmers in the Corn Belt reacted to these rube stereotypes with attempts to create a discourse of condescension about urban Americans. These attempts to parry insults against rural life reveal that the rural-urban conflict existed not only in the halls of Congress and in debates over tariff policies, but as a lived experience of farmers. Rural denizens carried self-consciousness about the “rube” as a dominant image on almost a daily basis and which had seeped into even rural folk culture by the mid-1920s. Rural Americans in the Midwest, therefore, knew they needed to perform in ways that combated these negative images of the farm coming out of urban America. One Corn Belt farmer and journal editor for *Better Farming*, Fred L. Chapman, for example, wrote a column in 1923 entitled “The Real Rube” in which he recalls,

---

<sup>244</sup> Mona Morgan, “Small Town’s Radio Receivers Will Emancipate It, Actress Predicts,”

*Louisville Courier Journal*,

(March 1923), sec. 2, quoted in Patnode, “‘What These People Need is Radio:’ New Technology, the Press, and Otherness in 1920s America,” 286.

<sup>245</sup> Ada Melville Shaw, “The Country Child’s Schooling: An Answer to the Question, ‘How Much Education Does the Rural Child Need?’” *Farmer’s Wife* 23, no. 8 (January 1921): 288, 308.

I can remember the time when I was a little boy, I almost dreaded a trip to the city because I might appear green to the more sophisticated lads who were better acquainted with street cars and tall buildings. I did not know then that there is a big world of things which the country boy and girl knows but which are utterly foreign to his city cousin. We have all heard of the town girl visiting the country who confessed she did not know the difference between a wild tree and an apple tree.

Chapman proceeds by listing high percentages of grammar school children in St. Louis, Missouri admitting on a questionnaire that they had never seen sheep, pigs, and mules. He then mocks plans by the St. Louis Zoo to place a pig and a cow in their rare animals exhibit. Chapman concludes, "I'll say that the laugh is about the city kid. He is the real 'rube.'"<sup>246</sup> Farmers found using new technology and methods, such as the latest tractors or accounting techniques, also served as a means of demonstrating that city dwellers were the "real rubes."

The clash over the urban yokel stereotype of rural Americans stood as the cultural manifestation of a broader rural-urban conflict in the 1920s that also presented political and economic disputes. The falling prices for farm products alongside the rising prices of manufactured goods farmers had to buy from urban producers created a tangible struggle between urban and rural interests that manifested itself politically in the debate over the McNary-Haugen bills and other measures to raise prices of commodities. The McNary-Haugen Relief Act, a series of proposed bills in the 1920s, would have required the federal government to purchase surplus farm products to raise prices. The government planned to recover its costs

---

<sup>246</sup> Fred L. Chapman, "The Real Rube," *Better Farming* 46, no. 12 (December 1923): 2.

through an “equalization fee” leveed on middlemen, such as grain elevators.<sup>247</sup> Politicians formed the bipartisan “farm bloc” in Congress in an attempt to reverse this price disparity. The American Farm Bureau Federation (AFBF), a political advocacy organization formed by farmers in 1919, and congressmen formed the farm bloc in response to the failure of Republicans in a special session of Congress called by President Warren G. Harding in 1921 to offer an agricultural plan.<sup>248</sup> While prior blocs in Congress operated behind closed doors, the farm bloc openly argued, “that the machinery of the federal government had to be employed to end discrimination against farmers.”<sup>249</sup> The McNary-Haugen bills stood as only the most visible pieces of pro-farmer legislation endorsed by the farm bloc. The amended 1924 McNary-Haugen bill sought to establish an export corporation to dispose of agricultural surplus by exporting it abroad, thereby raising domestic commodity prices. The AFBF and Secretary of Agriculture (and founder of *Wallaces’ Farmer*) Henry C. Wallace, supported the bill while other farmer groups distrusted it because they associated the AFBF with the interests of urban business and financial groups.<sup>250</sup> Farm journals and farmers in the 1920s exhibited an obsession with the McNary-Haugen Bill and other legislation intended to raise prices for farm commodities, but

---

<sup>247</sup> George N. Peek, “The McNary-Haugen Plan for Relief,” *Current History* 29, no. 2 (November 1, 1928): 273; Darwin N. Kelley, “The McNary-Haugen Bills, 1924-1928: An Attempt to Make the Tariff Effective for Farm Products,” *Agricultural History* 14, no. 4 (October 1940): 170-180.

<sup>248</sup> For a more in depth discussion of the AFBF and its importance in demonstrating and advancing rural capitalistic modernity, see page 194 below.

<sup>249</sup> Saloutos and Hicks, *Agricultural Discontent in the Middle West: 1900-1939*, 321-323.

<sup>250</sup> *Ibid.*, 281-282.

which never passed into law.<sup>251</sup> President Calvin Coolidge vetoed the McNary-Haugen Bill on February 25, 1927. Editorialists in farm journals vehemently attacked Coolidge for killing the bill while leaving similar tariff protections for big business in place. For example, one writer mocked the president writing, sarcastically “Ah, the courage of Coolidge is vastly underestimated. He bares his breast to the arrows of outrageous fortune in defense of the steel trust and the banker with an unparalleled calmness and remains - Cool!”<sup>252</sup> The farmer needed a means other than the ineffective farm bloc and the federal government to compete with the “outrageous fortune” of these urban interests.

Farmers not only perceived of their money flowing into cities but their labor force too, as young men and women abandoned the farm for urban jobs.<sup>253</sup> The farmers and farmwives of the Corn Belt found themselves in an awkward position of working as both capitalist owners and laborers without identifying with either urban capital *or* labor. The urban industrialists feared that farmers in the early twentieth century would join radical labor movements absent farm bureau organizations, a concern reflecting yet another urban misunderstanding of rural America. Historians Theodore Saloutos and John D. Hicks explain that the farmer not only had substantial amounts of capital invested in property; he and she felt superior to labor.<sup>254</sup> At the same time,

---

<sup>251</sup> For example see “Senate Approves McNary Bill: Vote of 53 to 23 Passes Measure by Margin Big Enough to Beat Veto,” *Wallaces’ Farmer* 53, no. 16 (April 20, 1928): 3.

<sup>252</sup> Saloutos and Hicks, *Agricultural Discontent in the Middle West: 1900-1939*, 399-400, quoting *Farmer’s Union Herald*, March, 1927.

<sup>253</sup> See for example, W.C., “Sending the Poor Farmer to Town,” *Wallaces’ Farmer* 53, no. 11 (March 16, 1928): 436 (10).

<sup>254</sup> Saloutos and Hicks, *Agricultural Discontent in the Middle West: 1900-1939*, 259-260.

farmers saw urban business as a threat both economically and culturally. Organizations such as the Farmer's Union consciously regarded any farm organization perceived to align with the Chamber of Commerce, big business, or agricultural colleges with suspicion.<sup>255</sup> While not all farmers viewed urban interests in such radical terms, they still viewed urban actors outside the farm as a dangerous "other."

People throughout the rural Corn Belt realized that "the roaring 20s" had passed them by, and they blamed urban interests, both labor and capital, for their unequal standing.<sup>256</sup> Farmer J.F. Murphy of Clark County Illinois wrote into *Wallaces' Farmer* in 1924 the tongue-and-cheek suggestion of fixing the farmer's price problems by abandoning the McNary-Haugen bills altogether and take a "short cut - one that congress cannot vote on. Organize the farmer into a federation and cut the working day to an eight-hour day; the week into five and one-half days." After all, Murphy asked "Why should the farmer work more hours per day than any other people?"<sup>257</sup> Murphy's sarcasm reveals an underlying serious truth that most farmers felt slighted by both urban businesses and labor living the modern "good life" on the shoulders of low food prices made possible by the overworked farmer.

Blanche Stein wrote into *Better Farming* angrily criticizing the U.S. government for preaching equality and bringing peace to Europe in World War I while allowing farmers to be

---

<sup>255</sup> Ibid., 283-284.

<sup>256</sup> See for example, Thomas E. Wilson, "Farmers are in a Fix," *Better Farming* 44, no. 1 (January 1921): 4.

<sup>257</sup> J.F. Murphy, "Eight Hour Day for the Farmer," *Wallaces' Farmer* 49, no. 46 (November 14, 1924): Voice of the Farm, 1479 (11).

“victims of distressing turmoil and unrest within our own borders.” After lamenting rural-to-urban migration, Stein argued “Our country will never be a democracy until we extend equality from the city to rural areas - until we give to the farmer equal rights socially, recreationally, educationally, religiously, and economically.” This rural-urban inequality, according to Stein arose from a mix of high wages in the city and the drudgery of farm work. As Stein recalls, a traveler through Iowa crossing the fields “came upon a youth plowing for corn. Knowing that he worked from dawn to dusk, he inquired what he ‘got’ for it. ‘Get?’ replied the farmer boy, ‘get? Why, if I do, I don’t get nothing, and if I don’t, I gets hell.’” Stein then mocked several ideas introduced by urban reformers for improving rural life, all of which greatly offended values important to a Jeffersonian or German agrarian, including independent ownership of land, family-centered production, and farming as a means of preserving democracy and Christianity. In doing so, Stein framed urban reformers as immoral, non-masculine, and un-American. For example, she sarcastically pointed out that, “A modified manorial system has been advocated by many, following somewhat the custom in France” whereby mindless workers from the city would be bused out to collective farms in the country. Stein continued, “Another group of reconstructionists maintain that theirs is the only plan which will work. They say that the American does not like to farm but that he makes a good office man. The Chinese are good farmers. So let the American live in the city, enjoy its pleasures. Let him wear soft garments, and keep his fingers nicely manicured, and let the Chinaman do the farming.” In a combination of Jeffersonian belief in the morality of a society built on agriculture, American exceptionalism, and white supremacy, Stein characterized these plans as “absolutely contrary to our idea of building a rural civilization in accord to the highest ideals of Americanism.” Stein saw “only one scheme that will solve our rural problem” that would preserve the Jeffersonian ideal of an

American “rural civilization.” “Our type of farmer must be improved” Stein said through better education and “equipment” as well as “the dissemination of scientific knowledge.” This new farmer “must be something of a student, an authority on the science of agriculture; he must be an investigator and experimenter to solve the problems of his own farm; and he must be a business man capable of the management of a large and complicated undertaking.”<sup>258</sup> Only this new type of farmer could “build our ‘rural civilization’ in accord with the highest American ideals.” Ironically, the small yeoman farmer so important to Jefferson could not save Jeffersonian agrarianism. The Corn Belt needed a new type of farmer, a modern capitalist making use of the latest science and technology, in the face of the threat of urban strength and “reconstructionists” from outside the farm.

As Stein and others in the Corn Belt saw the farm bloc in Congress as ineffective and failing to push through agricultural legislation, technology became a way the farmer could take it upon himself to level the economic and cultural playing field. Some farmers such as E.S. Murphy from Fremont County, Iowa even suspected a conspiracy of urban interests in which the federal government’s farm investigators colluded with speculators to construct crop reports that drove down commodity prices. As Murphy wrote into *Wallaces’ Farmer* “Can you explain why the speculators' reports coincide with the government reports, no matter whether the latter is

---

<sup>258</sup> Blanche Stein, “Building a Rural Civilization: It Must be Based Upon the Highest American Ideals, Expressed in Terms of Christianity, Recognizing the Farmer’s Right to Economic Welfare,” *Better Farming* 45 No. 1 (January 1922): 4, 16, 19.



accurate or inaccurate? Do you not think it is a fact that they get their information from the same source?”<sup>259</sup>

Simply put, rural denizens knew they had to modernize or risk losing the contest with urban America or, even worse, submitting to urban reformer’s view of what rural America should look like. Importantly, one cannot understand this rural need for modernization wholly through rational economic explanations. In fact, one could argue that new farm machinery and methods promised to increase production, which would lead to even lower commodity prices. Thus, only within the cultural context of urban-rural contestations over the meaning of modernity and rural identities can one fully understand why farmers found increased supply as a solution to low prices. An economist may critique my argument by pointing out that a new tractor promises to increase an individual farmer’s profits through taking greater advantage of economies of scale, and that farmers may not internalize the effect that the increase in his individual production may have on prices more broadly. This economic argument, however, fails to realize that this individualist capitalist way of thinking about production and technology, the very mindset that causes the farmer to ignore externalities, is itself a feature of the new rural capitalistic identity that formed in response to the rural-urban conflict. As discussed later in this book, farmers prior to the 1920s, while they valued independent property ownership, also viewed themselves as part of communities rather than as fierce individual capitalist competitors against their neighbors. Only by taking into account changes in unspoken discourses and identities can one fully understand why farmers failed to internalize the potential of new technologies to lead to a fall in commodity prices.

---

<sup>259</sup> E.S. Murphy, “Government Crop Reports,” *Wallaces’ Farmer* 53, no. 16 (April 20, 1928): Voice of the Farm 638 (6).

Farmers wrote into farm journals suggesting all kinds of measures for solving the price problem, such as Midwest states forming marketing associations to fix prices or farmer-owned banks.<sup>260</sup> Others formed cooperatives to set higher prices in an attempt to combat what rural Americans saw as large urban corporations colluding to drive down the value of farm commodities.<sup>261</sup> But a discourse and identity of Jeffersonian and German agrarianism mandated that farmers act independently to uplift their own production processes and create their own modernization rather than rely on outside reformers. As Joseph Frazier Wall stated in writing the bicentennial history of Iowa in the late 1970s, Iowans saw their state's history as one in which farmers tried "to live and let live" unbothered by "eccentric purveyors of panaceas" conspiring to "disrupt his life, and drag him, willy-nilly, into the whirlwind of ideological dispute."<sup>262</sup> With this cultural conception of fierce independence threatened from outside forces, the farmer needed to conceive of him- or herself as developing one's own modern rural identity through technological use.

On the urban side of the conflict, a diverse group of cultural, business, and commercial actors in early twentieth-century America motivated by many forms of economic or political gain echoed the myth that American farmers saw themselves as old fashioned and opposed to progress, modernism, and urbanism. While supporters of this myth of a persisting Jeffersonian

---

<sup>260</sup> John H. Bundy, "Grain Marketing," *Wallaces' Farmer* 46, no. 2 (January 14, 1921): 54 (14); W.S. Short, "The Banker and the Farmer," *Wallaces' Farmer* 46, no. 2 (January 14, 1921): 54 (14).

<sup>261</sup> "Individualism and Collectivism," *Wallaces' Farmer* 46, no. 1 (January 7, 1921): 5; "Co-Operative Legislation for Iowa," *Wallaces' Farmer* 46, no. 1 (January 7, 1921): 8.

<sup>262</sup> Wall, *Iowa: A Bicentennial History*, 66.

yeoman ideal came from a wide range of places and institutions, they generally hailed from industrialized urban areas, from the Federal government, or from rural groups or institutions seeking to critique urban industrialization and modification by juxtaposing it with an outdated and idealized agrarian imagery.

Two groups of Progressive reformers perpetuated this anti-modern view of farmers prior to World War I. The first, the Country Life Movement, consisted entirely of urban-based educators, social scientists, religious leaders and philanthropists concerned that increased rural-to-urban migration had caused a drain of intelligent and ambitious people in rural communities, potentially leading to a fall in U.S. agricultural productivity. In 1907, President Theodore Roosevelt lent legitimacy to the movement by forming the Country Life Commission to study and write a report on rural problems. This commission of experts, however, did not contain a single farmer. Its chair, Liberty Hyde Bailey, worked as a horticulturalist at Cornell University (albeit a land-grant university). Following the issuing of questions, receiving letters from farmers, and holding hearings and conducting interviews with farmers in forty states, the Commission's 1909 report concluded that farmers had failed to keep pace with urban Americans both in terms of standard of living, education, and methods of productivity. What rural America needed, among other reforms according to the report, were urban education models to teach children agricultural skills that many rural denizens thought they had already learned on the farm.<sup>263</sup> "Life on the farm," the report stated, "must be made permanently satisfying to intelligent, progressive people." Since the Commission determined that rural America lacked these types of "progressive" people, they framed their task as, "The work before us, therefore, is

---

<sup>263</sup> *Report of the Commission on Country Life* (Washington, D.C.: GPO, 1909), 1-9, 25.

nothing more or less than the gradual rebuilding of a new agriculture and new rural life.”<sup>264</sup> As historian Ronald Kline explains, many on the Commission even viewed farmers as less intelligent and enterprising than urban dwellers because urban migration resulted in a thinning out of the rural gene pool.<sup>265</sup>

The Commission’s report elicited defensive attitudes from farmers in rural America who saw it as evidence of an attack on the rural way of life by urban voices. For example, in a cartoon published for a rural audience in a February 1928 issue of the *Farm Journal*, three intellectuals, an historian, a psychologist, and an economist dressed in suites worn by the urban upper classes sling handfuls of mud at a woman labeled “agriculture.” The woman in the cartoon dressed in a robe and wearing a laurel wreath with a cornucopia overflowing with food next to her, represents the moral purity of agriculture advocated for years by Jeffersonian agrarianism. She covers her face in a defensive position with her arm to shield herself from the filth thrown by the scowling and aggressive intellectuals. The bountiful cornucopia highlights the injustice, from a rural point of view, of an urban-dominated economic and social system that flings mud at the very people who feed and support it, another Jeffersonian idea. The artist of the cartoon, entitled “Rural Bunk,” means to escalate rural resentment in order to effect rural

---

<sup>264</sup> Ibid., 17.

<sup>265</sup> Kline, *Consumers in the Country: Technology and Social Change in Rural America*, 91; similarly, Nancy Isenberg argued that reformers exhibited a similar biology-based attitude towards rural people in the American Southeast arising, in part, out of a broader eugenic movement among urban elites in the early twentieth century that viewed social ills as caused by the inherited “degeneracy.” She does not discuss whether urban dwellers viewed rural people in the Corn Belt through a eugenic lens. Isenberg, *White Trash*, 174-205.

resistance, evidenced by the drawing's subtitle which asks "Favorite indoor sport is slandering agriculture: Why do American farmers continue to stand for it?"<sup>266</sup> As David Danbom states in *Born in the Country: A History of Rural America*, "rural people did not agree that there was a crisis in their schools or even that there was anything very wrong with them."<sup>267</sup> The backlash by rural America only confirmed the urban misconception that farmers were backward and that they opposed modernity.<sup>268</sup> Stories in the urban-based popular press and reports by Progressive reformers following the Country Life Commission report fanned rural resentment. For example, the *Ladies Home Journal* in 1909 criticized farm husbands for purchasing labor saving equipment in the fields before the home, where women work. This report alienated many farm women who viewed themselves as partners in the farming operation rather than as homemakers (see the discussion below about Emily Hoag Sawtelle's 1924 report). The founding editor of *Wallaces' Farmer*, Henry Wallace, characterized the *Ladies Home Journal* article as slanderous to rural men. Another series of articles in *Harper's Bazaar* in 1912 by Country Life Commissioners Martha Bensley Bruere and Robert Bruere entitled "The Revolt of the Farm Wife!" depicted life on the farm as unhealthy and monotonous. Similarly, a USDA report in 1919 surveying farm wives framed life for rural women as monotonous and lacking the

---

<sup>266</sup> Walter Burr, "Rural Bunk: Favorite Indoor Sport is Slandering Agriculture: Why do American Farmers Continue to Stand for It?," *Farm Journal* (February 1928): 9-10.

<sup>267</sup> Danbom, *Born in the Country: A History of Rural America*, 167-175.

<sup>268</sup> Kline, *Consumers in the Country: Technology and Social Change in Rural America*, 13.

“modern” technologies enjoyed by urban women. One report from Cornell University even claimed a “prevalence of insanity among rural women.”<sup>269</sup>

Negative urban stereotypes about rural life following the Country Life Commission Report reached such a feverish level that the USDA dedicated an Associate Economist, Emily Hoag Sawtelle to interview 8,000 farm women in 1924 to rehabilitate popular images of farm life. Sawtelle’s report provides a window both into rural identity and resentment of urban dwellers among women on Corn Belt farms in the 1920s. Sawtelle first described the general view of the Country Life Commission Report in rural America: “A rather gloomy picture was painted and put before the people and the impressions it made persists in the minds of city people and writers on rural topics.” All of the women interviewed by Sawtelle saw “the popular conception” of farm life appearing in “the press” as “misrepresentative.”<sup>270</sup> In addition, the women in the report wanted to “remove the stigma from agriculture,” noting that, “The surgeon, the artist, the engineer, are not stigmatized in public thought.” Unlike these urban professions where “the glorified part of their calling obliterated the materials with which they work... The soil, the clods-the farmer’s medium have been too much stressed.” The women Sawtelle interviewed lamented that “the wheat, the cattle, the fruit, his [the farmer’s] finished products,

---

<sup>269</sup> Ronald R. Kline, “Ideology and Social Surveys: Reinterpreting the Effect of ‘Labsaving’ Technology on American Farm Women,” *Technology and Culture* 38, no. 2 (Apr. 1997): 355-385.

<sup>270</sup> Emily Hoag Sawtelle, “The Advantages of Farm Life: A Study by Correspondence and Interviews with Eight Thousand Farm Women,” unpublished manuscript, U.S. Department of Agriculture, March 1924, 1, <https://archive.org/stream/CAT31046460#page/n4/mode/1up> (accessed 9/29/16).

have been too little remembered and too little identified with his calling.” Thus, farm woman in 1924 saw themselves not as women living in a rural setting but as farmers taking part in agriculture. “It is the problem of the farmer and the farmer’s wife,” Sawtelle noted, “to take the stigma from agriculture, so as to elevate it by motive that farming shall cease to take its general reputation from the meaner aspects and begin to assume the character of a lofty calling. Already farmers are objecting to the caricatures in the press which represent them as sorry and disheveled, hay-seedy and dirty.”<sup>271</sup>

Throughout the report, Sawtelle reflects a rural obsession with urban stereotypes of farmers and a desire to defy them through rural modernization. The women she interviewed saw negative urban views of farming as not just upsetting but as threats to a moral way of life from an outside “other.” Instead of submitting to urban notions “that American rural life is cracking and bound to break up,” by leaving the farm, which Sawtelle characterized as “acknowledgment of defeat,” the women considered farming “on no lower round of advancement than merchandizing or any other business.”<sup>272</sup> The farm women in the report, therefore, saw the adoption of new technology in terms of a contest over the very survival of what they considered a moral rural identity. Rather than seeing themselves according to the urban conception of women trapped in a backwards place of drudgery and boredom full of social disadvantages, these female farmers performed an identity as “strong, resourceful, capable, and leading personalities in their communities.”<sup>273</sup>

---

<sup>271</sup> Ibid., 12.

<sup>272</sup> Ibid., 19.

<sup>273</sup> Ibid., 2.

Throughout Sawtelle's report, she cites Abigail Adams as a kind of founding heroine who managed the farm in her husband John Adams' absence. Adams is evoked as an archetype of female rural independence, as an example of how women uphold family and the farm as a virtuous social system.<sup>274</sup> One can go so far as saying if men had Jeffersonian agrarianism with which to fashion themselves in heroic terms, women had "Abigailian" agrarianism. The report, for example, saw women as the heroic leaders in combating urban stereotypes:

The rural woman through all our agricultural development has held like a creed the determination that while gaining financial advantages, her family should not be needlessly deprived of social privileges. She has endeavored by dint of labor and thought, by substitution and combination, to bring to her family the best that life has to offer. The American farm woman has always been a courageous social pioneer as well as a resourceful frontierswoman.

In addition, Sawtelle reflected that farm wives saw the woman in the farm home as preserving democracy: "The farm home is a home to the whole nation, not merely to those that live within its walls. The nation, in a way, borrows and depends upon the traditions of its farms. This, it seems, is our rock-bed of patriotism, the stabilizer which shall continue to make us a strong and permanent nation. Without it we should be like floating plants without roots."<sup>275</sup> The farm women saw it their duty to modernize in order to not only combat false urban stereotype but for the Jeffersonian rationale of preventing the cities from undermining true democracy: "The farm woman is the strongest supporter of our basic democratic principle- she believes that everyone in

---

<sup>274</sup> Ibid., 23.

<sup>275</sup> Ibid., 14, 29.



America should work, and that everyone in America should share in the higher life. She admits of no second place for American farmers. She makes no apology for her chosen occupation. Rather, she believes its possibilities boundless.”<sup>276</sup>

The female farmers also told Sawtelle that they saw themselves as superior to urban women for several reasons. First, several interviewed noted that unlike their urban cousins they worked as partners with their husbands on “equal financial footing.” “A farm woman,” the report noted, “can always start on her way to partnership or economic independence with her garden, her butter, and her hens.” Further, “The helping on the farm is not all on one side. The farmer often gives his partner a helping hand with the garden and heavier indoor work.” As one Ohio woman wrote, “My husband and I started life on \$200, 6 years ago, and today by hard work we are making good, and are looking forward to a home of our own in the near future.” As an equal partner in a modernizing business, farmwomen saw themselves as actually more modern than urban women. Sawtelle writes,

Nowhere does a woman have a better chance to be her husband’s partner in every sense of the word. The business itself is spread out in front of her door. Its details come to her kitchen. She sees the plans for the work going around her. She hears the talk of the business at her table. The farm papers come into her living room; farm bulletins are on her desk. She has every opportunity for studying the technique of science, and for acquainting herself with the inside workings of a thriving business.<sup>277</sup>

---

<sup>276</sup> Ibid., 4.

<sup>277</sup> Ibid., 4-5.

Second, the women in the report saw the farm as a more moral place to raise children than the city. Increased modernization and technology use thus became a means of enacting an older Jeffersonian or German agrarian identity of women heroically preserving a moral family. Sawtelle noted a statement at the 1922 National Agricultural Conference by farm women, “We stand for the conservation of the American farm home, where husband and wife are partners and where children have the opportunity to develop in wholesome fashion.” One Michigan woman expressed a similar identity as a heroine defending her family from less virtuous urban lifestyles, “Our work is harder than the city woman’s and there is more of it, but we are free to do as we like in some things. I am raising my family without fear of a landlord ordering me out, because there are too many babies. The little vine-covered cottage is better than an apartment in the city where no children are wanted.” The very landscape of the Corn Belt, the farm women felt, promised a superior environment for raising children than cities where children “are all too often forced to seek a playground in the street” and where “The city mother is kept in a constant state of anxiety as to the safety of her children.” As one woman farming in Wisconsin stated, “In the country there is a lot of room indoors and out for things to grow in. Our families, like the crops, grow up naturally.”<sup>278</sup> Thus as partners in a business that preserved more wholesome places for raising children, rural women had constructed an identity as more moral than their urban cousins. In contrast, urban women toiled in an inferior position to their husbands and raised their children in a dangerous and unhealthy city. That these same urban women looked down on agriculture must have irked the farmer’s wife who saw herself as morally superior. A decade later, even President Franklin Delano Roosevelt’s Secretary of Agriculture and former chief editor of

---

<sup>278</sup> Ibid., 21-22, 24.

*Wallaces' Farmer*, Henry Wallace, expressed a similar Jeffersonian view that “The land produced the life-stream of the nation,” in the form of “young people bred on the farms.”<sup>279</sup>

The farm women interviewed by Sawtelle almost universally viewed the adoption of new technology and accumulation of increased property and wealth as the best ways to challenge the “gloomy picture” of rural life held by urban dwellers. As Sawtelle writes, “But with the movement for improvement of conditions well under way, protests against calamity stories began to appear and farm people now resent characterization and cartooning as ignorant objects of misguided pity.” The farm women objected to the fact that “Casual observers of country life are in the habit of contending that the present day farm woman is more restricted by her household duties than was her Puritan and Revolutionary ancestors: that there has been in the average American farm home, no substantial improvement of conveniences in the past 50 years.”<sup>280</sup> To combat this notion, as one woman in Wisconsin stated, “you may be sure that the farm woman will fall in line with every improvement and wave of progress that is made.” Similarly, many of the farm women used Sawtelle’s interview as a chance to document a “march of progress” in rural America.<sup>281</sup> One “Iowa farmer’s wife wrote, “Slowly and surely, electricity

---

<sup>279</sup> Isenberg, *White Trash*, 216-217. Isenberg also makes the point that Wallace argued that children born on farms produced “the life-stream of the nation” to combat eugenic notions at the time regarding the rural poor during the Great Depression, particularly in the South, as genetically inferior. Isenberg, however, sees Wallace’s comments as revealing a belief that the strength of a nation depended on demographic growth rather than as an example of a rural modern identity.

<sup>280</sup> Sawtelle, “The Advantages of Farm Life,” 1, 8-9.

<sup>281</sup> *Ibid*, 4, 8-9.

and gasoline are finding their way into the farm home.... Naturally, if the outbuildings are modernized, it enables the farmer to work faster and realize more capital with which to make further improvements. There's truth in the old saying: 'A barn can build a house sooner than a house can build a barn.'"<sup>282</sup>

Many women noted technological improvements for the specific purpose of demonstrating that farmers had modernized just as much or more than their urban cousins. One "Minnesota farm woman" stated, "Country roads are being rapidly improved-in proportion to the population, much more rapidly than city streets. Almost every farmer has his car; often his son has one too, and it is but a matter of minutes to drive into town for a new plow point or a new dress pattern." Another farm woman in North Dakota similarly noted, "I wonder whether a farm woman who can drive a car over a smooth road, who is but three quarters of a mile from good neighbors, and only five miles from a thoroughly equipped trading town, is any more isolated, or completely hidden away, or forgotten by the world, than many a city woman?" A "Wisconsin farm woman" saw telephones as a means of combating urban notions of rural isolation, "There is nothing in the city to compare with the spirit of comraderie [*sic*] that exists in the rural districts among folks who share a party line telephone..."<sup>283</sup>

Other women in the report noted "great improvements that have come about in her lifetime" by listing artifacts they owned in great detail and contrasting them with objects possessed by their mothers. These women performed a modern identity for urban observers by creating a kind of inventory of progress. The women sought to present to urban observers a

---

<sup>282</sup> Ibid., 5.

<sup>283</sup> Ibid, 14-15, 17.

“new farm house” that “does not differ materially from the city home in its opportunities for conveniences.” Just because a house stands on a farm “does not mean that it must be merely a crude headquarters for work, completely pervaded by an air of grim business,” the report noted.<sup>284</sup> One woman on a farm in Ohio’s Miami Valley described her parents as having a 40-acre tract of land. Her mother “had a little 4-hole wood stove, and iron kettle, 2 iron pots, 2 iron skillets, 2 iron griddles, and enameled lined iron kettle and a granite 6-quart preserving kettle, the prize of the neighborhood in canning time.” To demonstrate rural progress, the Ohio farm woman noted,

Now...we have over a hundred acres. I have gas lights in every room, a 3-hole hot plate for hot summer cooking and an extra large coal range, a washing machine that can be run sitting or standing or by gasoline engine, if I ever am lucky enough to possess one. I can all my vegetables by “cold pack” in a steam cooker. I have all the pans and kettles I can use in aluminum and granite, and I haven’t a heavy iron pot in the house. I have a big roomy kitchen with large cupboard cabinet, chest of drawers for towels, 2 large roomy work tables and 2 stoves in it.<sup>285</sup>

Similarly, another woman in Missouri wanted Sawtelle to know that she had a gasoline engine to run her water pump and washing machine and that her and her husband would soon obtain a car.<sup>286</sup>

---

<sup>284</sup> Ibid., 24.

<sup>285</sup> Ibid., 10.

<sup>286</sup> Ibid., 11-12.

Other women interviewed by Sawtelle sought to reframe their technology use within a modern rural discourse as a way to resist efforts by the popular press to evaluate them based on urban conceptions of modernity. One Iowa farm woman, for example, boasted,

My washing machine has been run with an engine for six years and now I use electricity. I also have a mangle, that is run by electricity that I iron all my clothes with. We farm women never have to watch a meter as we have our own electric plants. Within three miles of my home there are only three out of 14 farmers that haven't electric plants of their own. Eleven of us farm women have the use of electricity and we don't have someone always sending us a light bill either. There are many things I haven't got, such as an electric vacuum cleaner, but I intend to have one before long to use in place of the hand one I have had for 10 years, and yes, I am going to have a grill to cook my light meals on, as well as other things as soon as I can get them. My sewing machine is run by an electric motor and while I am busy sewing I have the electric fan to keep me cool.<sup>287</sup>

The Iowa farm woman seems to view the lack of electricity from a grid, a condition seen by urban dwellers as a sign of backwardness, as a sense of pride. The fact that she derives her electricity from her own electric plant rather than through a wired meter enhances her identity as an independent Jeffersonian. She sees her electric plant as a subtle act of protest against urban forms of modernization because she does not receive her electricity from an urbanized distant provider, but produces it herself on her farm. As a result, she turns urban scorn towards rural

---

<sup>287</sup> Ibid., 10.

people too isolated to connect to a grid into a positive sign of self-reliance. By turning a negative into a positive, the Iowa farm woman challenges not only rube stereotypes but urban modernity itself. She seeks to reframe modernity into a rural image that contains an element of pre-existing Jeffersonian and German agrarianism: independence. This attitude towards personal electric power plants only makes sense if one blends modernity with rural Jeffersonian or German agrarian identities.

The technologies cited by women in the report fit into a broader rural project of farmers of both sexes constructing a modern self to show, as one “Indiana farm woman “ stated, that rural people “are not behind the times, by any means.“ The Indiana women noted that her town had “a fine consolidated school building, modern throughout.” A “great many of the people in our community,” she noted, “are college-bred men and women and even those who are not, nearly all plan to send their children to college.“ Similarly, another woman in Indiana, describing herself as “Mrs. Stratton-Porter” presented a sophisticated lifestyle for an urban audience including operating a large flower conservatory. She also claimed to have “mastered photography” and she declared, “I have written ten books.”<sup>288</sup> Surely, no city dweller could classify Ms. Stratton-Porter as a rube.

Further, Sawtelle saw farm journals and other rural publications as instrumental in presenting the rural capitalistic modern rural identity to misinformed urban dwellers. “There is every reason to believe that the courageous spirit with which American farm women are now attacking their problem of social organization will soon be widely reflected in the press,” Sawtelle wrote. She continued, “Presently we shall have appearing in our magazines and

---

<sup>288</sup> Ibid., 19, 28.

newspapers strong truthful pictures of farm life. Already occasional glimpses into farm life given in current periodicals show us that we have in the making a new rural literature.”<sup>289</sup>

This placement of technology use within the context of constructing a rural modern identity explains why women interviewed by Sawtelle did not speak of technology in economic terms. When the women employed financial justifications for adopting technology, they did so only through vague folksy rhetoric such as “A barn can build a house sooner than a house can build a barn.”<sup>290</sup> In other words, the “partners” in the farming enterprise did not conduct a rational economic analysis of each artifact or balance its functions with its costs before making a purchase. Rather, “When the farm women has fully determined for herself that her permanent home is to be upon the farm, she sets about getting all the indoor conveniences as rapidly as practicable,” Sawtelle wrote, including “The furnace, the bathroom, electricity, hardwood floors, and other pleasant features.”<sup>291</sup> While these items may have made life on the farm more “pleasant,” farm wives and husbands ultimately adopted them mainly to convince urban dwellers, themselves, and their neighbors that they were modern capitalistic agrarians rather than backwards rubes. In fact, historian Ronald Kline has shown that studies by home economists as early as the mid-1920s revealed that technologies in the home often did not save rural people time, what historian Ruth Swartz Cohen would later call “the irony of laborsaving household technology.”<sup>292</sup> Rural sociologists John Kolb and Edmund S. de Brunner in a 1933 report even

---

<sup>289</sup> Ibid., 21.

<sup>290</sup> Ibid., 5.

<sup>291</sup> Ibid., 25.

<sup>292</sup> Ronald R. Kline, “Ideology and Social Surveys: Reinterpreting the Effect of ‘Laborsaving’ Technology on American Farm Women,” 355-385.



cited a Wisconsin study that found farmers “with tractors work longer days on the average than farmers without tractors.”<sup>293</sup> In other words, the obvious conveniences of electric lighting or tractors cannot fully explain why farmers used electricity or mechanized equipment when they did, nor can it account for how they used these devices. Only an understanding of how urban views of farmers offended rural people, who thought of themselves as moral Jeffersonian or German agrarians, can explain why farmers used technology the way they did in the 1920s. As I will argue throughout this book, resentment and identity, not efficiency or even profit, often drives rural technology use. Farmers, like all people, use technology as a performance.

A second group of urban progressive reformers led by experimental agriculturalist Seaman Knapp began in 1902 promoting agricultural extension services, whereby county agents would demonstrate innovative farming methods. The extension system gained federal support with the passage of the Smith-Lever Act in 1914, which created bureaus organized by state land-grant agricultural and mechanical colleges. While the extension system became popular in the rural South, where farmers saw it as a way to end their dependence on cotton, it met with resistance in the Midwest because many farmers saw the extension agents as further evidence of unnecessary meddling by urban reformers. Agents also alienated women by focusing on domestic skills such as cooking even though for many Midwest farm families, women participated in farm production (as discussed in more detail in Chapter 8).<sup>294</sup> As with negative reactions towards the Country Life Commission Report, this inability of some Midwest farmers

---

<sup>293</sup> John H. Kolb and Edmund S. de Brunner, *Rural Social Trends* (New York, 1933), 65-66, quoted in Kline, “Ideology and Social Surveys: Reinterpreting the Effect of ‘Labsaving’ Technology on American Farm Women,” 379.

<sup>294</sup> Danbom, *Born in the Country: A History of Rural America*, 174-175.

to embrace the extension program served as further evidence of farmer's anti-modern Jeffersonian yeomanism from the point of view of urban dwellers. Many farmers even resisted outside efforts to reform rural education, a stance that must have seemed rooted in backwardness from the perspective of urban reformers. In a 1928 *Farm Journal* cartoon, with the heading "Still After 'Em" a farmer sits sleeping under an apple tree guarding it with a shotgun. Besides the tree, an "Educational Crank" tries to steal an apple from the tree labeled "Rural Schools" with a hook. The "Crank" wears a suit and top hat to signify his urban origin while a tag labeled "Prussianized Education" hangs from the hook to associate him with Germans, the groups many Americans saw as the most dangerous category of outsiders in the interwar era. In fact, the term "Prussianized education" originated shortly before the cartoon with the writings of nativist Gustavus Ohlinger and famous Western novelist Owen Wister from 1916 to 1919 as part of a broader "superpatriotism" campaign following the declaration of war with Germany on April 2, 1917.<sup>295</sup> This patriotic fervor featured a propaganda crusade against all aspects of German culture including in the realm of education. The historian Carl Wittke, for example, described the superpatriotism resulting from World War I as "a violent, hysterical, concerted movement to eradicate everything German from American civilization."<sup>296</sup> Ohlinger and Wister joined prominent educators such as Mary C.C. Bradford, president of the National Education Association, and Thomas H. Briggs, notable education professor at Columbia University, in

---

<sup>295</sup> Gustavus Ohlinger, *The German Conspiracy in American Education* (New York: George H. Doran Co., 1919), 11; Owen Wister, "Forward," in *Their True Faith and Allegiance*, ed. Gustavus Ohlinger (New York: The Macmillan Co., 1917), viii-x, xii.

<sup>296</sup> Carl Wittke, *German-Americans and the World War* (Columbus, OH: The Ohio State Archaeological and Historical Society, 1936), 163.

promoting fear that German-born professors and immigrants forming organizations such as the German-American Alliance sought to promote the political aspirations of imperial Germany. To prevent the spread of such “Prussian” influence, these nativists and educators sought to eradicate German-language education and German textbooks. Further, these “superpatriots” viewed German schools as making Kaiser Wilhelm II’s aggression possible by inculcating students in Germany with militarism and the “cruel philosophy” of Friedrich Nietzsche. Therefore, Ohlinger and his supporters created paranoia that this German style of education would spread into the U.S. through immigration.<sup>297</sup> As education scholar Paul J. Ramey notes, the fear of “Prussianized education” caused an especially high level of ethnic tension in the Midwest where German immigrant populations presented a sizeable group that influenced both parochial and public school curriculum.<sup>298</sup>

On the other side of the tree in the 1928 *Farm Journal* cartoon, a man in an urban suit labeled “Paid Uplifter” tries to steal an apple named “Farm Children” with a hook with a flag stating “Child Labor Amendment.” Much like the “Educational Crank” who the drawing regards as immoral because of his urbaness and his foreign or outsider status, the “Paid Uplifter” lacks

---

<sup>297</sup> Paul J. Ramey, “The War against German-American Culture: The Removal of German-Language Instruction from the Indianapolis Schools, 1917-1919,” *Indiana Magazine of History* 98, no. 4 (2002): 285-303.

<sup>298</sup> Ramey concentrates on ethnic tensions over German-influenced education in Indiana, and notes the proliferation of German-language instruction in schools in Ohio and Kansas prior to World War I. Ramey also discusses efforts to curb or ban German-language education during or immediately after World War I in Indiana, Minnesota, Nebraska, Illinois, and South Dakota, among other states. *Ibid.*

morality because unlike farmers, he produces nothing but, rather, is paid simply to tell hard-working Americans what to do. The cartoon urges farmers to stay vigilant in protecting farm children and rural culture against these urban threats by stating “If they were just sure the boy with the gun would not wake up, they’d have those apples in a minute.” While the cartoon advocates the rural point of view regarding urban reform efforts, an outsider could easily see it as evidence of backwards farmers stubbornly resisting needed social and economic change.<sup>299</sup> As Randall Patnode describes in “‘What These People Need is Radio:’ New Technology, the Press, and Otherness in 1920s America,” these negative conceptions of “the farmer as an anti-modern ‘other’” had become common among urban denizens by the 1920s because radio had accelerated a cultural practice of legitimizing their urban way of life.<sup>300</sup> Patnode argues that the periodical press in the 1920s, partnered with radio, adopted this discourse of otherness to exaggerate anti-modern shortcomings of farm life to promote radio in rural areas. While Patnode ignores evidence that farmers themselves helped to develop a distinctly rural modernity, as I argue throughout this book, he does link the use of radio with a discourse identity bundle of urban industrialism that painted farmers as backwards and requiring modernization in the urban mold. By portraying farmers as “lonely, desperate, and victims of geography,” radio promoters could sell radio as not only a relief from boredom but as a modernizing force bringing music, culture, and sophistication from the city to redeem the backward farm.<sup>301</sup> This advertising, therefore, perpetuated the myth of the farmer as an anti-modern Jeffersonian in need of urbanizing. Radio

---

<sup>299</sup> “How it Looks to the Editor,” *Farm Journal* 52, no. 9 (September 1928): 8.

<sup>300</sup> Patnode, “‘What These People Need is Radio:’ New Technology, the Press, and Otherness in 1920s America,” 285.

<sup>301</sup> *Ibid.*, 288.

marketing also satisfied the longing of urbanites, many of whom had recently left the farm, that they led more modern and sophisticated lives. Patnode explains:

As many historians have noted, the move to the cities was tinged with anxiety, regret, and guilt over the passing of the family farm and the traditions that went with it. In focusing on radio's promise to redeem the farm, the popular press acknowledged the degree of American ambivalence about the trajectory of modern advances and the loss of comforting traditions.<sup>302</sup>

### **Urban Industrialism**

The rube stereotypes that viewed farmers as a social problem stemming from their goals, supposedly, to resist modernity formed just one feature of a more comprehensive bundle of discourses and identities, which I call urban industrialism. I argue in this book that many farmers in the Corn Belt did not oppose modernity per se, only urban industrialism proffering a specific urban version of modernity. Additionally, I contend that this urban industrialism as it existed within the social milieu of 1920s America actually motivated the formation of a competing rural discourse identity bundle of rural capitalistic modernity. Thus, I urge the reader to view the history of rural resentment of urban America, including the rural urban conflict of the 1920s, as not just a struggle over competing tangible interests such as economic power. Rather, the contest between rural and urban America results from a clash of two discourse identity bundles with opposing visions of what it means to be "modern." Technology plays a central role in this conflict because users reinforce their competing identities and send signals to the other

---

<sup>302</sup> Ibid., 289.

side through performative use of material objects. People use technology both to realize the type of person they think they should be and to perform this identity for an outside “other” regarded as less moral.

Fitzgerald discussed elements of what I view as a discourse identity bundle of “urban industrialism” extensively in her work. The discourse identity bundle of urban industrialism promoted a view that the farm should resemble a factory characterized by centralized management by the government, heavy mechanization, and a lack of control over work processes on the part of the farmer himself. Urban industrialism views the farmer as simply an uneducated input in a large, well-managed machine and technology as scientific reductionism and order. As discussed earlier, urban reformers from academia, business, and government championed this industrialization and sought to impose it on farmers viewed as backwards and anti-modern others. In “Blinded by Technology: American Agriculture in the Soviet Union, 1928-1932,” Fitzgerald also shows how American agricultural economists, led by M.L. Wilson, attempted to implement this urbanized model of industrialized wheat production among collectivized Soviet peasants in the 1920s and 1930s. While Fitzgerald correctly attributes Wilson’s failure to a misguided scientific reductionism that viewed wheat production as a purely technical problem while ignoring social and cultural contexts, Fitzgerald again treats industrialization as equivalent to modernization.

In addition, Fitzgerald fails to take into account the importance of ideology and self-identity as important sub-categories of culture that influences the adoption and use of technology. This industrialization never actually occurred in American agriculture, even though Wilson and others attempted to implement it in rural Montana, because it clashed with other American cultural values such as individual ownership of property, competition, individualized

incentive, and the value of the nuclear family. Even in large chicken farms or hog lots that have enrolled animals in large mechanized production processes that resemble a factory, the farmer does not see himself as relinquishing control and ownership to the same extent as urban factory laborers. Again, my methodology and theoretical framework commits me to view the meaning of agricultural technologies through the eyes of the farmers using the artifacts, rather than from the perspective of the outside observer. David Nye, in *Electrifying America* and Ruth Schwartz Cowan, in *More Work for Mother*, illustrated how reformers' ideas that conflicted with these American cultural values in the early and mid-twentieth century, such as the use of electric appliances in communal kitchens, failed as well. Americans rejected such communal uses of electricity, even though they often promised greater efficiency and economic benefit, because they clashed with existing values of nuclear families. Middle class American women, Cowan argues, simply did not want to restructure their labor as providers of meals to nuclear families to culinary workers for many people eating communally even though the former created more work, and cost, for mother.<sup>303</sup> As Nye writes, "American families rejected many economies of scale that electrification made possible.... Instead of moving into well-appointed apartment houses...they chose to live in labor-intensive single-family dwellings.... Americans had long expressed a penchant for individual homes, preferably in pastoral locations outside the city."<sup>304</sup> In other words, technological use does not follow a predictable or objective "rational" economic

---

<sup>303</sup> Cowan, *More Work for Mother: The Ironies of Household Technology from the Open Hearth to the Microwave*, 111-114, 146-147; Nye, *Electrifying America: Social Meaning of a New Technology*, 248-249.

<sup>304</sup> Nye, *Electrifying America: Social Meaning of a New Technology*, 249.

model that maximizes its “efficiency” or economic potential, but rather becomes shaped by human values and identities, even for those users claiming rationality.

Similarly, a more careful reading of the discourse of farmers in the Corn Belt early in the twentieth century reveals that they sought to modernize, but they rejected visions from “others” in academia, business, or government to literally “make every farm a factory.” Rural objections to schemes implementing urban industrialism had little to do with economics or even articulated evaluations of production processes. For example, one model of urban industrialism in the 1920s appeared in the form of Hawthorn Farm, a 4200-acre estate owned by the electricity mogul Samuel Insull, on which 35 men operated seventeen tractors and 24 horses. Insull bought 24 separate family farms over a seventeen- year period and combined them into one huge operation. The agricultural engineer E.R. Wiggins celebrated Hawthorn Farm at the annual meeting of the Society for Agricultural Engineers in Lincoln, Nebraska on June 18, 1924. In an article published in *Better Farming*, Wiggins described Insull’s creation as the wave of the future:

[T]here is no farm that could be selected to show better the saving in operating expenses brought about by mechanical power and machinery. It is so organized as to bring man labor to a minimum, and have the work done in its proper season. That the plan is right is shown by the fact that since 1917, the year the largest number of men were employed, the farm has been greatly increased in size, yet the number of men has not increased. The efficient application of labor saving machinery is the answer.



Further, Hawthorn Farm “solved many agricultural engineering problems” such as arranging all fields at more than 100 acres with as few fences as possible “to make straight lines of field sides.”

So given the efficiency and innovations from Wiggins’ perspective as an agricultural engineer, why did Hawthorn Farm *not* become the model of agriculture in the Corn Belt? A traditional view that technology and methods appear in farming for primarily functional or economic reasons, as Wiggins presumes, would suggest that the entire Corn Belt should have become Hawthorn Farm in the coming years. After all, modern farming, according to Wiggins and the traditional view of agriculture, is simply the rational application of labor and capital to increase efficiency and profit and Hawthorn Farms carried this task out with greater effect than any other model. Wiggins’ description of the relationship between labor and technology on Hawthorn Farm provides the answer of why the Hawthorn Farm blueprint failed to spread throughout the Corn Belt. Wiggins writes:

In the general labor and horses are centralized in one place, and the mechanical power in another place. There are two main boarding houses, and it has been found that it pays to keep the men concentrated. “It’s best” said Mr. J. C. Reuse, Manager, “to keep the gangs of workers together, as it saves time. It is cheaper to haul the men around in a bus than to have them scattered all over the place.”

Thus, none of the 35 men owned any of the land or equipment or farmed in an environment with the family at the center. Rather, they worked under the direction of a manager and lived in communal boarding houses rather than the family farm home. The manager conceived of the

workers as “gangs” rather than individuals because “the idea of concentration of effort prevails. As many workers as possible work on one job at the same time.” The workers labored under a strict hierarchy of managers. A head service man and his assistant under the manager had “entire charge of all tractors and equipment” and a field boss directed all use of these technologies. In fact, this efficient centralized management, according to manager Reus, allowed for *less* use of modern equipment. Wiggins noted that the workers received high wages to ensure the most efficient operation of machinery.<sup>305</sup> Given the complaints of farmers in farm journals of a lack of a regular paycheck and work that often led to no profit, one would expect that any rational economic actor would choose the high wages on farms like the Hawthorn Farm over the unstable earnings on a family farm. Further, one would expect for farmers to enthusiastically sign up for such work as laborers would be paid regardless of the well-known risks inherent to agriculture such as poor weather, price fluctuations, and crop diseases, particularly in an era before crop insurance. Unlike many farmers in the Corn Belt in the 1920s for whom electricity represented an expense, the workers on Hawthorn farm even enjoyed electric lighting as part of their monthly salaries.<sup>306</sup>

Similarly, Scott Rowley, a corporate law professor, made the argument in favor of reimagining farms as carbon copies of urban factories in a 1928 *Wallaces' Farmer* article entitled

---

<sup>305</sup> E.R. Wiggins, “Growing 1000 Acres of Corn on Hawthorn Farm,” *Better Farming* 47, no. 7 (July 1924): 3-4, 7.

<sup>306</sup> Wiggins lists \$2.00 per month in the itemization of workers’ monthly salaries on Hawthorn Farm. It is not clear from the article whether Insull provided electricity by running power lines to the farm or through one of the many localized “power stations” produced by companies such as Delco Light or Colt Light. *Ibid.*, 3.

“Do We Need Corporation Farming? An Argument for Putting Corporate Methods into Agricultural Production.” Rowley begins his essay with language subtly suggesting that he does not identify with the previous dominant discourse of Jeffersonian agrarianism that moralizes the yeoman farmer by addressing only “those engaged in farm management, and also of landlords who have been unable to secure satisfactory tenants.” Rowley then suggests a plan to implement “modern business practices” by organizing farmers in the same geographical vicinity to form a large corporation by which:

Each owner and stockholder might turn over personal property on his farm - horses, stock, equipment, crops - to the corporation, in payment for his shares of stock. A competent manager, preferably a graduate of an agricultural college, could be hired at a fair salary, and a certain percentage of the corporation profits, perhaps with an opportunity to purchase a certain amount of stock in the corporation. Each of the land owners could rent his farm to the operating corporation, for a cash rental and could also, should he so desire, hire his services to the corporation, at the prevailing scale of wages for farm-hands. Each of such owners could retain his farm residence for his own use, and his services could, primarily, be utilized on his own farm. In case he might not live on the farm, the farm residence could be occupied by one of the employes [*sic*]. The idea would be that at least one man should, primarily, live on and work one farm, but that he should be subject to the direction of the manager, who might send him, temporarily, to work elsewhere.

Given the economic advantages that this arrangement would provide in the form of economies of scale, greater specialization of labor, and regular wages, Rowley could not understand why any farmer would resist his plan. After all, manufacturers often sold their plants or combined with parent companies in the 1920s to gain economic advantages, so why would owners of capital and property in the country not do the same? As with Wiggins' evaluation of the benefits of Hawthorn Farm, Rowley expected that farmers would surely welcome this more rational, efficient, and modern corporate reorganization. A response essay by an unnamed farmer and journal editor entitled "Are We Ready for This?," however, reflects a long and widespread resistance to plans like Rowley's scheme and Hawthorn Farm. The rebuttal cynically begins "Corporation farming has had a lot of advertising lately. Here is some more," as if to say "here we go again!" The farmer, in claiming to speak for the majority of farmers then stated, "We doubt if corporation farming can or should succeed. It has yet to prove its efficiency. With few exceptions, corporation farms have lost money." More importantly, the farmer argued, "Even if it were efficient, corporation farming would still be socially undesirable. We need the family farm; we need the social qualities it generates. Love of the land is something too precious in the life of a farmer, and in the long life of a nation, to be traded for stock in a corporation-farm."<sup>307</sup>

In other words, the reason models like Hawthorn Farms or Rowley's corporation farming failed to become the model of agriculture in the coming years lies in the fact that despite the potential economic advantages of reorganizing every farm as a literal factory, such urban-derived creations threatened the farmer's identity as an independent, family-oriented, producer in control

---

<sup>307</sup> Scott Rowley, "Do We Need Corporation Farming? An Argument for Putting Corporate Methods into Agricultural Production," *Wallaces' Farmer* 53, no. 10 (March 9, 1928): 376 (6); "Are we Ready for This?," *Wallaces' Farmer* 53, no. 10 (March 9, 1928): 376 (6).

of work and material objects. Wiggins' training as an agricultural engineer and Rawley's education as a lawyer, which taught them to view the world in terms of rational economic processes, blinded them to the fact that farmers imbed their identities and ideas about morality within the equipment they use and the fields they plow. While promising to make the farmer financially richer, schemes of urban industrialism also sought to take away from the farmer and the farmwife the unspoken things that were ultimately more important to them: the farm home, the family, independence, and the Jeffersonian and German view of themselves as moral agrarians.

Throughout this book, the reader will discover that rural Americans in the Corn Belt would see any agricultural arrangement that took authority over production processes away from the farmer or farmwife and removed the farm family from the center of life as a threat to rural identities from an outside "other." This external threat to rural identity took different forms such as the French manor, the Soviet *agrorod*, or the model of the industrial farm copying urban factories in the 1920s. The Soviet *agrorods* were the state-operated agrarian cities established by Soviet premier Nikita Khrushchev in 1949.<sup>308</sup> The French (and Western European) manorial system, beginning in the Middle Ages, established a series of private estates where agrarian peasants worked as tenants for a landlord, usually in exchange for protection. One could consider these laborers as "serfs" because they were born bound by a contract that only the

---

<sup>308</sup> "Biographies: Nikita Khrushchev and Frol Kozlov," *Communist Affairs* 1, no. 1 (1962): 13-17. See page 219 below for a further discussion of the *agrorod* and how it related to rural capitalistic modernity among American farmers.

landlord could negate.<sup>309</sup> Midwest farmers detested both the idea of the *agrorod* and the European manor because in neither did the agrarian own the land he or she worked nor did the farmer control production processes.<sup>310</sup>

Thus, from the 1920s onward, farmers did not object to modernity per se but to conceptions or forms of modernity that threatened agrarian identities developed by Jeffersonian and German agrarianism with deeply ingrained rural notions of morality. Farmers in the 1920s looked at their inferior position within the rural-urban conflict and realized, even without articulating it, that they needed to form their own version of modernity and use the latest

---

<sup>309</sup> Douglass C. North and Robert Paul Thomas, “The Rise and Fall of the Manorial System: A Theoretical Model,” *The Journal of Economic History* 31, no. 4 (December 1971): 777-803; Peter Sarris, “The Origins of the Manorial Economy: New Insights from Late Antiquity,” *The English Historical Review* 119, no. 481 (April 2004): pp. 279-311; Andrew Jones, “The Rise and Fall of the Manorial System: A Critical Comment,” *The Journal of Economic History* 32 no. 4 (December 1972): 938-944; Martin Dribe, Mats Olsson, and Patrick Svensson, “Was the Manorial System an Efficient Insurance Institution? Economic Stress and Demographic Response in Sweden, 1749–1859,” *European Review of Economic History*, 16 (2012): 292–310.

<sup>310</sup> For the rural objection to the French manor model see Stein, “Building a Rural Civilization: It Must be Based Upon the Highest American Ideals, Expressed in Terms of Christianity, Recognizing the Farmer’s Right to Economic Welfare,” 4, 16, 19. For objections to the Soviet model see Joseph Alsop, “Khrushchev Gambles on Farms,” *Cedar Rapids Gazette*, January 28, 1958, Editorials. For objections to the urban industrial or factory model see *Wallaces’ Farmer’s* response, entitled, “Are we Ready for This?” to Scott Rowley, “Do We Need Corporation Farming? An Argument for Putting Corporate Methods into Agricultural Production,” 376 (6).

technologies, or men like Insull and Rowley would end up doing it for them. From the view of people in the Corn Belt in the 1920s, the Jeffersonian yeoman must not be reduced to the status of the “mindless” urban factory worker. Nor could the old Jeffersonian yeoman, with his small dirt farm, his horse-drawn plow, his one-room schoolhouse, and his wife raising a few chickens win this conflict between urban and rural America. The yeoman farmer and farmwife needed something else very quickly while not losing their moral selves. They needed an updated yeomanry. They needed technology, and they needed it on their own terms.

### **The Development of a Competing Rural Capitalistic Modernity<sup>311</sup>**

I argue that a competing ideology influencing the farmer’s relationship with agricultural technology, which I have named *rural capitalistic modernity*, already existed in the 1920s and gained strength in the 1950s and the 1960s as a result of Cold War ideologies (see Chapter 5). This sense of modernity viewed mechanization as a symbol of American cultural values and discounted the notion of farms as industrialized and centrally managed businesses. It encompassed a culture in which farmers’ identities as modern, progressive, independent capitalists (as opposed to urbanized industrialists) became embedded in the technologies they employed. My argument contrasts with traditional notions, exemplified by the views of the Country Life Movement, that farmers only have agency in determining their lifestyles, work processes, and uses of technology to the extent that urban experts and activists have shown them

---

<sup>311</sup> Part of this section will be published in the upcoming article, Brinkman and Hirsh, “Welcoming Wind Turbines and the PIMBY (‘Please in my backyard’) Phenomenon: The Culture of the Machine in the Rural American Midwest,” (forthcoming 2017). Paper accepted for publication by *Technology and Culture* on September 25, 2015.

the efficient or best way of doing things. The narrative of farms becoming factories tends to show the farmer as analogous to factory workers who have no independent control over work processes, mechanization, or business practices. Nor do farmers have much imputed skill, since factory workers usually are viewed as simply being cogs in a well-designed machine. In other words, the traditional historical narrative strips farmers of agency even though on the farm, the farmer works as the laborer and the manager at the same time. More importantly, the traditional narrative ignores the importance of technology as a means of performing identity.

Quotes from farmers, farm journal advertisements, photos of farmers, and even the actions taken by farmers in the 1920s reveal that rural capitalistic modernity already existed in the 1920s. Rather than centrally managed, collectivized, industrialization, this rural modern discourse viewed mechanization as the personification of values of individual ownership of property, competition, individualized incentive, and the value of the nuclear family also important among farmers under traditional Jeffersonian and German agrarianism. From 1873 to 1916, the National Grange, the main organization of farmers at that time, organized picnics promoting a form of rural modernity by displaying household appliances, automobiles, and farm machinery at Grange gatherings as early as 1880. These Grange events also displayed how farmers could employ electricity around their farms.<sup>312</sup> Unlike urban industrialization, therefore, this modernity prevailed because it featured the farmer as the technological user and linked modern technologies with the nuclear family. As a result, these Grange displays fit into previously existing values comprising traditional Jeffersonian and German agrarianism.

---

<sup>312</sup> Kline, *Consumers in the Country: Technology and Social Change in Rural America*, 11.



Advertisements in the *Farm Journal* in the 1920s for items used in work processes show that farmers had already adopted their own version of modernity based on faith in capitalism and progress through use of technology, yet retaining a rural flavor that preserved the nuclear family and kept the farmer in control of work processes. For example, an ad for mechanical De Laval cream separators in September of 1928 read “Milestones of Progress.” The ad not only showed the development of separator technology, but the machines march from the background in the nineteenth century to the present foreground and, presumably, into the future as newer and better designs.<sup>313</sup> Another De Laval advertisement in 1925 described their centrifugal cream separators as “De Laval's part in modernizing the American Farm.”<sup>314</sup> Similarly, an ad for Dodge automobiles in March of 1928 pictured a farmer pulling up to a farm dressed in such a way as to display the latest in sophistication. In the background, a poor old-fashioned farmer sits dejected on a horse, an old technology, watching his more modern neighbor drive by. The ad reads “The Finest Four Ever Built!”<sup>315</sup> The ad clearly plays on a modern sensibility and rejects the farmer’s identity as an anti-modern agrarian.

Ads for tractors similarly drew on modern sensibilities and reflected the latest capitalistic ideologies. These ads suggest that farmers had already embraced growth, the association of time with money, and capitalistic competition with their neighbors through the adoption of the latest technologies. For example, an ad for McCormick-Deering the Farmall tractors in the February, 1928 issue of the *Farm Journal* read “Prosperity is rare whenever time is being wasted on a large scale. Time is the most valuable thing we have. It is the very essence of life itself. That is

---

<sup>313</sup> “De Laval advertisement,” *Farm Journal* 52, no. 9 (September 1928): 32.

<sup>314</sup> “De Laval advertisement,” *The Alabama Farmer Newsletter* 6, no. 9 (December 1925): 32.

<sup>315</sup> “Dodge advertisement,” *Farm Journal* 52, no. 3 (March 1928): 29.

where the great value of *machines* and *power* and *planning* comes in. These factors help a man to *multiply his work, his production, and his profit.*” The ad concludes “Time is always money on a well-managed farm.”<sup>316</sup> Another McCormick-Deering ad in September of 1928 read, “Remember that in this tractor you will own the *modern-4-cylinder power plant* for which McCormick-Deering is famous... It is ready for your peak loads, for new machines you will buy in the future, and for greater acreage you may want to farm.”<sup>317</sup> Another ad in December 1928 stated in large print “Don’t Underpower!” and went on to state “Invest in power *ample* for your future needs.”<sup>318</sup>

These ads for farm equipment reflect that farmers saw themselves as competitive capitalists whose modernity depended on progress through greater efficiency, growth, and use of the newest technologies offering more power and mechanization as early as the 1920s. An ad for telephone service in the January 1928 edition of the *Farm Journal* contained discourse of this rural capitalistic modernity. The ad tells the story of farmers who used phones to sell to far off agricultural markets early in the morning and deliver the product “at night when my neighbors are sleeping.” The ad goes on to read “The work of a whole year may hinge on the result of a few

---

<sup>316</sup> “McCormick-Deering advertisement,” *Farm Journal* 52, no. 2 (February 1928): 21.

<sup>317</sup> “McCormick-Deering advertisement,” *Farm Journal* 52, no. 9 (September 1928): 35.

<sup>318</sup> “McCormick-Deering advertisement,” *Farm Journal* 52, no. 12 (December 1928): page unknown.

days. It's easy to lose \$10 a steer by selling at the wrong time... The modern farm home has a telephone."<sup>319</sup>

As a McCormick-Deering advertisement from 1928 shows, these marketing messages rejected the kind of industrialized modernity advocated by Rowley and Hawthorn Farm by retaining the nuclear family with the farmer himself in control of work processes even while constructing a new rural identity around modernity and mechanization. The ad shows an idealized winter scene in which a father and a son haul a Christmas tree with other workers efficiently using the tractor in the background to do winter work with a prosperous family farm in the background. The ad reads:

The American farmer is always improving things he has done. He goes on compounding farm science and knowledge, motive power and mechanical equipment, managing his farm-factory with greater ease and efficiency. The more he works with his brains, intelligently, the less he works with his hands.... He is abreast with the best of men and competes with the world.... More than ever it is a certainty that "Good Equipment Makes a Good Farmer Better."<sup>320</sup>

Ads for electricity and consumer products in the 1920s also indicate that farmers had adopted their own rural modern identity incorporating capitalism, faith in progress and science, and mechanization while rejecting the type of urbanized industrialization that saw farmers

---

<sup>319</sup> "American Telephone and Telegraph Co. advertisement," *Farm Journal*, 52, no. 1 (January 1928): 53.

<sup>320</sup> "McCormick-Deering advertisement," *Farm Journal* 52, no. 1 (January 1928): 25.

simply as factory workers. For example, the National Electric Light Association ran a series of advertisements promoting rural electrification. While the ads varied, they all presented charts and numbers to show progress with the caption “American farmers may safely depend upon the electric power companies to carry forward the electrical progress which the principle of individual initiative has made possible in the past.” The chart always accompanied a photo blending a modern farmer or a modern farm wife with the nuclear family.<sup>321</sup> The modern farmer in these ads clearly has control over work and property. In one ad published in the October 1928 issue of *Farm Journal*, a farmer stands confidently talking to a team of electricians running power lines to his large and prosperous barn and farm house as if giving them directions on how to wire his property. The drawing associated masculinity with strength, control over work, progress, technology, and the moral raising of male children. The farmer’s hay mow on the barn overflows with hay and he has the latest grain silo between the barn and the farm house. The farmer’s son of about six years old stands next to him listening to him directing the electricians. The artist placed the child prominently above the graph showing growth of electricity in rural districts as if to associate the introduction of new technology with, literally, the family’s future. Everything in the advertisement draws the eyes upward as if to subtly convey that a family “on the rise” has electricity. One of the electricians climbs an electric line and the wires seem to shoot up into the sky towards the peak of the barn. Birds and tall trees in the sky further focus

---

<sup>321</sup> “National Electric Light Association advertisement,” *Farm Journal* 52, no. 1 (January 1928): 29; “National Electric Light Association advertisement,” *Farm Journal* 52, no. 10 (October 1928): 45; “National Electric Light Association advertisement,” *Farm Journal* 52, no. 8 (August 1928): 37.

the observer's gaze upward into the future.<sup>322</sup> In another ad, a farm woman dries clothes in the kitchen of a prosperous farm home lit by electric lighting. She smiles blissfully at her daughter, who is about the same age as the son in the previous advertisement, who shows her mother one of her dolls. The scene presents a rural paradise. The woman has kept her kitchen in good order and she stands next to an open window that one can imagine admitting a gentle breeze while a farm cat in the foreground completes the idealized picture. As with the first ad, this one places the child above the same graph showing a steady growth in rural electrification. The two drawings suggest that both men and women linked new technology with control over work processes and property in a family-based production process.<sup>323</sup>

Similarly, ads for isolated generation facilities by General Motor's Delco-Light subsidiary used modern discourses praising open-mindedness while at the same time similarly emphasizing farmer's independence from the city and the benefits to the farm family. Many

---

<sup>322</sup> In analyzing these ads for electricity I am informed by cognitive linguists George Lakoff and Mark Johnson's work arguing that metaphors arising from embodied experiences construct realities and conceptual systems, particularly the idea that "more," "better," or the "future" is always described as "up" such as the phrase "things are looking up." Lakoff argues that the experience of children looking upward at their parents explains this "Up is good" metaphor. These electricity ads directing the eyes upward are consistent with this up-down metaphorical cognitive structure. George Lakoff and Mark Johnson, *Metaphors We Live By* (Chicago: University Chicago Press, 1980), 1-13.

<sup>323</sup> "National Electric Light Association advertisement," *Farm Journal* 52, no. 10 (October 1928): 45; "National Electric Light Association advertisement," *Farm Journal*, 52, no. 1 (January 1928): 29.

other advertisements associated light with prosperity, a happy home, and other symbols of modernity such as automobiles. In one advertisement, entitled “Delco Light *and* the Open Mind,” the farmer stands next to his garage door with a modern car in front of it. He turns towards a large and prosperous farm house as if talking to his wife who stands in the open door of the house. The entire farm is dark except for the farmer and his wife, both of whom are bathed in light. The farmer stands in a swath of light emitted by a flood light at the front of the garage. The wife stands in a house in which light pours out of every window and door. The ad, in using the term “open mind,” implies that light does not bring simply an economic benefit but also symbolizes that the mind of its users is also bright and forward-looking.<sup>324</sup> The Delco ads sometimes told the origin story of the generator-battery technology, in which a farmer wrote to General Motors to say that he had creatively powered his home using his Cadillac’s built-in equipment to light his house. Such stories emphasized the notion that innovation began on the farm, not in urban areas.<sup>325</sup> Another Delco ad in March of 1928 promised shorter hours for labor as well as larger profits, indicating that farmers, unlike factory workers, saw technology as giving them greater control over time as well as work processes.<sup>326</sup> Farmers themselves desired to electrify their homes and barns and many took independent action to install small electric power plants on their properties. Victor Brown, for example, a Somers, Wisconsin farmer installed a plant to light his house and all of his work buildings as early as 1924. The article reflected that Brown, “typical of many farmers,” saw electrification as one technology in a group of artifacts making his farm modern including a “two-plow tractor, self-lift plow, double disk

---

<sup>324</sup> “General Motors Delco Light advertisement,” *Farm Journal* 52, no. 10 (October 1928): 39.

<sup>325</sup> “General Motors Delco Light advertisement,” *Farm Journal* 52, no. 10 (October 1928): 39.

<sup>326</sup> “General Motors Delco Light advertisement,” *Farm Journal* 52, no. 3 (March 1928): 67.

harrow, stationary gas engine,” and many other artifacts. The author notes, “he [Brown] says he will not be completely satisfied until he had every possible necessity and convenience.”<sup>327</sup>

The tendency of scholars to attribute increased mechanization or electrification of the farm to purely economic motives ignores the fact that early in the twentieth century, it was not so clear to many farmers that new technologies actually increased profit. Because of the complexity of calculating the costs and benefits of many agricultural inputs and outputs, one could show, for example, that horses outperformed tractors in the 1920s or vice versa. Farm journals contained debates between agrarians that reveal this uncertainty. While one farmer may note the tendency of horses to break down in the heat, another may note the penchant for early tractors to malfunction frequently. One farmer may note the savings allowed by the tractor in the form of not paying a “hired man” to drive horses while another farmer may note the gasoline savings allowed by animal power.<sup>328</sup> In addition, farming with motors required an investment in time and effort to learn new mechanical skills needed to maintain them.<sup>329</sup> Indeed many of the tractors of the 1920s, such as the widely used Fordson, featured a magneto engine started with a hand crank that many found difficult to turn and often did not start the tractor at all. As a result,

---

<sup>327</sup> E.R. Wiggins, “Comfort, Convenience, and Economy with Electric Power and Light Plants: Thousands of Famers and Farmers’ Wives Point Out Many Advantages of Electricity Both in the Home and the General Farm Activities,” *Better Farming* 47, no. 5 (May 1924): 4.

<sup>328</sup> See for example two farmers debating cultivating with horses Reader, O’Brien County, Iowa, “Truck and Tractors,” *Wallaces’ Farmer* 53, no. 12 (March 23, 1928): 480 (10), *The Voice of the Farm*.

<sup>329</sup> “Motor Skill in Demand: Many Farmers Seek Instruction in Gas Engine Management,” *Better Farming* 46, no. 11 (November 1923): *All Around the Farm*, 9.

many farmers had to learn how to wire supplemental batteries into the ignition of the magneto to aid starting. On cold days, farmers even had to light a fire under the oil tank so that the crank would turn faster.<sup>330</sup> In a business in which weather demands careful timing of work processes, a non-starting magneto could pose serious threats to a farmer's livelihood.<sup>331</sup> Other mechanized farm equipment in the 1920s and 1930s brought similar technical disincentives to their adoption. For example, using the new mechanical sprayers required changing the oil every 40 to 60 days and the farmer had to flush out the tank, pump, nozzles and all connecting hoses each day during spraying. In addition, the farmer had to keep all fittings and screw joints tight throughout the engine and pump, as well as check all of the "plungers and packing to see that they are not leaking." A farmer neglecting any items in this long list of arduous maintenance tasks would result in a dysfunctional sprayer and a net loss to the already cash-strapped agrarian. Yet, farmers adopted mechanical sprayers in such large numbers that by 1930, the National Association of Farm Equipment Manufacturers received enough concerned letters from users of the fickle devices that they ran a whole series of farm journal articles about how to care better for the new technology. In other words, farmers continued to adopt mechanical sprayers because

---

<sup>330</sup> Harold F. Breimyer, *Over-Fulfilled Expectations: A Life and an Era in Rural America* (Ames, IA: Iowa State University Press, 1991), 47.

<sup>331</sup> See for example, the discussion of timing in farming in Hamilton, *Deep River: A Memoir of a Missouri Farm*, 85.



doing so made them modern, even though the new machines often performed unreliably in the field and many agrarians had little idea of how to properly maintain them.<sup>332</sup>

Similarly, when farmers praised the advantages of installing their own electric power plants on their farms, they often justified the expense for reasons that had little to do with adding articulable production value. Rural denizens of the Corn Belt, in the 1920s for example, rarely spoke of electrification in the kind of rational economic discourse proffered by University of Wisconsin agricultural engineer Floyd Waldo Duffee. In 1924, Duffee wrote into *Better Farming* urging farmers to electrify their farms because “experiments show that in the process of stabling cows, cleaning mangers, weighing, and feeding grain, hay and silage, that a half hour or 34.9 percent of the time was saved by the use of electric lights when compared with coal oil lanterns.”<sup>333</sup> In contrast, farmers themselves rarely employed such rational economic quantifications of work hours to justify their decision to electrify. Instead, they used discourse reflecting a desire to achieve a more modern lifestyle. One 1926 advertisement for the Colt Light Plant in the journal *Farmer’s Wife* declared “Colt Light has brought modern convenience to hundreds of thousands of farm women.” followed by a letter written by the farming couple “Mr. and Mrs. S.B. Rudicil” of New Trenton, Indiana. In the March 15, 1926 letter, the Rudicils describe the electric light as “It is always clear and bright, and the fixtures so beautiful that they never fail to attract attention. In our living room we have a handsome central fixture and a floor

---

<sup>332</sup> Robert A. Jones to “The Editor,” National Association of Farm Manufacturers, Farm Press Release #76, “Care Lengthens Sprayer’s Life,” January 2, 1930, Box 24, Record Group Number 503, Accession Number 79-001, Ag Engineering Records, Auburn University Archives, 5.

<sup>333</sup> F.W. Duffee, “Modern Lights Save Farmers Work Hours,” *Better Farming* 47, no. 6 (June 1924): 8.

lamp with a silk shade-in our parlor also, a nice central fixture.” Mrs. Rudicil also noted her use of the Colt iron and hot plate not because they brought economic benefits to the farm but because “They have lighted my work so much that I would be willing to pay the price of the whole plant for them if it were necessary.” The husband and wife concluded that, “We have never made any investment that has been of more benefit to the entire family. Every one of us is proud of our Colt Light Plant.”<sup>334</sup> The Rudicils, in other words, felt that the Colt Light Plant made them modern and believed the light signaled their identities to others.

When farmers did cite economic reasons for electrification, they rarely agreed on how to articulate its advantages. In a January 1922 issue of *Farmer's Wife*, Minnesota farmer Harper Christensen, for example, cited as the primary economic benefits of electricity the time he saved milking cows and the fact that light in his hog house prevented predators from killing sows.<sup>335</sup> Just two years later, F.W. Duffee would note neither of these economic benefits.<sup>336</sup> In fact, Duffee's argument in favor of rural electrification focused on avoiding the risk of fire posed by oil lanterns.<sup>337</sup> Therefore, much like with automobiles or trucks, farmers did not ultimately install costly power plants on their farms because of an agreed upon set of rational economic

---

<sup>334</sup> Mr. and Mrs. Rudicil, “Colt Light advertisement,” *Farmers' Wife* 26, no. 12 (December 1926): 611.

<sup>335</sup> Harper Christensen, “Electricity on Our Farm,” *Farmer's Wife* 33, no. 8 (January 1922): 677; although Christensen gained electricity from a power line that ran by his farm rather than through installing a power plant, I still find his discourse useful in describing the advantages of electricity from the farmer's perspective.

<sup>336</sup> Duffee, “Modern Lights Save Farmers Work Hours,” 8.

<sup>337</sup> *Ibid.*

advantages brought by electricity. Rather, people on farms who had come to think of themselves as modern became more likely to emphasize the advantages of these technologies and underplay their costs or inconveniences. The Rudicils, for instance, characterized the expense of ten cents per day to operate their Colt Power Plant as low “since we used to pay nearly as much for oil lamplight,” but they overlooked the cost of installation and maintenance.<sup>338</sup> Even Christensen, who sought to present rational reasons for farm electrification, would admit that the primary reasons for installing electric lighting on a farm did not derive from its economic advantages. “Electric lights were installed on our farm nearly a year ago,” Christensen wrote, “Now we often wonder how we managed to get along Without [*sic*] them, not alone for time and labor saving but for pleasure, convenience and cleanliness.” The fact that “We can now play horseshoe till eleven ‘oclock [*sic*] - all on account of the lights!” seemed just as important to Christensen as any rational economic saving of labor hours or input costs.<sup>339</sup>

Further, farmers encountered several new technologies early in the twentieth century and continuously had to make decisions on which ones to adopt.<sup>340</sup> Of course, the easiest choice would have been to reject all of them, particularly when faced with uncertainty about the economic viability of many new artifacts. Farmers, therefore, needed a discourse identity bundle such as rural capitalistic modernity to see their farms in a way that favored the adoption of the tractor, the power plant, and other new material objects. When one reads accounts of rural residents first encountering automobiles, for example, they cite many disadvantages of the new technology such as the danger that turning a crank shaft would recoil and break the user’s arm or

---

<sup>338</sup> Mr. and Mrs. Rudicil, “Colt Light advertisement,” 611.

<sup>339</sup> Christensen, “Electricity on Our Farm,” 677.

<sup>340</sup> “Motor Skill in Demand: Many Farmers Seek Instruction in Gas Engine Management,” 9.

the high volume of dust that became sucked inside the cab on unpaved roads. Others recall batteries constantly dying and the lack of gas stations in the country, requiring the driver to often borrow the nearest farmer's kerosene. The user could only add this borrowed kerosene after draining the remaining gas left in the gas tank. Other users recall the inability of early cars to scale even the small hills of the Corn Belt. Rural denizens early in the twentieth century nevertheless embraced automobiles, as Matt DeVries of Buffalo Center, Iowa recalls because "Cars were an exciting novelty." DeVries continues, "Dad came in and yelled 'Come on out.' There's a car coming down the road.' It was D.B. Sterling's brother driving a car with a chain drive. We all ran out and stood on the hill to watch it go by." Many people in the Corn Belt even invested in an additional expense of a car garage because nitrogen emitted by horse manure would damage the finish on cars kept in barns. Few of these accounts justify this increased cost by citing that automobiles, in fact, increased the speed of travel.<sup>341</sup> Another Buffalo Center resident, John Howe, recalling his father bringing home a phonograph on their farm expressed similar sentiments "We were so tickled, we had a phonograph! We really appreciated something like that and thought it was mysterious as heck!"<sup>342</sup>

Thus, a purely "rational" analysis of accounting cannot explain early twentieth-century modernization. In addition, the function of the device cannot fully account for its use. Rather, rural capitalistic modernity nudged the farmer on the fence about what technologies to use to the side of adopting newer artifacts. While some farmers resisted modernization, many others adopted new technology wholesale and with enthusiasm in spite of uncertainty about their economic viability. For example, notable agricultural economist Harold Breimyer gives a

---

<sup>341</sup> Wilson, *Buffalo Chips: The History of a Town*, 31-34.

<sup>342</sup> *Ibid.*, 37; it should be noted that John Howe is the author's great grandfather.

revealing description of his father's adoption of technology on their Ohio farm in 1920s (Breimyer writes in third person), "The confidence that led Harold's father Fred to seek his future, if not his fortune, in farming is explained in part by his progressiveness. Fred was sure that most farmers stayed with outmoded practices too long. He would update, modernize. He sought to learn the latest practices, including those that agricultural colleges declared to be scientifically sound..." Breimyer saw this modernity as a genetic trait that he inherited from his father remembering, "In the 1920s, the Breimyrs, father and son, were quick to adopt whatever farming practices the county agent and vocational agriculture instructor were advocating." Looking back on his childhood, Breimyer admitted he and his father "sometimes adopted new practices before it had been tested thoroughly. And he overcapitalized in operation." In other words, Breimyer and his father adopted new technologies not because of a rational and articulable economic evaluation but because they had come to think of themselves as modern and had already conceived of this trait as an in-born progressiveness. Further, Breimyer's father clearly made choices based on an unarticulated desire to perform this modern identity for observers, "Fred Breimyer was not satisfied with an inexpensive barn held together by heavy beams. He built a splendid hip-roofed barn, and he painted it white." Nor can one view Fred Breimyer's performativity as unusual among farmers. In fact, many years later Breimyer's son, who had become a respected agricultural economist, remembered his father's barn as an example of how "overcapitalization is the most nearly universal mistake that U.S. farmers are prone to make."<sup>343</sup>

An analysis of the *Farm Journal* in the 1920s also shows that rather than seeing themselves as a backwards agrarians, farmers in the Midwest already began to embrace modern

---

<sup>343</sup> Breimyer, *Over-Fulfilled Expectations: A Life and an Era in Rural America*, 38-39.

business practices and the need for higher education to learn the newest business and farming techniques while maintaining practical knowledge learned on the farm. While these farmers may have articulated a desire to make more “rational” decisions as the reason for adopting these business practices, an equally significant unstated motive was to *be* modern. Articles reflect a balance between urban academics and traditional rural knowledge that formed part of the uniquely rural discourse of modernity. One article entitled “Orderly Farm Business” reflected farmers’ efforts to learn new accounting techniques developed in agricultural schools while another article entitled “College on the Farm” discussed the value of both going to college and “learning at home” through practical experience and 4H clubs.<sup>344</sup> Further, by 1940, farmers had already begun to take photos of themselves and their families proudly posing with machines, the symbols of this independent rural modernity (Figure 4.1).



---

<sup>344</sup> George Price, “College on the Farm: 4-H Clubs Provide Opportunity to ‘Learn by Doing’ at Home,” *Farm Journal* 52, no. 4 (April 1928): 24; Walter Burr, “Orderly Farm Business,” *Farm Journal* 52, no. 1 (January 1928): 38-39.

**Figure 4.1:** “Famer Posing with Farmall F-20 Tractor with a Wind-Powered Water Pump in Background.” The farmer is my great grandfather (John L. Howe). Author’s personal records. Powersville, IA, 1940.

Farmers not only expressed rhetoric, but also pursued activities consistent with rural-capitalistic modernity starting after World War I. In the fall of 1919, farmers helped establish their own national advocacy organization, the AFBF, for the purpose of giving farmers more control in modernizing agricultural life. By 1920, the AFBF claimed to represent more than 100,000 members. Farmers flocked to the AFBF because, as one newspaper noted, “it starts with the farmer, not from any social or political standpoint, but as a producer and distributor, and the idea of production, and of increasing it by scientific methods, is carried along from the bottom to the top.”<sup>345</sup> Reflecting the perceived importance of the AFBF, one farmer stated, “[w]hile farmers might hold off from joining any of the other organizations, no up-to-date farmer could afford to keep out of this one.”<sup>346</sup> While many urban financial and commercial interests actually supported the AFBF because it offered a more conservative organization to counter more radical rural movements such as The National Farmer’s Union, many farmers joined for purposes of increasing the power of rural residents through modernization.<sup>347</sup> In addition, the

---

<sup>345</sup> “Farm Federation’s Power: Life Topsy, Bureau ‘Jes’ Grew,’ and Now Numbers 100,000 Members.” *New York Times* (July 4, 1920): 70.

<sup>346</sup> *Ibid.*

<sup>347</sup> The National Farmer’s Union was organized in 1902 as the Farmers Educational Cooperative Union of America in Point, Texas. It initially advocated “for increased co-operative rights, fair market access for farmers, direct election of senators and voting rights for women.” National Farmer’s Union, “History,” <http://nfu.org/about> (accessed 9/6/16).

AFBF and many state farm bureaus tended to frame farmers as rural capitalists in order to satisfy urban industrialist's desire to prevent a more radicalized farmer-labor alignment. Thus, farm bureaus and a discourse of rural capitalism satisfied two opposing interests at the same time. From the farmer's point of view, farm bureaus gave them a way of competing with strengthening urban interests; for urban industrialists, it offered a means of avoiding, in the words of Illinois Agricultural Association president Henry J. Scone, "any policy that will align organized farmers with the radicals of other organizations."<sup>348</sup> In this way, modernity offered social consensus while still satisfying the need of opposing parties to engage in conflict.<sup>349</sup>

Quotes from farmers in magazines in the 1920s reflect this same modern sensibility when discussing specific methods of production. Farmer G.O. Merryman of Grundy County, Iowa observed in a 1925 editorial in *Wallaces' Farmer*, "[t]o those that are still skeptical [of using the newest machinery], let us say you will come to use the two-row cultivator just as surely as you have the self binder, the automobile, hay loader, tractor and other modern tools and conveniences that reduce time and labor and production costs."<sup>350</sup> Another farmer in O'Brien County, Iowa wrote into *Wallaces' Farmer* stating that by 1928, he already owned a truck and two tractors, which he used for "planting, disking, harvesting and the fifty other jobs it can be used for." The farmer discounted the use of horses because they "break down from the heat," while overlooking mechanical problems with tractors. The farmer also bought his own truck even though trucks for

---

<sup>348</sup> Saloutos and Hicks, *Agricultural Discontent in the Middle West: 1900-1939*, 253-258.

<sup>349</sup> *Ibid.*, 285.

<sup>350</sup> "The Two-Row Cultivator: Readers Say it Saves Labor and Saves Time," *Wallaces' Farmer* 50, no. 35 (August 28, 1925): 1095 (9).



hire in many Iowa towns “haul as cheap or cheaper than one can afford to own a truck.”<sup>351</sup> Many other farmers discussed tractor use in a similar way that only recognized the benefits of new machinery compared to horse-powered equipment and reflected a willingness to make the new equipment profitable by finding new uses. Earl Hill of Low Moore, Iowa, for example, stated in 1924 “We have done light belt work with our motor cultivator, pulled an 8-foot disk, 6-foot pending on the size... It does a good job of cultivating [corn] as any horse-drawn machine I ever used.” According to the article, many farmers themselves in the Corn Belt were enthusiastically adopting tractors for cultivation on their own without the influence from advertisers, university experts, or government assistance.<sup>352</sup> *Better Farming* reported that these novel uses for tractor belts had become widespread among Corn Belt farmers as early as 1923.<sup>353</sup>

Evidence from farm journals indicates that many urban dwellers in the early 1920s, including advertisers and manufacturers, greatly underestimated this modern sensibility as already existing in rural America. *Better Farming*, published in Chicago, Illinois, for example, declared “It has become almost proverbial to say ‘The farmer ought to be a businessman.’ This is a phrase that is loosely bandied about by those who do not realize that the farmer is a businessman.” M.V. Casey noted the inability of urban advertisers or dealers in 1920 to recognize the farmer as a modern capitalist and address how farmers would use the truck. The advertisers appealed only to urban users in spite of the fact that farmers had already gladly

---

<sup>351</sup> Reader, O’Brien County, Iowa, “Truck and Tractors,” *Wallaces’ Farmer* 53, no. 12 (March 23, 1928): 480 (10), *The Voice of the Farm*.

<sup>352</sup> E.R. Wiggins, “Killing Weeds and Forming a Mulch by Cultivation,” *Better Farming* 47, no. 5 (May 1924), 7, 11.

<sup>353</sup> Louis W. Arney, “The Tractor Belt,” *Better Farming* 46, no. 11 (November 1923): 4.

adopted tractors over horses. He also noted the fact that the dealers did not offer instruction as to how farmers could repair or modify truck hardware themselves.<sup>354</sup> Casey, in other words, critiqued the truck industry for failing to appeal to rural modernity. In fact, the same issue of *Better Farming* reported that farmers had already widely adopted truck use in spite of the inability of advertisers to appeal to them. According to 1919 statistics from B.F. Goodrich, farmers used 78,789 trucks in hauling grain and livestock compared with 65,928 used by manufacturers and 64,486 used by retailers. The article concludes, “When the farmer once starts to motorize his equipment, due either to his previous use of a stationary gas engine or his use of some automobile, the complete motorization is only a question of time and the up-to-date farmer is going to use truck as well as tractors.”<sup>355</sup> This evidence from the dawn of the 1920s suggests that farmers spurred advertiser’s association between trucks and rural modernity immediately preceding the widespread adoption of trucks for farm use later in the decade.

Several articles in *Wallaces’ Farmer* in the 1920s confirm how farmers themselves had already adopted “scientific” methods to develop new corn strains and seed inoculation methods.<sup>356</sup> One 1925 piece recounts how farmers in Downy, Iowa organized a competition comparing crossbred corn strains that they developed as a way of improving and standardizing

---

<sup>354</sup> M.V. Casey, “What Kind and Size Truck Shall I Buy?: Some Practical Ideas for the Prospective Truck Buyer,” *Better Farming* 43, no. 2 (February 1920): 5.

<sup>355</sup> “Farmers Used 78,789 Trucks During 1918,” *Better Farming* 43, no. 2, (February 1920): Farm Mechanics, 16.

<sup>356</sup> Henry A. Wallace, “Fifth Iowa Corn Yield Contest,” *Wallaces’ Farmer* 50, no. 7 (February 13, 1925): 1, 18; Russell H. Beck, “The Voice of the Farm: Inoculating Soybeans,” *Wallaces’ Farmer* 50, no. 9 (February 27, 1925): 298 (10).

production.<sup>357</sup> Similarly, when hybrid corn first appeared on the market in 1932, farmers enthusiastically adopted it even though they had to purchase it from seed companies. By 1939, for example, three-fourths of all Iowa corn acreage was hybrid corn.<sup>358</sup>

Letters to magazine editors from Corn Belt farmers also show their embrace of mechanized machinery and the newest accounting methods. For example, farmer F.W. Hawthorn's 1930 letter to the editor states, "My seven-year cost-account record tells me the average fuel cost on a three-plow tractor is 38 cents per hour of operation... The depreciation charge was \$1,020 for 2,688 hours of work, or exactly 38 cents per hour, the same as the fuel costs." In another article, W.J. Breakenridge, a farmer in Palo Alto County, Iowa, described his management practices in similarly modern terms: "[w]e departmentalize the farm... Accounts are kept separately for the beef cattle, the cows, hogs, horses, chickens, and for various crops." A "close student of markets," the author noted that he "tries to buy on the breaks and sells on bulges."<sup>359</sup> Another Iowan in a 1930 editorial reflected similarly modern sensibilities emphasizing technological efficiency and advanced accounting techniques: "Greater efficiency in tractor farming can be attained in two general ways. You can cut the cost per hour of running [the] tractor by intelligent operation and care; and you can increase the number of work units

---

<sup>357</sup> B.N. Stephenson, "A Community Checks up its Corn," *Wallaces' Farmer* 50, no. 1 (2 January 1925): 8 (8).

<sup>358</sup> Wall, *Iowa: A Bicentennial History*, 131.

<sup>359</sup> D.F. Marlin, "Pulling Back to Prosperity." *Wallaces' Farmer* 50, no. 1 (January 2, 1925): 1 (1), 12 (12).

accomplished per hour by using the most efficient field practices.”<sup>360</sup> The piece continues with great detail about accounting records of three tractors that considered depreciation, fuel cost, interest, and repair costs so farmers could perform their own cost-benefit analysis. Similarly, farmer A.L. Haecker wrote into *Better Farming* in 1920 analyzing evidence from experimental stations and other all over the Corn Belt on the productivity and profitability of the new silos spreading through the Midwest. Haeker states that over a half million farmers had already done such a detailed analysis of data in ways resembling a scientific method and had chosen to install the new silos on their farms.<sup>361</sup> These voices hardly portray backward farmers resisting mechanization and change.

Other articles and letters exhibited farmers’ enthusiastic adoption of manufactured animal feed, new uses for mechanized equipment, and novel crop fertilization methods.<sup>362</sup> One Corn Belt farmer, R.B. Rushing, for example, wrote to *Better Farming* in 1925 explaining:

---

<sup>360</sup> Fred W. Hawthorn, “More Efficient Tractor Farming,” *Farm Journal* 54, no. 3, (March 1930): 11, 41-42.

<sup>361</sup> A.L. Haecker, “Do I Need a Silo? Half a Million Farmers in the U.S. Have Answered ‘Yes,’” *Better Farming* 43, no. 6 (June 1920), 6, 14.

<sup>362</sup> “Cultivation that Kills Weeds,” *Wallaces’ Farmer* 50, no. 19 (8 May 1925): 676(6); “Too Busy to Milk,” *Farm Journal* 54, no. 1 (January 1930): 40; Warner, H.W. “Getting More Mileage on the Manure-Spreader,” *Farm Journal* 54, no. 2 (February 1930): 38; “Topics in Season,” *Farm Journal* 54, no. 2 (February 1930): 44; Grif McKay, “Good Cows, Well Fed”; “Topics in Season,” (March 1930): 28; “Why Some Farms Pay,” *Wallaces’ Farmer* 50, no. 12 (March 20, 1925): 440 (28); Miller Purvis, “New Ideas in Feeding Poultry,” *Wallaces’ Farmer*

My experience is that the farmer should never be afraid to buy and invest his money in new and improved labor saving and money making tools. Just now, as the snows and blusters of winter have passed away, and the spring and working season is over, it is a good plan for the farmer to carefully consider the proposition of buying any Implements that will increase the farm's efficiency.<sup>363</sup>

Another 1921 article in *Wallaces' Farmer* entitled "The Best Corn in Iowa" discussed new corn breeds not originating from universities or extension stations, but developed by farmers growing corn, comparing strains, and keeping records using the experimental method.<sup>364</sup> One Corn Belt farmer, Henry Lunz, wrote a letter to *Better Farming* in 1920 to share new seed-selection methods he developed with the newest fanning mills writing "The modern fanning mill is almost a wizard when it comes to cleaning and separating seeds. The right mill in skilled hands will do seemingly impossible things."<sup>365</sup> Similarly, in a 1928 article, Illinois farmer Charles D. Kirkpatrick described sophisticated use of phosphate to fertilize his 500-acre farm that included

---

53, no. 11 (March 16, 1928): 431 (7); J.G. Haney, "Making Alfalfa and Clover Hay," *Better Farming* 46, no. 7 (July 1923): 3.

<sup>363</sup> R.B. Rushing, "Buying Farm Implements: Good Tools and Implements Pay for Themselves," *Better Farming* 48, no. 1 (January 1925): 13.

<sup>364</sup> Henry A. Wallace, "The Best Corn in Iowa," *Wallaces' Farmer* 46, no. 2 (January 7, 1921), 43 (1).

<sup>365</sup> Henry Lunz, "Better Farmers See Need of Fanning Mills," *Better Farming* 43, no. 8 (March 1920), 28.

research of experimental results and the use of a technoscientific network of experts.

Kirkpatrick writes,

Because several British experiment farms have proved that fineness of grinding [of phosphate] is important, we were content to take the manufacturer's guarantee. We employed a firm of commercial engineers to make private tests for us. At our request several comparative tests were made for neighboring state experiment stations. By their tests, our purchases have ranged from 94.8 to 87.5 per cent [*sic*] thru a standard dry screen. This same firm made screen tests on materials which another mill had furnished the Iowa and Missouri experiment stations. The rock phosphate used at Missouri tested. 78 per cent and at Iowa 83.7 per cent. In another test, the rock phosphate used at Ohio tested 67 per cent.<sup>366</sup>

Other Corn Belt farmers in 1924 formed “cow testing associations” to incorporate the scientific method and modern business accounting more thoroughly into milk production by hiring testers to work with each farmer. The tester “spends one day every month on the farm of each member where he weighs and tests the milk from each cow, computes its value and estimates the total cost of feed for the month. When this amount has been charged against the value of the milk and fat produced for that month, the owner is able to determine the profit or loss on each cow in his herd.” The tester served as a sort of expert employee of the farmer’s as he also “assists in selecting feeds and figuring the most profitable rations. He also offers

---

<sup>366</sup> Charles K. Kirkpatrick, “Using Rock Phosphate” How the Walden Farm Has Profited by it,”

*Wallaces' Farmer* 53, no. 14 (April 6, 1928): 551 (9).

suggestions on breeding, management, and other phases of the business as deemed advisable by the attitude of the member.”<sup>367</sup>

Danald H. Wells, a corn farmer in Croton, Ohio gave similarly detailed accounts of his use of a tractor to double his land holding in 1924 with numerical accounts of tractor hours, fuel costs, and yields to calculate efficiency and profit.<sup>368</sup> Concern with efficiency and personal ownership of technology motivated Cyrus H. Lancaster of Indiana to abandon communal threshing for a small grain thresher.<sup>369</sup> Another 1930 piece reports that “[w]ork for the tractor in winter months is no problem for J.J. Zeman, Winneshiek County, Iowa. He has bought a stone-crusher which he is using to turn a rocky corner of this farm into limestone that is sold to other farmers for sweetening sour soil. Some stone is sold for road building. There’s an example of real farm management.” The article further explains that, “balling hay is the winter job that keeps N. Schaub’s tractor busy.” These articles suggest that at least some farmers found original uses for new technologies on their own and understood the modern business concept of creating more output from invested capital. One proposed article in a press release by Robert A. Jones of the National Association of Farm Equipment Manufacturers also suggested that farmers had

---

<sup>367</sup> E.M. Harmon, “The Cow Testing Association: How it Works for the Herd Owner and the Community,” *Better Farming* 47, no. 10 (October 1924): 7.

<sup>368</sup> E.R. Wiggins, “How Tractors Make Farms Pay Profits: Many of the Best Farmers Have Found that Ample Power Provides the Means of Doing Their Work at the Right Time,” *Better Farming* 47, no. 3 (March 1924), 6-7, 11.

<sup>369</sup> E.R. Wiggins, “The Small Grain Thresher-a Profitable Farm Machine: Farmers Save Money Threshing Their Own Grain and Earn Extra Money Threshing,” *Better Farming* 47, no. 5 (May 1924), 3.

associated increased use of tractors and cars to economies of scale as early as 1930. In the article, Jones described one farmer's use of a tractor in Wisconsin who used a tractor "to take on an additional 40 acres, half of which was four miles from the house and the other 20 about two miles away. The car was used to drive back and forth to work which would have been impossible with horses." Jones went on to describe how the Wisconsin farmer "utilized his tractor for custom work [work under contract on another farmer's farm], taking in \$200 this last fall in about two weeks by filling silos. By filling his own silo he figured that he saved a thirty-dollar expense." Jones describes how another Wisconsin farmer found increased uses of the tractor to increase his land size,

Operating pea viner in three years brought in \$1,370 to one man who reports that gas and oil for this work cost him \$195. On the average, this tractor grinds 900 bushels of grain each year, a saving of \$45 in cash outlay not to mention the saving in the long haul to town and waiting at the mill. Because of time saved over former methods in putting in his crops, this farmer had the opportunity to tile drain most of his farm over a six year period, with a saving of \$380 which he would have otherwise expended in outside labor. This tractor is also used to run the threshing machine and kill weeds in the late summer with a harrow.<sup>370</sup>

---

<sup>370</sup> Robert A. Jones to "The Editor," National Association of Farm Manufacturers, Farm Press Release #76, "Increasing the Farm Business," January 2, 1930, Box 24, Record Group Number 503, Accession Number 79-001, Ag Engineering Records, Auburn University Archives, 2; for another farmer in the Corn Belt associating increased tractor use with economies of scale in the



Farmers Zeman and Schaub also saw the new roads spreading into their communities, not as a threat to the farm by urban encroachment, as some rural people feared, but as a profit opportunity.<sup>371</sup> Other farmers such as Daire Cobbler of Hedrick, Iowa, even used his tractor in off peak seasons for roadwork.<sup>372</sup> In another article, F.S. Wilkins recalls how he, an extension agent, and an investigator with the U.S. Department of Agriculture (USDA) surprisingly found a town in Washington, Iowa “where soybeans are not a novelty, where they are a common and extensively grown crop on practically every farm, where the farmers know how to grow them with a minimum of expense, and where the yields have been going over twenty bushels per acre.” Thus, farmers, not the USDA “soybean investigator,” initiated the growing of new crops and invented their own techniques and uses of technology.<sup>373</sup>

Other letters to farm journals by Corn Belt farmers reflect the enthusiastic adoption and modification of the newest technologies with an underlying motive to equal or exceed the modernity of urban residents. Farmer Rich Lucas wrote into *Better Farming* in 1925 urging other farmers to enhance the lives of their families by buying a radio. Lucas begins by stating “We farmers situated miles from our home town or many miles from large cities are not able to secure much of the pleasures our city cousins do as to operas, band concerts, lectures, etc., by

---

1920s, see L.T. Woods, “I Use Big Machinery and a Little Pencil,” *Tractor Farming* (May-June 1926): page unknown.

<sup>371</sup> “Topics in Season,” *Farm Journal* 54, no. 2 (February 1930): 36.

<sup>372</sup> S.E. Gamble, “Reaping Large Rewards From Good Roads,” *Better Farming* 48, no. 1 (January 1925): 12.

<sup>373</sup> F.S. Wilkins, “Where Soybeans Replace Oats: Wapello County, Iowa, Community Finds Soy Yields More and Pays Better,” *Wallaces’ Farmer* 53, no. 12 (March 23, 1928): 477(7).

attending them personally, but this pleasure can be secured by all farm folks by the use of radio.” Lucas not only bought a radio to equal the modern lifestyle of his “urban cousins,” he modified it to make it even better by repurposing parts from a phonograph. Lucas writes, “The horn or tone carrier on a good phonograph is an excellent loud speaker so I bought a phonograph attachment and attached our radio onto our Victor and it makes us a perfect loud speaker. All I have to do is slip off the microphone and slip on my radio attachment so we use only one set of head phones to tune in by.”<sup>374</sup> Another article in the same issue describes how farmers and farmwives already began using typewriters in 1925 because “the carbon copy of the letter, made at the time it is written, gives an exact and indisputable record. This is particularly important where price quotations are given or when any financial arrangements are made.”<sup>375</sup> Yet another article quotes farmer V.F. Joslin from Pine City, Minnesota about how he found novel uses for a new garden tractor, “It does better than a horse for it pulls the feed mill, wood saw, hauls the truck from the patch and does not ask for oats when standing still.”<sup>376</sup>

While farmers writing into these farm journals tend to frame their decisions in terms of profit motive, evidence also confirms that farmers viewed these financial or business decisions through a lens of shifting identities towards a self-image of modern technological users. Illinois farmer W.F. Nagel, for example, declared in 1923 that “[i]f power farming means the most

---

<sup>374</sup> Rich Lucas, “Radioize the Farm Home,” *Better Farming* 48, no. 3 (February 1925): All Around the Farm, 10.

<sup>375</sup> “Business Farmers Use Typewriter,” *Better Farming* 48, no. 3 (February 1925): All Around the Farm, 10.

<sup>376</sup> E.R. Wiggins, “Making More Money with Practical Garden Tractor,” *Better Farming* 48, no. 3 (February 1925): 4, 8.

economical application of mechanical power to the operation of an individual farm, then I am a power farmer.” As a result of his newfound realization about himself, Nagel was ready to completely abandon horse farming as old-fashioned. Nagel concluded "I do not believe it is a question of whether power farming will pay or not. It is more a question of whether it will pay to keep as many horses as formerly were thought necessary."<sup>377</sup> Nagel’s letter appears alongside an article about how an unprecedented number of farmers in 1923 had sought courses in gas engine management and basic mechanical engineering.<sup>378</sup> In another 1924 article, Illinois farmer Charles W. Baker showed off a “modern” house and farm buildings, pointing with special pride at the fact that his barnyard had a cement floor. The author declared the performative function of these modern buildings as, “it does not take more than a glance to see that here is a good farmer.”<sup>379</sup>

Nor did farmers view modernity in terms of urban industrialism. In a study of rural Illinois families, anthropologist Jane Adams found that none of the farm families she interviewed or lived with thought of their farms as factories either in the 1920s or the 1990s.<sup>380</sup> Rather, new technologies and farming methods became incorporated into a discourse of rural morality featuring family and community. For example, the January 20, 1928 issue of *Wallaces’ Farmer*

---

<sup>377</sup> “255 Acres: 4 Horses; A Tractor; A Truck,” *Better Farming* 46, no. 11 (November 1923): All Around the Farm, 9.

<sup>378</sup> “Motor Skill in Demand: Many Farmers Seek Instruction in Gas Engine Management,” *Better Farming* 46, no. 11 (November 1923): All Around the Farm, 9.

<sup>379</sup> W.R. Edwards, “Beautiful and Useful Farm Homes and Buildings,” *Better Farming* 47, no. 10 (October 1924): 5, 10.

<sup>380</sup> Adams, *The Transformation of Rural Life*, 51.

reported how eleven “Master Farmers” from Iowa addressed a rural audience over the WHO radio station out of Des Moines, Iowa. These Master Farmers all shared common practices consistent with rural capitalistic modernity. As the article explains, “These men have, since 1921, invested freely in limestone, improved machinery and in better farm buildings. Three have built new homes since then, and nearly all the others have spent a considerable amount in making the homes better adapted to the needs of the family. These improvements include remodeling, additions of porches, heating systems, electric lights, and bathrooms.”<sup>381</sup> The farmers, therefore, saw themselves as modern businessmen, but not as equivalent to urban industrialists running a factory because the family and the farmer as controlling productivity remained central moral components of modernity. One farmer, George Steen, speaking at the radio address linked efficiency and profit with moral ways of living in his speech:

We may apply limestone and phosphate to all our land, and rotate crops to the best advantage; we may convert bumper crops into livestock with the greatest efficiency and market them to the best advantage; we may accumulate a good property; yet we can still be failures as farmers. Unless we can transform the profits of good farming into homes and neighborhoods where people get

---

<sup>381</sup> Jay Whitson, “Farmers Whom Agriculture Honors: The First of a Series of Articles on the Iowa Master Farmers of 1927,” *Wallaces’ Farmer* 53, no. 14 (April 6, 1928): 545 (4); see also “Sixteen Iowa Master Farmers: Leaders in ‘Good Farming, Clear Thinking, Right Living’ are Chosen,” *Wallaces’ Farmer* 53, no. 2 (January 13, 1928), 43 (3).

more of the worth while things that come with good schools and good churches and a healthy social life, we are poor farmers.<sup>382</sup>

The same issue of *Wallaces' Farmer* reveals how these "Master Farmers," such as 1926 winner Lewis Morris of Grimes, Iowa, served as experts and teachers at Iowa State University in short courses for farmers to learn better "money making methods." The article proudly declares "Farmers who are anxious to learn the results of new experiments in an effort to make as much money as possible on their own farms are business men."<sup>383</sup> The journal juxtaposed these articles extoling the modernity of these "Master Farmers" with reports of farmers' enthusiastic attendance at Iowa Farm Bureau (IFB) Conventions renewing demands for the McNary-Haugen Bill in Congress. The IFB unanimously declared: "We insist on national legislation that will place agriculture on an economic equality with other industries. We believe legislation as embodied in the McNary-Haugen bill, with the equalization fee and the federal farm board, and with such improvements as experience and good judgment may suggest, should again be passed."<sup>384</sup>

Others on Midwest farms saw modernity in the 1920s as a way of preventing young people from leaving rural America for urban centers. Farmwife Emma Gary Wallace, for example, told a story of a family able to keep their children from joining the rural-to-urban

---

<sup>382</sup> "Master Farmers of 1927 Honored: Presented to Corn Belt Over WHO and to Iowa Notables at Banquet," *Wallaces' Farmer* 53, no. 3 (January 20, 1928): 91 (7).

<sup>383</sup> "Iowa Farm Businessmen," *Wallaces' Farmer* 53, no. 3 (January 20, 1928): 88 (4).

<sup>384</sup> "Farm Bureau Holds Convention: Iowa Farmers Renew Demands for McNary-Haugen Bill-Hearst Re-Elected," *Wallaces' Farmer* 53, no. 3 (January 20, 1928): 90 (7, 14).

migration by modernizing their home, “eventually the home was entirely remodelled [*sic*] with hardwood floors, electric lights, bath-rooms with plumbing, furnace, and all the modern fittings of any home of refinement [*sic*]. The young people have no desire to go elsewhere.... There is a great deal to be said in favor of living in an atmosphere of prosperity....”<sup>385</sup> Clearly, the prosperous Master Farmers functioned to serve as such a dominant image of the modern capitalistic agrarian within a broader conflict between rural and urban economic and social interests. This image of the modern Corn Belt farmer served an important role in rural efforts to combat yokel stereotypes as part of an unspoken cultural dispute over the meaning of modernity at the heart of the rural-urban conflict.

Similarly, one article describes a school for farm children started by farmer Eugene M. Funk in 1920 that included small experimental plots for each student that “afford good laboratories” as well as an interior that had “an appearance of a modern country home” as opposed to the old-fashioned one-room schoolhouse. The school also featured instructional fields “to show the value of rotation, fertilizing, proper cultivation and the other things essential to the growing of biggest crops and soil maintenance.” Funk started the school because “farming is something like a factory now, and the farmer must be a business man to some extent.” As such, Funk concluded, “It is best for their boys and girls to know something about the business which we hope they will take up. That is farming.”<sup>386</sup> Importantly, Funk noted that farming was

---

<sup>385</sup> Emma Gary Wallace, “Making the Young People Contented,” *Better Farming* 46, no. 1 (January 1923): 4.

<sup>386</sup> Thomas J. Delohery, “Teaching Practical Farming in Funk Grade School: Junior Agricultural High School Recognized as Best by State Authorities,” *Better Farming* 43, no. 1 (January 1920): 5, 10.

“like” a factory reflecting an understanding that his work involved preparing farm children for some sort of rural version of modern production without literally copying verbatim the urban industrial model. Nor did Funk find himself alone in his approach to educating children to become modern capitalists. Harold Breimyer recalled how his high school taught “vocational agriculture” requiring students to “undertake a livestock production project,” experiment with a specified acreage of crops, and keep detailed records of production inputs and yield. Students viewed the agricultural instructor as a “business advisor” and often converted projects into profit.<sup>387</sup> This view of childhood, as a training ground for future businesspersons contrasts sharply with memoirs of rural Americans recalling childhood on a farm at the turn of the twentieth century where children tended to simply provide labor in production processes, and parents often beat them for not working. As Edith Bradley Rendleman recalled of growing up in rural Illinois at the end of the nineteenth century, “In those days everyone beat their kids something awful.” Her memoir recalls many hours of planting beans in fields, picking downed corn, harvesting straw and several other tasks under the constant threat of corporal punishment.<sup>388</sup> Rendleman’s account contains nothing about learning accounting techniques or farming methods. Her memoir contains no account of education about plant science, household technologies, or new or future equipment. She certainly never heard the term “experimental plot” or “modern farm home” before and indicates nothing that would suggest she or her parents saw her life in terms of preparing for a better techno-centric future. As Rendleman’s memoir title states succinctly *All Anybody Ever Wanted of Me Was to Work*. In fifteen short years

---

<sup>387</sup> Breimyer, *Over-Fulfilled Expectations: A Life and an Era in Rural America*, 67.

<sup>388</sup> Jane Adams, ed., *All Anyone Ever Wanted Me to Do is Work: The Memoirs of Edith Bradley Rendleman* (Carbondale, IL: Southern Illinois University Press, 1996), 83-85.

between Rendleman's childhood and the Funk school, the image of what a child on the farm needed to become in the Corn Belt had clearly started to change, at least for some farm families.

Other farmers expressed the idea that technological use represented a more moral means of solving the farmer's financial problems in the 1920s than legislation like the McNary-Haugen Bill because the former promised to enhance the farmers' independence. For many of these farmers, technology promised a means of modernizing and competing with industrialism without depending on politicians whose farm blocs must have seemed ineffective to combat urban interests in the 1920s (if the reader recalls, the McNary-Haugen Bill ultimately failed to become law<sup>389</sup>). Harry Rehm of North Dakota, for example, wrote into *Wallaces' Farmer* stating that the only way tariff legislation could help hog farmers "would be to appoint guardians for those of us who can not think for ourselves. Personally, I like to handle my own affairs as far as possible, even if I go bankrupt doing it."<sup>390</sup> Similarly Harold Rohwer of O'Brien County, Iowa opposed the McNary-Haugen Bill because "if the new Ford is not a success will Henry shout 'rotten legislation?' Indeed not. He will say, 'You have made a mistake somewhere, Henry.' And furthermore he won't ask congress to find it and remedy it; he will do it himself; and if the farmers can't pull themselves out of the rut of their own making they are a sorry lot indeed." Rohwer then listed several items that he believed would help the farmer more than legislation from Washington including "More following of daily markets and less following of murder trials; More tractors and less automobiles; More early morning rises, less midnight frolicking; More and longer working days in a year." The farmer, according to Rohwer must abandon the

---

<sup>389</sup> Saloutos and Hicks, *Agricultural Discontent in the Middle West: 1900-1939*, 399.

<sup>390</sup> Harry Rehm, "What Farmer Can Kick Now," *Wallaces' Farmer* 53, no. 3 (January 20, 1928): *The Voice of the Farm*, 94 (10).



image of “the old one-crop farmer,” and embrace productive technology, hard work and education to combat urban dominance.<sup>391</sup> As *Better Farming* proudly exclaimed as early as 1925 “Farm work with modern machinery has come to be more and more of an engineering job. The farmer who handles the binder, a tractor, or a truck, who installs a drainage system on his farm, or who builds his small farm building in his spare time, must be somewhat of an engineer as well as a farmer.”<sup>392</sup>

Yet other farmers note a significant change in farmers’ views of themselves from a communal identity in the late nineteenth century to an individual capitalist that competed with his or her neighbors by the 1920s or 1930s. Farmers had thought of themselves as a part of communities of laborers since the Middle Ages, and the rural landscape of the Corn Belt in the late eighteenth century featured roads full of people walking between fields to work communally. The communal nature of threshing in the nineteenth century and the accompanying “threshing dinners” have become part of the mythology of the Midwest. Thus, the change from a communal to an individual identity marked a significant shift in the way farmers thought of themselves. In fact many farmers after mechanization would cite not drudgery or poverty as the most negative aspects of a rural lifestyle but, rather, social isolation.<sup>393</sup> The mistake many farm memoirists make is taking a technological determinist view assuming that this shift from a communal to an individual experience occurred because of new farming technologies such as

---

<sup>391</sup> Harold Rohwer, “Helping the Farmer,” *Wallaces’ Farmer* 53, no. 3 (January 20, 1928): The Voice of the Farm, 94 (10).

<sup>392</sup> M.M. Jones, “Farm Shop will Save Money,” *Better Farming* 48, no. 1 (January 1925): 14.

<sup>393</sup> Breimyer, *Over-Fulfilled Expectations: A Life and an Era in Rural America*, 49.

tractors that did not require collective production processes.<sup>394</sup> However, nothing mandated that the Corn Belt farmer would use the new tractors in a non-communal way. Farmers could have very easily decided that only one farmer would purchase a tractor and use it under contract on adjacent farms as farmers had done with threshing machines. Similarly, one could imagine a production process whereby farmers would communally cultivate one another's land with multiple tractors to complete the work even faster. In other words, the tractor's design itself did not dictate its individualistic use. Rather, an unarticulated discourse identity bundle of rural capitalistic modernity, which introduced capitalist ideas about competition into Jeffersonian and German agrarianism, in combination with the design of the latest tractors explains this abandonment of communalism. In addition, this rural capitalistic modernity accentuated the obsession with private property proffered by Jeffersonian and German agrarianism. While farmers in the Corn Belt prior to the early twentieth century embraced some communal work processes, they also rejected several "radical" communities that attempted to establish pure forms of communism.<sup>395</sup> Rural capitalistic modernity combined with material objects to not only form a rural identity, but also to reconcile the tension between communal work processes and a threatening communism by rendering the farmer as an unambiguous individual capitalist. Identities and technologies co-constructed one another.

Thus, while traditional histories assume a rural anti-modern agrarianism until after World War II, a more careful analysis of cultural trends of technological use contained in farm journal advertisements, farmer's quotes, family farm photos, and action by farmers using artifacts

---

<sup>394</sup> See for example Hamilton, *Deep River: A Memoir of a Missouri Farm*, 157.

<sup>395</sup> For a discussion of these radical communities in Iowa, see Wall, *Iowa: A Bicentennial History*, 73-77.

reveals that some farmers had formed their own rural capitalistic modernity much earlier. A culture of the machine had established itself in which farmer's identities as modern, progressive, independent capitalists became embedded in the technologies they used as a means of opposing an urbanized industrialism. This discourse identity bundle of rural capitalistic modernity would intensify and become more widespread in rural America during the Cold War when the "other" shifted from the threat of urban industrialists and reformers to a collectivizing ideology emanating from the Soviet world.

## Chapter 5<sup>396</sup>

### Rumbling Down Main Street: Cold War Ideology and the “American Way” Encouraging

#### Rural Capitalistic Modernity

*Khrushchev has said to us- “We will bury you-your grandchildren will be Communist.” The best weapon we have pointed against him is our overabundance of food-this is even more important than any missile in the long run.*

J.K. Stern, President-American Institute of Cooperation, March 30, 1961<sup>397</sup>

Fourth of July parades in small towns throughout the Corn Belt, in places like Charles City, Iowa, and Hermann, Missouri rehearse a familiar performance. Expressions of patriotism involve more than simply nighttime fireworks. Rather, residents sit along main streets in lawn chairs while a steady column of huge pieces of farm machinery that seem to dwarf the nearby brick buildings rumble by, driven by farmers and their families waving American flags. Often older tractors accompany newer models, all of which sparkle in pristine condition. In one photo showing a parade in Hermann, Missouri in 2015, old tractors like the Farmall pictured or newer equipment often have flags attached to them. The picture caption reads “Gale Groppe drives his 1st Place tractor in the July 4 Parade.” As in the photo of Goppe, the driver usually wears

---

<sup>396</sup> Part of this chapter will be published in the upcoming article, Brinkman and Hirsh, “Welcoming Wind Turbines and the PIMBY (‘Please in my backyard’) Phenomenon: The Culture of the Machine in the Rural American Midwest,” (forthcoming 2017). Paper accepted for publication by *Technology and Culture* on September 25, 2015.

<sup>397</sup> J.K. Stern, “The Weapon Khrushchev Can’t Match: American Agriculture,” speech delivered at Farmer’s Night Program, Roaring Spring, Pennsylvania, March 30, 1961, in *Vital Speeches of the Day* 27, no. 15 (1961): 469-471.

overalls or other work clothes to highlight his or her rural heritage.<sup>398</sup> The celebration masks deep and unwavering disagreements among the spectators over which company produces the best farm machinery. For my family, Case International makes the only proper tractor and no Brinkman would ever farm in something painted green or blue. Of course, the more interesting question as I grew older and became a “serious academic” was the meaning of this annual performance. Why, after all, did large farm equipment, American flags, fireworks, and bands playing the “Star Spangled Banner” seem to “go together” on the main streets of the Corn Belt? Why do people on these huge rumbling machines wave flags and why do people on the street smile and wave flags back when they see an artifact that seems so out of place to an outside observer on a paved street? In the language of Irving Goffman and Stephen Hilgartner, what exactly *is* the performance?<sup>399</sup> Surely, the hundreds of people lining a Main Street in the Corn Belt see the latest combine as more than a way to increase the efficiency of soybean harvesting.

---

<sup>398</sup> “Hermann July 4 Parade Winners Announced,” *The Hermann Advertiser-Courier*, July 14, 2015, at <http://www.hermannadvertisercourier.com/hermann-july-4-parade-winners-announced/>. (accessed on 1/23/16).

<sup>399</sup> See also Lynn Hunt, “The American Parade: Representations of the Nineteenth-Century Social Order,” in *The New Cultural History*, ed. Lynn Hunt (Berkeley, CA: University of California Press, 1989), 131-153. Hunt argues that urban parades in the U.S. from 1825 to 1880 constituted a “public, ceremonial language,” whereby Americans developed and performed ethnic, class, and gender identities. While Hunt regards parades as performative, she views the process more as a conscious performance for an audience of onlookers directly observing the display. In addition, she does not consider material objects as particularly important aspects of performativity and she never uses the term “performative use” in her analysis of parades.

---

The Cold War spurred the development of the rural capitalistic view of technology as associated with modernity because it highlighted the dichotomy between American capitalism and Soviet/Red Chinese collectivism. Tractors and milking machines took on symbolic significance as soon as World War II ended. By highlighting America's technological superiority in agriculture promising abundant food production, the U.S. could attract allies and stop the spread of communism. When Soviet Premier Joseph Stalin forced millions of Russian peasants off their land and into huge government-operated "agro-towns," the successful American family farmer became a symbol of the superiority of the free market respecting private property over collectivized workers.<sup>400</sup> Every local newspaper in the American Corn Belt from Waukesha, Wisconsin, to Cedar Rapids, Iowa, to Chicago, Illinois highlighted this ideological struggle around agriculture and reported with subtle pride the inability of the Soviet Union to feed its own people. Agricultural technology became embedded with the ideology that market incentive wins over government control. For example, a note from the editor of *Electricity on the Farm Magazine*, W.J. Ridout, Jr., in a May 1953 issue entitled "A Defeat for Communism" echoed the sentiments of many farmers in the Corn Belt who saw private technological production among farmers in any country as a victory for rural capitalistic modernity. In celebrating reports that farmers in Yugoslavia and other Eastern Bloc countries had resisted collectivization. Ridout, whose magazine targeted farmers who wished to modernize through greater use of electrification, dramatically wrote:

---

<sup>400</sup> Henry Shapiro, "Malenkov Regime Acted to Stop Soviet Food Crisis," *Waukesha Daily Freeman*, January 21, 1954, 9.

In Yugoslavia, defeat has been conceded in the effort of the government to collectivize farming. From what we hear agriculture is well along the road back to private ownership in that country. Stubborn resistance is also taking place in the Russian satellite countries. The farmers in these countries will certainly draw new strength from the victory scored in Yugoslavia. Without freedom, incentive is lost, with[out] incentive, hope is lost.<sup>401</sup>

Similarly, in a 1949 cartoon by the famous *Washington Post* cartoonist Herb Block, a Soviet government official has a plow shaped as the Soviet hammer and sickle symbol harnessed to a Russian peasant who sweats with exhaustion as he pulls the plow by a sign that reads “Marshall Stalin Plan.” Above this scene of oppression on a piece of higher ground a Western European farmer with a pipe in his mouth drives a modern tractor labeled “Marshall Plan” with a large grin on his face. In the background, another farmer drives a tractor in front of a modern and prosperous barn and silo. Below, on the Soviet side, another Soviet official explains to another Russian peasant dejectedly watching his comrade pulling the plow “It’s the same thing without mechanical problems.” Another Russian peasant looks up at the modern tractor with jealousy.<sup>402</sup> Even at the dawn of the Cold War, Block saw rural capitalistic modernity as an important

---

<sup>401</sup> W.J. Ridout Jr., “A Defeat for Communism,” *Electricity on the Farm Magazine*, May 1953, Editor’s Note, <http://www.papergreat.com/2014/09/checking-out-1953-issue-of-electricity.html> (accessed 9/16/16).

<sup>402</sup> Herb Block, “It’s the Same Thing Without the Mechanical Problems,” *Washington Post*, cartoon, January 26, 1949, 21. <https://www.loc.gov/exhibits/herblocks-history/ticktock.html> (accessed 6/16/15).

weapon in attracting allies, hence the “Marshall Plan” label on the tractor, and combating the spread of Communism.

The centrality of agriculture in Cold War diplomacy meant that domestically, the modern farmer became a Cold War warrior who almost had a duty to buy the latest machinery, educate himself, and increase production. At that time, when an American farmer purchased the latest tractor or the newest combine and increased production he did so not just to assert his own version of modernity over visions of urban reformers, but to show his patriotism. The rural “modern way” became the “American way” in which discourses of rural-urban conflict transformed into a more inclusive nationalistic discourse. For example, in a cartoon published in the *Farmer’s Weekly Review* in rural Illinois in 1950, one man labeled “Big Business” and another named “Small Business” help each other pull on a rope hoisting a large block named “America’s Industrial Expansion.” The two men exclaim “All together now!” underneath a title of “The American Way.” Most farmers in the Corn Belt seeing this cartoon would have identified with the man representing “Small Business.”<sup>403</sup> This inclusive message contrasts sharply with the political cartoons in the 1920s in which industrial and other urban interests attacked or threatened farmers (recall the 1928 *Farm Journal* cartoon seeing urban interests as a threat to rural schools for example). Domestic political debates over price controls for agricultural commodities and land limits contributed to the identity of the American farmer as an independent capitalist employing technology as opposed to the collectivized and government-controlled Russian peasant using old fashioned farming techniques. Politicians arguing in favor

---

<sup>403</sup> “The American Way,” *Farmer’s Weekly Review*, cartoon, October 24, 1950, 1.



of ending New Deal-era price controls accused the opposition of attempts to socialize agriculture.<sup>404</sup>

Agricultural technology became an even more important Cold War weapon from 1954 to 1955 when it took center stage in the struggle for power between Georgi Malenkov and Nikita Khrushchev.<sup>405</sup> Khrushchev (who, as Stalin's secretary of the Central Committee, proposed in 1949 the idea of the *agrogorod*, or agrarian city, which extended the policy of forced collectivization<sup>406</sup>) owed his eventual victory to Malenkov's inability to respond to an agricultural crisis and keep pace with American production.<sup>407</sup> As a result, Khrushchev, regarded by many Midwest newspapers as the most dangerous world leader since Hitler, sought to vastly improve Soviet agricultural production to show the World that collectivization could

---

<sup>404</sup> *Waukesha Daily Freeman*, "Farm Bureau Opposes Socialized Agriculture," September 9, 1953, Editorials; *Chicago Daily Tribune*, "What Makes Communists Tick?," September 8, 1950, 20; *Chicago Daily Tribune*, "The Family Farm," September 20, 1952, 10; *Chicago Daily Tribune*, "Pilgrim's Progress," August 11, 1950, 14.

<sup>405</sup> *Waukesha Daily Freeman*, "Malenkov Regime Acted to Stop Soviet Food Crisis," January 21, 1954, 9.

<sup>406</sup> "Biographies: Nikita Khrushchev and Frol Kozlov," 13-17.

<sup>407</sup> Harold Milks, "Khrushchev Rips Malenkov Group on Farm Issue," *Cedar Rapids Gazette*, 16 December 1958, 16; *Chicago Daily Tribune*, "The Two Faces," 24; Lazar Volin, "Khrushchev and the Soviet Agricultural Scene," in *Soviet and East European Agriculture*, ed. Jerzy F. Karcz (Berkeley, CA: University of California Press, 1967): 9-10.

out-produce privatized free market capitalism.<sup>408</sup> The *Chicago Daily Tribune* even reported in 1959 that as “communist chief of the Ukraine” after 1938, Khrushchev had helped to “direct the program of planned starvation to force collectivization of the farms. Five million Ukrainians died.”<sup>409</sup> Increased mechanization formed the center of Khrushchev’s Seven Year Plan, but he also socialized Soviet peasants even further by shifting from collectivized farm towns to large state-operated compounds.<sup>410</sup> One Iowa newspaper editor likened Khrushchev’s state-operated facilities to “huge Roman slave estates, state owned, state managed and worked by laborers having no personal stake in the land.”<sup>411</sup> Similarly, the *Chicago Daily Tribune* referred to collectivized Chinese farmers as “dehumanized guinea pigs” and Soviet-style farms as “coercive communal living.”<sup>412</sup>

While Khrushchev may have despised the West, he also admired the American farmer’s ability to use technology to boost production. As a result, the premier opened the Soviet Union to tours by Midwest farmers and politicians as a “cultural exchange” and allowed high ranking

---

<sup>408</sup> William R. Ryan, “Nikita Khrushchev: Bold Gambler, He Has More Potential for Mischief than Hitler Before Munich,” *Cedar Rapids Gazette*, November 24, 1957, 16; Jake Booth, “Russia Faces Big Odds in Drive to Improve Farming,” *Cedar Rapids Gazette*, April 25, 1955, 15; *Chicago Daily Tribune*, “Khrushchev, Heretic,” December 19, 1958, 12.

<sup>409</sup> *Chicago Daily Tribune*, “The Two Faces,” August 30, 1959, 24.

<sup>410</sup> *Buffalo Center Tribune*, “The State of Soviet Agriculture,” December 3, 1959, page unknown.

<sup>411</sup> Joseph Alsop, “Khrushchev Gambles on Farms,” *Cedar Rapids Gazette*, January 28, 1958, Editorials.

<sup>412</sup> *Chicago Daily Tribune*, “Red China’s Communes,” December 27, 1958, 8.

Soviet officials to visit the U.S.<sup>413</sup> The American corn-hog economy fascinated Khrushchev, and he even proposed to introduce corn to Soviet farming in “the American style” in 1955.<sup>414</sup> (Khrushchev famously toured Iowa in 1959.<sup>415</sup>) Meanwhile, the U.S. State Department and the Central Intelligence Agency recognized agricultural technology as a Cold War weapon. In secret documents from 1955, the State Department and the Central Intelligence Agency recommended organizing cultural exchanges as military campaigns with the goal of strategically gaining more useful information than the Soviet delegates could acquire from tours of the U.S.<sup>416</sup> Farmers and politicians returned from these trips in the mid-to-late 1950s and early 1960s and debunked the notion of an “agricultural crisis in the Soviet Union” while at the same time reporting on inefficient farming methods.<sup>417</sup> These farmer-delegates often attributed the failures of Soviet farming to the lack of individualized incentive caused by too much government control.<sup>418</sup>

---

<sup>413</sup> *Waukesha Daily Freeman*, “Russ Ag Men Eye Specialties,” July 22, 1955, 4.

<sup>414</sup> *Waukesha Daily Freeman*, “Seek to Boost Corn Output,” February 25, 1955, 3.

<sup>415</sup> “Nikita Khrushchev’s Visit to Iowa,” film, 1959, a Special Pool Telecast on WHO-TV (available at Iowa State University Library University Archives, Film K-3056), <https://www.youtube.com/watch?v=LZ8WZB0sWwU> (accessed 5/27/15).

<sup>416</sup> U.S. Department of State, *Intelligence Report: U.S. and Soviet Gains from Agricultural Exchange* (Washington, D.C.: GPO, 1955), Office Memorandum, 1-7, at <http://www.scribd.com/doc/138124499/1955-Report-on-US-USSR-Agricultural-Exchange-Visits>. (accessed 3/27/15).

<sup>417</sup> Peggy Brown, “Diplomatic Farmers: Iowans and the 1955 Iowa Delegation to the Soviet Union,” *The Annals of Iowa* 72, no. 1 (2013): 50, 53.

<sup>418</sup> *Waukesha Daily Freeman*, “Farmers End Russian Tour,” August 22, 1955, 8.

Almost all of the farmer-delegates and government officials who toured the Soviet Union noted the use of manual labor and old fashioned tools by collectivized Russian peasants rather than the up-to-date hardware operated by American farmers.<sup>419</sup> Several travelers derided the Soviets, in a blend of faith in technology with 1950s male chauvinism, for using women as manual labor in the fields declaring “Most of these women - in the late teens, twenties and early thirties – showed little of the femininity of American women.”<sup>420</sup> In speeches at town meetings and in articles filling newspapers of the upper Midwest, rural residents received (and resonated with) one clear message: the capitalist American farmer who employed modern technology and business practices was winning the Cold War.<sup>421</sup> In a cartoon published in rural Wisconsin in 1955, for instance, a “Soviet Farm Guest” sits devouring a large pile of sweet corn served on a plate labeled “Good Will and Friendliness.” In the background one American woman brings even more corn while a man holds a plate of butter asking “More Butter Ivan?” The cartoon, labeled “And there’s a lot more where this came from” conveys that the American farmer’s use of

---

<sup>419</sup> Dick Hanson, “State Farms are Becoming Dominant in Soviet Union,” *Cedar Rapids Gazette*, December 13, 1959,11; Rex Conn, “Soviet Agriculture Still Lags, Says Minn. Farmer,” *Cedar Rapids Gazette*, July 29, 1958,15; Ovid A. Martin, “Russia Pins Ag Hopes on Work of Peasant Women,” *The Cedar Rapids Gazette*, October 20, 1959, 24.

<sup>420</sup> Ovid A. Martin, “Russia Pins Ag Hopes on Work of Peasant Women,” *The Cedar Rapids Gazette*, October 20, 1959, 24.

<sup>421</sup> D.W. McDowell, “State Agriculture Alert to Responsibilities,” *Waukesha Daily Freeman*, July 29, 1955, Editorial Page.

modern technology has defeated Soviet farming effort so thoroughly that even Russian farm representatives arrive to the U.S. hungry and enjoy the abundance of American commodities.<sup>422</sup>

In many farmers' minds, reports in Corn Belt newspapers of the failure of Khrushchev's agricultural policies to increase food production by the 1960s confirmed the superiority of privatized capitalist agrarians using modern technology.<sup>423</sup> Midwest newspapers also revealed in the failure of communal agriculture in Communist China by the late 1950s.<sup>424</sup> The *Chicago Tribune* mocked "Professor" Khrushchev for lecturing Communist China about the advantages of collectivism while his own farm policies failed exclaiming "If Prof. Khrushchev while in America had talked less and studied more, he might have learned how to increase production."<sup>425</sup> Roscoe Drummond's editorials in the *Cedar Rapids Gazette* serve as an illustrative example of this nationalistic modern discourse. In one editorial from 1962, he boasted, "Soviet agriculture is faltering, failing, and falling behind. Today it is in a colossal mess for two reasons. Communist

---

<sup>422</sup> D.W. McDowell, "State Agriculture Alert to Responsibilities," *Waukesha Daily Freeman*, July 29, 1955, Editorial Page.

<sup>423</sup> William L. Ryan, "Early Farm Plan Almost Spelled Nikita's Downfall," *Cedar Rapids Gazette*, April 1, 1959, 4A; Phil Newsom, "Agriculture is Soviets' Big Problem," *Cedar Rapids Gazette*, January 27, 1961, 14; Henry S. Bradsher, "Mismanagement, Weather Plague Russian Agriculture," *Cedar Rapids Gazette*, April 27, 1964, 13; *Chicago Daily Tribune*, "Why the Slavs Hunger," November 20, 1950, 18; *Chicago Daily Tribune*, "Production for Use," April 13, 1950, 16.

<sup>424</sup> *Chicago Daily Tribune*, "Red China's Flop," August 29, 1959, 12.

<sup>425</sup> *Chicago Daily Tribune*, "Chinese Seminar by Prof. Khrushchev," October 3, 1959, 12.

farming through collectivization doesn't work.”<sup>426</sup> In 1963 when the U.S. Secretary of Agriculture announced that Moscow would soon purchase a billion tons of wheat from the U.S., Drummond asked “Why? Primarily because its collectivized, state-managed agriculture is inefficient and unproductive. Soviet agriculture is exactly the way communism says it should be.”<sup>427</sup> In one cartoon, published in Cedar Rapids, Iowa in 1962, “Soviet collective farm officials” exit an airplane onto an American runway. In front of the plane, Uncle Sam mocks the officials by asking an American government bureaucrat “Maybe they can solve our surplus problem?” The bureaucrat answers “Let ‘em mess around a bit.” The cartoon accompanied a Roscoe Drummond editorial asking rhetorically “Why can’t Communist Countries Feed Their People?”<sup>428</sup> In a 1963 cartoon entitled “Small Problem” a tombstone at the head of an open grave paraphrases Khrushchev’s famous declaration to the U.S., “We’ll bury the U.S. here.”<sup>429</sup> Inside the grave, a shovel sticks out labeled “K.” for Khrushchev stating, “Help! I’m stuck.”

---

<sup>426</sup> Roscoe Drummond, “Look at World Through K's Eyes; He's Got Troubles,” *Cedar Rapids Gazette*, July 27, 1962, Editorial Page.

<sup>427</sup> Drummond, “Communism’s Many Ailments Add Up to One Big Flop,” *Cedar Rapids Gazette*, October 21, 1963, Editorial Page; for similar opinions among farmers regarding collectivization, see also “Farmers Want to Own Their Land,” *Wallace’s Farmer* (November 4, 1950): 6.

<sup>428</sup> Drummond, “Why can’t Communist Countries Feed Their People?,” *Cedar Rapids Gazette*, March 12, 1962, Editorial Page

<sup>429</sup> For an example of Khrushchev’s use of the word “bury” to threaten the U.S. in terms of agricultural production see J.K. Stern, “The Weapon Khrushchev Can’t Match: American Agriculture.”

Beside the grave, Uncle Sam approaches with a rescue ladder with a flag inscribed with the words “Wheat Deal.” The cartoon, which accompanied an editorial by Drummond entitled “Communism’s Many Ailments Add Up to One Big Flop,” saw the Soviet need for U.S. wheat as the ultimate sign that the American farmer had thoroughly won his and her part of the Cold War.<sup>430</sup>

Reinforcing this message of agricultural superiority, the American Feed Market Association published a booklet entitled “Mightier than Missiles” in 1961 declaring, “The greatest of all weapons is America’s production of food and fiber...its agriculture and agribusiness.”<sup>431</sup> The idea that agricultural technologies served a greater role in combating communism than missiles also appeared at agricultural fairs throughout the U.S by the early 1960s.<sup>432</sup> By 1960, the Department of Agriculture and the president had issued several reports characterizing the failure of Soviet agriculture as an important Cold War victory.<sup>433</sup> An editorial

---

<sup>430</sup> Drummond, “Communism’s Many Ailments Add Up to One Big Flop,” *Cedar Rapids Gazette*, October 21, 1963, Editorial Page.

<sup>431</sup> *Mightier than Missiles*. Chicago: American Feed Manufacturer Association, 1961, 2-3; *Quad City Herald*, “Food is Stronger Weapon Not Generally Recognized,” November 2, 1961, 6; Jenny Barker-Devine, “‘Mightier than Missiles:’ The Rhetoric of Civil Defense for Rural American Families, 1950-1970,” *Agricultural History* 80, no.4 (2006): 415-435.

<sup>432</sup> *St. Petersburg Times*, “Food Mightier than Missiles,” February 8, 1962, 3-B. [news.google.com/newspapers](https://news.google.com/newspapers) (accessed 5/21/15).

<sup>433</sup> Gaylord P. Goodwin, “Study Compares American and Soviet Agriculture,” *Cedar Rapids Gazette*, September 29, 1962, 11B; *Cedar Rapids Gazette*, “U.S., Soviet Agriculture Compared,”

by William Ryan in the *Cedar Rapids Gazette* noted in 1962, “Persistent failure of communist agriculture is regarded in Washington as one of the most important aspects of the Cold War. President Kennedy is known to feel that if the USSR, while it still is led by those obsessed with the notion of world domination, should ever out-produce the United States in food and consumer goods, the cause of the whole free world would be in danger.”<sup>434</sup>

The apparent victory of American agriculture had a clear effect on farmer’s identities as users of technologies. Rather than a thoughtless worker using a manager’s machine in a collective Soviet system, the machine itself reinforced the farmer’s identity as an independent, hard-working, capitalist. As the *Buffalo (Iowa) Center Tribune* declared, “It’s likely that the toughest barrier to the solution of the Soviet farm problem, as with other economic problems, will prove to be a system where the few give the orders and the many meekly obey.”<sup>435</sup> Just as when they encountered the idea of industrialization, when farmers themselves participated in the development of rural modernity as a means of resistance against urban reformers in the 1920s and 1930s, they later in the 1950s and 1960s, bolstered the same rural capitalistic identity against a collectivized “other” in the communist world. The fact that the Soviet peasant had been stripped of his agency and starved by the centralized government served as proof, from the farmer’s perspective, of the validity of the capitalist ideology of the independent American

---

July 20, 1965, 18; *Cedar Rapids Gazette*, “Russia Beset by Problems in Agriculture,” January 10, 1964, 17.

<sup>434</sup> William L. Ryan, “Khrushchev Risks Hersey to Solve Food Troubles,” *Cedar Rapids Gazette*, April 13, 1962, 22.

<sup>435</sup> *Buffalo Center Tribune*, “The State of Soviet Agriculture, December 3, 1959,” page unknown.



agrarian whose production capabilities, in contrast, grew greater with the continual adoption of advanced hardware.

The establishment of the modern rural capitalist identity in the Midwest Corn Belt had a reciprocal effect of spurring growth in farmers' land holdings and their use of increasingly mechanized equipment. In other words, technology, ideas of modernity, and capitalist Cold War ideologies became co-constructed. The discourse of rural capitalistic modernity alleviated social unrest over the grow-or-die phenomenon after World War II, in which some family farms failed while others grew, by framing the process as a natural consequence of competitive agricultural capitalism. It gave an ideological justification for the massive rural-to-urban migration spurred by the economic pressures discussed by historians such as Fitzgerald and Danbom. Residents of rural America accepted the growth of the successful farmers at the expense of their defeated counterparts because (at least in part) the discourse identity bundle of rural capitalistic modernity suggested that superiority derived from the effective use of modern business principles and the best new technology.

### **The Persistence of the Jeffersonian Yeoman Myth Among Observers of Agriculture During the Cold War**

In spite of the strengthening of rural capitalistic modernity during the Cold War among farmers in the Corn Belt, the myth of the backward Jeffersonian resistant to technological change persisted among urban observers of agriculture. Farmers from the 1950s onward still faced urban yokel stereotypes notwithstanding their performative use of the latest technologies. The resentment in the Corn Belt over what, to farmers, seems like an urban refusal to acknowledge their true modernity forms an important feature of modern rural identities. Men and women in

the Corn Belt have maintained the same unspoken rural obsession with how urban observers see them that arose among farmers during the rural-urban conflict of the 1920s. As a result, farmers still use the latest technologies to perform a modern identity to combat urban yokel stereotypes that seem to remain remarkably difficult to dislodge in the broader American culture.

In Chapter 2, I already discussed how this urban notion of the anti-modern farmer has pervaded the work of some historians and scholars of agriculture. Going beyond historiographical concerns, I now turn to how urban actors during the Cold War maintained this dominant image of the rube resistant to change. Two main groups of urban actors promoting the urban view of farmers as the anti-modern “other” gained cultural significance within urban America after 1950. The first group, urban television producers, played an important role in maintaining rube stereotypes. Of course, this group of urban observers of agriculture gained increased cultural power to define dominant urban images of farmers with the rise of television as a social medium. The second group, environmental policy advocates, promoted the Jeffersonian myth more subtly than television producers by characterizing the anti-modern farmer in positive terms. This group of advocates framed farmers as moral Jeffersonians who had the latest technologies forced upon them by a greedy and omnipotent network of agribusiness. Moral “family farmers,” according to these critics of modern agriculture, desired to resist “industrial” agriculture and return to their pre-technological ways. Farmers who embraced new technology had simply been fooled by agribusinessmen seeking even greater profit. As with television producers, this group of urban observers of agriculture gained importance in urban American life with the rise of the environmental movement and, with it, environmental consciousness in the later Cold War period.

Through the narrative that follows, I try to see these urban presentations of the Jeffersonian myth from the farmer's perspective. As such, I present an analysis of how these images held by people removed from agriculture may have alienated an agrarian who used technologies to perform a rural modern capitalistic identity. The yokel stereotype maintained by urban television producers presented such an insulting image because it failed to acknowledge rural people's modern identity. Similarly, environmentalists seemed blinded to the existence rural capitalistic modernity and they refused to grant farmers' technological use with moral standing. From the farmer's point of view, environmental policy advocates confused moral rural capitalistic modernity with immoral urban industrialization. Thus, environmentalists alienate farmers who embrace the newest hardware by associating rural people with the same industrialists that Corn Belt agrarians had resisted in the 1920s. From the modern agrarian's perspective, therefore, both television producers and environmental advocates exhibit a lack of urban appreciation for "real farmers" in the Corn Belt.

*Assumptions of Anti-Modern Jeffersonian Yeomanism in American Popular Culture*

The dominant image of the Jeffersonian agrarian resistant to social and technological change has pervaded American popular culture since at least the 1920s. Television shows such as the three CBS sitcoms airing in the 1960s and early 1970s, *Green Acres*, *The Beverly Hillbillies*, and *Petticoat Junction*, portray rural Americans exclusively from the perspective of urban dwellers; by doing so, they reinforce rube stereotypes. In *Green Acres*, for example, a sophisticated New York lawyer, Oliver Wendell Douglas, and his glamorous Hungarian wife, Lisa Douglas, abandon their Manhattan penthouse for a dilapidated farm in the rural town of

Hooterville.<sup>436</sup> The entire comedic vehicle of *Green Acres* revolves around this reasonable urbane straight man encountering a backwards and bizarre rural “other.” In a 1965 article previewing the show for urban viewers, the *New York Times* even characterized Douglas as “a kind of reverse rube.”<sup>437</sup> The Douglases repeatedly fail to bring urban modernity to rural yeoman, who include Mr. Haney, a yokel con man, Eb Dawson, a hillbilly farmhand, and Fred and Doris Ziffel, Douglas’ elderly neighbors whose old-fashioned ways include reoccurring attempts to pass off a talking pig as their son, Arnold.<sup>438</sup>

Throughout the sitcom, which aired from 1965 to 1971, technology plays a key role in demonstrating Douglas’ modernity as well as his neighbors’ backwardness.<sup>439</sup> None of the farms in Hooterville appear prosperous, and none of the farmers around Douglas use mechanized equipment. One running joke throughout the show occurs when Mr. Haney cons Douglas into purchasing poorly made or badly conceived material objects, often from an old-fashioned truck or a junk shop, suggesting that Hooterville lacks respectable retail options. Mr. Haney accentuates the comedic effect of this repeated scene with a noticeable high-pitched southern accent and new ways to fool Mr. Douglas. One can view the rube salesman’s presentation of these poorly designed technologies as a symbolic ritual that reinforces urban identity by “othering” rural dwellers. Namely, Mr. Haney’s hucksterism stands in for the urban suspicion

---

<sup>436</sup> It is difficult when viewing the show to surmise the exact geographical location of Hooterville.

<sup>437</sup> Val Adams, “Eddie Albert Due in Comedy Series,” *New York Times*, August 17, 1965, 67.

<sup>438</sup> Ed Stephan et al., “Green Acres,” *IMDB*. <http://www.imdb.com/title/tt0058808/> (accessed 5/26/16).

<sup>439</sup> *Ibid.*

that the rural performance of modernity through technology use is also a scam. Mr. Haney, for example, sells Douglas a tractor because Douglas insists on modernizing farming in Hooterville. A Corn Belt farmer in 1965 would view scenes with this tractor as ridiculous, and perhaps even insulting for several reasons. First, the tractor requested by Douglas is an old model with metal wheels that farmers would have used in the early 1920s, not the 1960s. So in attempting to show an urban dweller's view of a "modern" tractor, the writers of *Green Acres* did not even present a contemporary machine. Further, when Douglas presents his tractor to his farm hand, Eb Dawson, he has no idea how to use it. Rather, Dawson attempts to hook a moldboard plow designed for horses to the back of the tractor. The scene symbolically places Douglas on the "modern" tractor seat and Dawson on the ground behind the plow as if he had never used a tractor before. As with all of the technologies sold by Mr. Haney, the gag concludes with the tractor falling apart with neither Douglas nor Dawson knowing how to fix it.<sup>440</sup> With the collapse of the tractor, any notion of a modern rural identity falls apart as well. Rural technologies, and hence rural modernity, are hoaxes when explored further by the urbane Douglas who exposes rural America as anti-modern and defunct in actuality. Mr. Haney embodies this urban notion that rural performative use hides an underlying anti-modern yeomanism existing in reality backstage.

When rural Americans actually act in *Green Acres*, they do so repeatedly as rubes. In one scene, Mr. Haney and a group of yokels forming the Chamber of Commerce plan to attract economic development by holding the Olympics in Hooterville. The fact that the board does not understand Douglas' argument that the small town cannot attract such an important event

---

<sup>440</sup> *Green Acres-A Few Scenes with Mr. Haney (3)* (December 25, 2013: MyyyClips).

<https://www.youtube.com/watch?v=5KaAO56WTe8> (accessed 5/26/16).

highlights the unworldliness of Mr. Haney and his provincial neighbors.<sup>441</sup> In yet another scene, Fred Ziffel, clad in old-fashioned overalls, attempts to open a bank account for Arnold, and becomes offended when a sophisticated banker tells him that he cannot open an account for a pig.<sup>442</sup> While one cannot definitively determine whether farmers in the Corn Belt viewed *Green Acres* as insulting or simply farcical and humorous, CBS did decide to remove it along with all of its other rural-based comedies from the air in 1971 because of low ratings. The *Atlanta Constitution* noted that the show found its greatest appeal in the Southeast, not the Midwest in spite of its focus on rural characters, implying that its lack of popularity outside of the South may have led to its demise.<sup>443</sup> No Midwest state even rated *Green Acres*, or any of the other CBS country-based comedies, among the top 25 of television shows in 1971. The article also notes that only local stations in Georgia, Alabama, the Carolinas, Tennessee, Louisiana, Mississippi and Texas chose to continue *Green Acres* in syndication after CBS discontinued it.<sup>444</sup> Thus, regardless of whether Midwest farmers actually expressed objections to the show, one can hardly view it as popular in the Corn Belt by the early 1970s. Indeed, any viewer can recognize that the ridiculousness of the displays of rural backwardness in the show reinforced the urban project of “othering” the American farmer, which accelerated in the 1920s, well before *Green Acres*.

Arnold and other rural characters in *Green Acres* serve as urban ways to prevent a rural capitalistic modern identity from becoming mainstream in the American consciousness. Such

---

<sup>441</sup> Ibid.

<sup>442</sup> *Arnold Ziffel Tests his Civil Rights - Green Acres - 1967 & 1968* (September 2, 2014: Shatner Method, MGM). <https://www.youtube.com/watch?v=fTEcL7bw6U4> (accessed 5/26/16).

<sup>443</sup> *Atlanta Constitution*, “CBS Kills Comedies,” March 18, 1971, 8B.

<sup>444</sup> Ibid.

rube stereotypes maintain notions of urban superiority and the morality of urban or suburban lifestyles.

Interestingly, Eddie Albert, the actor who played Oliver Wendell Douglas, viewed *Green Acres* through the lens of early organic food advocates who associated rural lifestyles with the unaltered Jeffersonian ideal. While Albert declared in an interview in 1965 that, “*Green Acres* is still part of the American dream” of “getting back to the soil,” he himself lived on an estate in the plush coastal neighborhood of Pacific Palisades, California where he planted an organic garden. One article highlighting Albert’s “grounds” pictures him sitting under an arbor taking a break from gardening and enjoying a cup of tea. He wears a pair of khaki pants and a polo shirt with dress shoes and black socks. His hair appears perfectly styled as if on the set of *Green Acres*. Another photos shows Albert dressed in the same manner in his garden wielding a small gardening trowel. The author of the article seems surprised that the actor plants most of the trees and flowers himself. In another interview from “the actor’s suite in a downtown hotel,” Albert noted how he also formed Eddie Albert Productions “which will aid in national and international campaigns against environmental pollution.”<sup>445</sup> Albert, who described himself as “a conservationist,” also traveled the country to give speeches about conserving wildlife and worked with universities to develop “model organic farms which would grow only organic food.” The author of one article, Norma Lee Browning, noted that “The organic garden at his Pacific Palisades home had helped make him an expert.” Albert described his estate as, “We grow corn, beets, carrots, lettuce, and other vegetables. We can’t grow enough to feed the whole family so we buy more at health food stores.” Albert went onto note, “I own several farms which

---

<sup>445</sup> *Washington Post*, “Eddie Albert: A Green Thumb,” November 15, 1970, 34; Marion Purcelli, “Green Acres, an Electronic Shangri-La,” *Chicago Tribune*, December 5, 1965, N10.

I visit regularly and I'm training people to run and organize them. They're learning modern agricultural techniques and, at the same time, providing more organic foods which are free of DDT and other pesticides." Thus, for Albert, the dream of "all men" of leaving the city for the country depicted in *Green Acres* actually meant reoccupying an idealized Jeffersonian pastoral space where one would practice non-technological organic production rather than rural capitalistic modernity. Even though he uses the term "modern agriculture," one should not view Albert's version of modernity as the same as that held by a majority of Midwest farmers. Ironically, in the same article he discusses his "agricultural" activities (recall that he did not even feed his own family with his garden), Albert immediately turns to describing his work with the "glamorous" and urbane Eva Gabor who played his wife on *Green Acres*.<sup>446</sup> Gabor famously wore "a \$150,000 square-cut necklace" as well as negligees designed by the acclaimed fashion designer, Jean Louis.<sup>447</sup> Gabor even insisted that CBS hire "one of Hollywood's most expensive and expert" hairdressers, Peggy Shannon, and makeup artists, Gene Hibbs, as part of her contract. One author writing for urban readers in Los Angeles in an article entitled "Hungary Meets Hillbilly, U.S.A." thought it amusing that Gabor had trouble understanding the country accents when visiting the set of *Petticoat Junction* and declared "What's a chic Hungarian like her doing in a barnyard?"<sup>448</sup> Prior to *Green Acres*, Albert acted alongside the equally glamorous Audrey Hepburn for the movie "Roman Holiday" for which he received an Academy Award

---

<sup>446</sup> Norma Lee Browning, "Eddie Albert Just Loves Green Acres on and Off the Screen," *Chicago Tribune*, May 24, 1970, S2.

<sup>447</sup> Adams, "Eddie Albert Due in Comedy Series," 67.

<sup>448</sup> Hal Humohrey, "Hungary Meets Hillbilly, U.S.A.," *Los Angeles Times*, August 9, 1965, C20.



nomination.<sup>449</sup> Indeed, the Corn Belt farmers of the late 1960s would likely have not related to Albert's Hollywood lifestyle or to his organic garden on the Pacific Coast between Brentwood and Malibu, California any more than they would have seen the outdated tractor driven by Oliver Wendell Douglas as representative of their modern capitalistic identities.

*Assumptions of Persistent Jeffersonian Agrarianism Among Some Environmentalists and  
Policy Advocates*

Many current policy advocates and environmental activists have also adopted the narrative of the anti-modern early twentieth-century Jeffersonian as a way of critiquing agribusiness.<sup>450</sup> By creating a romanticized nostalgia about early and mid-twentieth-century farming, activists, such as poet Wendell Berry and botanist and geneticist Wes Jackson, construct a false image of the family farm as a place where anti-modern families practiced environmental stewardship with the goal of keeping their farms small and building strong communities.<sup>451</sup> These advocates have adopted pure Jeffersonian agrarianism while combining it with a more contemporary environmentalist ethos creating an update notion of morality. More importantly, these critics of modern agriculture have assumed that farmers themselves also strive for this

---

<sup>449</sup> Browning, "Eddie Albert Just Loves Green Acres on and Off the Screen," 52.

<sup>450</sup> Danbom, *Born in the Country: A History of Rural America*, 256-257.

<sup>451</sup> Wendell Berry, *The Art of Common Place: The Agrarian Essays of Wendell Berry* (Berkeley, CA: Counterpoint Press, 2002); Berry, *The Unsettling of America: Culture & Agriculture* (Sierra Club Books: 1977); Wes Jackson, *Consulting the Genius of the Place: An Ecological Approach to a New Agriculture* (Berkeley, CA: Counterpoint Press, 2010); Jackson, *New Roots for Agriculture* (San Francisco, CA: Friends of the Earth, 1980).

same blend of pure Jeffersonian and environmentalist virtues against a menacing, all-powerful, and immoral agribusiness. Farmers, as powerless victims, find themselves blocked by industrial interests from re-capturing a pre-technological Jeffersonian golden age. Berry, for example, describes the typical farm prior to World War II in utopian terms as:

The farms were generally small. They were farmed by families who lived not only upon them, but within and *from* them. These families grew gardens. They produced their own meat, milk, and eggs. The farms were highly diversified... In those days the farm family could easily market its surplus cream, eggs, old hens, and frying chickens. The power for field work was still furnished mainly by horses and mules. There was still prevalent pride in workmanship, and thrift was still a forceful social ideal. The pride of most people was still in their homes, and their homes looked like it.<sup>452</sup>

Berry characterizes this image of pre-World War II agriculture as the dream of Jefferson because it promoted communities of small farmers who eschewed what Jefferson referred to as “artificers,” but what would later be called manufacturers of technology.<sup>453</sup>

Berry sees the history of twentieth century agricultural change as a moral devolution following a common pattern within white European society in which the strong exploits the weak. Just as European settlers exploited Native Americans or slave owners used their strength to dominate slaves, Berry argues, “institutions of agriculture” such as “the university experts, the bureaucrats, and the ‘agri-businessmen,’” ruined these Jeffersonian communities by forcing

---

<sup>452</sup> Wendell Berry, *The Unsettling of America: Culture & Agriculture*, 39-40.

<sup>453</sup> *Ibid.*, 13, 143-144.

technology and “bigness” upon them in the name of efficiency and progress.<sup>454</sup> The farmer in Berry’s narrative clearly lives as a victim of technological change. He lacks any agency in deciding which technologies to adopt or how to use them and lacks savvy to pierce the veil of official statements from the United States Department of Agriculture (USDA) and other institutions extolling progress and faith in technology. The farmer is either forced to adopt bigger and newer artifacts or is fooled into doing so at his own expense ultimately leading to the ruin of his communities, environment, and Jeffersonian way of life.<sup>455</sup> Thus, for Berry, pure Jeffersonian agriculture formed the only possible moral way of farming and technology, purely the tool of urban industrialists and their institutions, always threatens this morality.

Further, Berry contends that “food is a cultural product; it cannot be produced by technology alone.” Berry regards “culture” as “familiarity” that “can grow only among a people soundly established upon the land; and it nourishes and safeguards a human intelligence of the earth that no amount of technology can satisfactorily replace.”<sup>456</sup> Berry and many other critics of contemporary mainstream agriculture associate less technological forms of production with a greater connection to place and a more intimate knowledge of the land itself. These authors assume that some immoral act has occurred on the part of an outside governmental or economic power who have broken these sacred rural connections between farmers and the land by introducing technology and modern farming methods. Of course, for these advocates, modern farming technology also destroys the natural environment. As one small Ohio farmer stated in a collection of essays compiled by Wes Jackson and liberal studies professor and environmentalist

---

<sup>454</sup> Ibid, 4-6.

<sup>455</sup> Ibid., 32-33.

<sup>456</sup> Ibid., 43-44.

William Vitek about his farm “Where else can one be so much a part of nature and the mysteries of God, the unfolding of the seasons, the coming and going of the birds, the pleasures of planting and the joys of the harvest, the cycle of life and death? ... Here on our 120 acres I must be a steward of the mysteries of God.” The small farmer, David Kline, credits his Amish and Mennonite friends with this spiritual insight about land.<sup>457</sup> Juxtaposed with essays by Berry and others lamenting the blind faith in technology proffered by “institutions” of modern agriculture justifying “the destruction of every aspect of rural life,” Kline’s essay clearly impresses the reader with the message that less technological Amish-style farming preserves this sacred bond with the land whereas modern mechanized agriculture affronts not only communities but God.<sup>458</sup> Again, in the Jeffersonian tradition, technology and morality stand in an inverse relationship.

In addition, from the perspective of Berry and some organic advocates, technology and culture form completely separate and even opposing domains. Rather than viewing technology as socially and culturally constructed, policy advocates critiquing modern agriculture sometimes frame advanced or large technologies always as destroying and undermining culture. “The best farming requires a farmer-a husband-man, a nurturer-not a technician or businessman,” Barry argues. The know-how required to farm comes only as accumulated knowledge through established communities and families whereas technicians and businessmen can come out of training in any university. Thus, farming culture requires the preservation of place where

---

<sup>457</sup> David Kline, “An Amish Perspective,” in *Rooted in the Land: Essays on Community and Place*, ed. William Vitek and Wes Jackson (New Haven, CT: Yale University Press, 1996), 35-39.

<sup>458</sup> Wendell Berry, “Conserving Communities,” in *Rooted in the Land*, 78.

knowledge can accumulate, which also calls for resisting the encroachment of advanced technologies and “community-killing agriculture.”<sup>459</sup>

Further, technology often carries with it capitalistic competition detrimental to communities and the environment. Rather than seeking to preserve lasting farming communities and resources, institutions of agriculture have duped farmers into seeking relief from dignified forms of manual labor by purchasing the newest technologies.<sup>460</sup> For example, in discussing the rural town of Matfield Green, Kansas, which had fallen into decay by the mid-1990s, Wes Jackson highlighted programs he had read from the New Century Club, a social organization of women in the town from 1923 to 1964. For Jackson, modern capitalistic farming methods and technologies destroyed this virtuous community. He writes, “Despite the daily decency of the women in the Matfield Greens, decency could not stand up against the economic imperialism that swiftly and ruthlessly plowed them and their communities under.”<sup>461</sup> We should, therefore, reject contemporary mainstream farming as big business and return to the simpler, more environmentally conscious times existing prior to World War II. The moral course points towards promoting the Jeffersonian agrarian, his “pastoral garden,” and his rural community oppressed by the interests and technologies of “industrial agriculture.” The organic advocate and environmentalist can thus save the oppressed Jeffersonian farmer.

I will return to a discussion of how this narrative of Jeffersonian agrarians (who some organic policy advocates view as reluctantly submitting to technological change imposed by

---

<sup>459</sup> Berry, *The Unsettling of America: Culture & Agriculture*, 41.

<sup>460</sup> *Ibid.*, 12, 45-47, 59.

<sup>461</sup> Wes Jackson, “Matfield Green,” in *Rooted in the Land*, 98-103.

immoral agribusiness) have helped construct an *organic reformist discourse* identity bundle in Chapter 8. While this organic identity does not in actuality represent all organic advocates, it does present a bundle of views that seems threatening when seen from the perspective of many farmers. Modern capitalistic farmers in the Corn Belt often regard organic discourse as advocating a view of technology as an immoral male domain and the farmer as an anti-modern Jeffersonian agrarian. These perceived aspects of organic identities tend to rekindle old rural resentments over yokel stereotypes and constructions of rural femininity.

---

To conclude, the Cold War strengthened the discourse identity bundle of rural capitalistic modernity that had formed in rural America in the 1920s. This buttressing of rural capitalistic modernity occurred during the 1950s and 1960s because rather than fully conflicting with competing urban identities, as it had during the rural-urban conflict, it now partially aligned with nationalistic ideologies and political discourses opposed to the perceived threat of communism. Importantly, rural capitalistic modernity did not abandon its distrust of urban industrialism. Rather, the Cold War resulted in a paradox in rural performative use. On the one hand, it encouraged farmers to use the newest technologies as a means of carrying out the patriotic aims of urban politicians and government officials to contest the Soviet Union. Farmers willingly viewed their technological use as fighting the Cold War because they saw parallels between the collectivization of the Soviet peasant and the urban industrialization of the American farmer at places such as Hawthorn farms in the 1920s. Both systems violated Jeffersonian and German agrarianism, which served as foundations for rural capitalistic modernity, by denying farmers control over work processes and engage in family-based production on their own land. On the other hand, rural capitalistic modernity retained its resentment of urban dwellers and its distrust

of urban industrialization. Even though rural capitalistic modernity strengthened in the Corn Belt as a result of its usefulness in promoting of Cold War objectives, rural resentment against urban actors may have actually even increased during this period due to the stubborn persistence of images of the farmer as a Jeffersonian agrarian resistant to change. I have identified urban television producers and environmental policy advocates as two important agents in fanning rural resentment already present in the Corn Belt as a result of the rural-urban conflict in the 1920s. Thus, farmers during the Cold War saw themselves as both supporting and opposing urban discourses and ideologies presented to them in the social ether.

In the next chapter, I will contend that the strengthening of rural capitalistic modernity during the Cold War also led to an evolution into rural ultramodernity by the 1970s. Further, I argue that by developing an ultramodern identity that viewed farmers as heroically solving a global food shortage, rural globalized ultramodernity sought to alleviate the paradox within rural capitalistic modernity. Namely, by emphasizing the pride farmers should feel in meeting the challenges of a global food supply, rural globalized ultramodernity allowed farmers to use technology to perform a familiar Jeffersonian identity as a hero. Rather than viewing themselves as braving the frontier, farmers now see themselves as combating world hunger. By regarding themselves as heroic figures in a global food network, farmers can also retain their opposition to urban industrialization and urban dwellers who Corn Belt residents regard as not appreciating the importance of “real” farmers in meeting the global food crisis. As a result of this rural globalized ultramodernity, farmers can engage in performative technological use without the tension between rural resentment of urban industrialization and allegiance to urban political ideologies. Consequently, rural globalized ultramodernity helped to solve the paradox facing farmers when using technology to reinforce rural capitalistic modernity during the Cold War.

In addition, since the 1970s, farmers' performative use of technology takes on a heightened moral tone because by using the newest artifacts, the ultramodern agrarian fights two virtuous battles. He or she combats both world hunger and urban stereotypes embedded within urban industrialization. In chapter 8, I will explain that in addition to opposing the industrialists and reformers, Corn Belt farmers now also view the organic and sustainable foods movement as an urban threat that they must oppose through technology use. A skeptic may raise the point that contemporary farmers in the Corn Belt find themselves controlled by urbanized agribusiness by way of their participation in the global food network. However, my theory commits me to view technology use from the farmer's perspective and to determine what identities he or she forms by employing material objects. In the next chapter, it will become clear that when contemporary Corn Belt farmers engage in discourse such as "People in cities do not know what real modern farming is like" or "Urban people do not appreciate where their food comes from," what they actually mean is "Urban actors still do not recognize the existence, or the morality, of my ultramodern identity."



## Chapter 6<sup>462</sup>

### “We Feed the World:” Rural Globalized Ultramodernity

*We need your angus cattle to satisfy the customers at our 200 restaurants in Japan. My customers like juicy, well-marbled, tender and delicious beef. They won't settle for anything less. That's why we selected Certified Angus Beef when we were looking for American beef to use in our 200 new Tokyo restaurants.*

Yashiro Honma, Tokyo restaurant executive, 1992.<sup>463</sup>

By the 1980s, the Cold War discourse of rural capitalist modernity had morphed into an ultramodern discourse in which many farmers thought of themselves as surpassing their urban cousins in terms of technological savvy. As I will argue, farmers developed self-images as heads of sophisticated technoscientific systems through computerized networks, remote sensing, and site-specific technologies. Farmers have gone beyond using technology as a means of claiming their own version of modernity. Instead, they use it as a means of constructing an identity of *greater* modernity. Hence, this discourse frames the farmer not as a user of science and engineering, but as someone who remains on par with scientists and engineers – as an expert who combines technical and scientific knowledge with practical experience. (As historian Benjamin Cohen argues, an emphasis on the practical played an important role in American rural

---

<sup>462</sup> Part of this chapter will be published in the upcoming article, Brinkman and Hirsh, “Welcoming Wind Turbines and the PIMBY (‘Please in my backyard’) Phenomenon: The Culture of the Machine in the Rural American Midwest,” (forthcoming 2017). Paper accepted for publication by *Technology and Culture* on September 25, 2015.

<sup>463</sup> “Angus: the Business Breed,” *American Angus Association* advertisement, *Successful Farming* (January 1992): page unknown.

identity as early as the eighteenth century.<sup>464</sup>) The discourse of *rural globalized ultramodernity* continues this practice-based ethic, but in a way that reinforces an updated identity. As Joseph Frazier Wall explains in his 1978 history of Iowa, the farmer thinks of himself as “no longer the simple tiller of the soil; he had become a remarkable hybrid himself-part geneticist, part chemist, part mechanic, part processor.”<sup>465</sup> Just as rural capitalistic modernity built on and added to the existing discourse identity bundle of traditional Jeffersonian and German agrarianisms, ultramodernity incorporated aspects of rural capitalistic modernity including the goal of eliminating urban stereotypes of the “bumpkin” farmer. In spite of the farmer’s self-image as above urban expertise, the rural-urban conflict remains as an unspoken ingredient within the ultramodern discourse identity bundle. Farmers still use technology to perform their identities and combat urban yokel stereotypes. When discussing letters written by Iowans on farms in the 1850s and 1930s, for example, Wall notes a common thread among farmers in these eras and agrarians in 1978 in spite of drastic technological changes. Wall claims that farmers in all three eras “were highly suspicious of town folk with their superior ways, their lack of understanding of the farmer’s problems.”<sup>466</sup> Similarly, ultramodernity retains traditional Jeffersonian and German rural values such as imbuing the dominant image of an independent producer on a “family farm” with morality as well as the cultural practice of displaying wealth through productive artifacts. As Wall recognized, this ultramodernity has not created an identity that completely abandons prior rural discourse identity bundles when he writes, “Yet, in spite of the revolutionary changes

---

<sup>464</sup> Benjamin R. Cohen, *Notes from the Ground* (New Haven, CT: Yale University Press 2009), 34-35.

<sup>465</sup> Wall, *Iowa: A Bicentennial History*, 133-134.

<sup>466</sup> *Ibid.*, 135.

that have occurred in agriculture during the last century and a half, ... the farmer himself has remained a remarkably consistent feature in our society.”<sup>467</sup> According to the farmer in the Corn Belt, he still has not become an urban industrialist. Rather, he or she uses technology to form and perform an updated version of rural modernity.

Unlike identities and discourses prevalent through the Cold War, farmers guided by ultramodernity no longer see themselves in nationalistic terms, or as using technology as proof of the superiority of capitalism over socialism, but as globalized businessmen using a high level of business and technical expertise to compete in an ultra-competitive global market. The farmer no longer views him- or herself as a single modern user of technology reasserting rural agency in the face of urban reformers. Rather, Corn Belt agrarians regard themselves as the head of a sophisticated technoscientific network of scientists, agricultural engineers, crop and soil analysts, commodities traders, and accountants all connected to the farmer’s field through computerized networks, remote sensing, and site specific technologies. This shift in the farmer’s identity from an American farmer to a world farmer parallels in many ways the change in the early twentieth century from a collective to an individual producer. In both instances, the farmer not only operates within different agricultural networks of production, but also sees himself or herself in those terms and moralizes the new self image by combining it with prior bundles of identities and discourses. In both cases, the farmer uses technology to develop and maintain this moral identity. In the most recent version of this cultural practice of technological use, farmers go beyond using the technology as a means of reclaiming their own version of modernity from urban efforts to define it, but use it as a means of constructing an identity of *greater* modernity.

---

<sup>467</sup> Ibid., 134.

Further, rural denizens view this ultramodern identity in as an inborn or inherited trait arising out of an underlying view of history as a progressive march towards better material objects with greater productive capacity. This idea of progress arises not just from many years of using technology to reinforce a discourse and identity of rural capitalistic modernity, but through active use of artifacts, old and new, which highlights how both the machine and the farmer have modernized. Hence, this discourse frames the farmer not as using science and engineering but as *above* scientists and engineers, as the one expert combining technical and scientific knowledge with practical experience and actual use of artifacts to produce. For example, when farmer Rodney J. Fee rejoined *Successful Farming* as their Senior Livestock Editor in 1992, he found it necessary to create trust with his readers by opening his debut article entitled “Production” with “After 12 years of what my dad would have called ‘good practical experience’ down on the farm, I’m back again at *Successful Farming*, behind a computer screen (an editor’s modern-day typewriter).” If Fee’s practical experience as a farmer did not gain his reader’s trust, he then recalled how he attended a presentation at the “’92 farm outlook session” in Kansas City, MO by economist Bill Hemming about ending “the USDA’s long-established beef cattle quality grading system.” While Fee ultimately agreed with Hemming’s argument, he instead highlighted in large bold letters in the middle of his text “All we need is another economist telling us how to make money on cattle!”<sup>468</sup> Fee’s article is clearly a performance of identity. The new livestock editor sought to establish trust by aligning himself according to an ultramodern discourse identity bundle among his readers that saw the practical modern farmer as the superior expert with higher moral standing than the urbanized “other” represented by the economist. In bringing up his father’s valuing of practical farm experience, Fee not only

---

<sup>468</sup> Rodney J. Fee, “Production,” *Successful Farming* (February 1992): 23.

positioned himself as an ultramodern “us,” but also subtly implies an inborn modernity and expertise that he shares with his intended audience.

Ironically, by adopting an ultra-modern identity, the farmer relinquishes agency as a member of an ultra-modern technical network. The farmer adopts technologies unconsciously and, in some cases, unknowingly. Simply put, the farmer must adopt the newest, most sophisticated, technology without question because it represents ultramodernity and practically, but also because he or she will fail financially by resisting the imperatives of the system.<sup>469</sup> In the words of Thomas Hughes, the farmer finds himself ensnared in a technological momentum that he himself helped to create and, from the farmer’s point of view, he still controls.<sup>470</sup>

Advertisements and editorials in farm journals published in the 1990s and 2000s reflect farmer’s use of technology to re-enforce this rural ultramodern globalized identity. Journals such as *Successful Farming*, a popular farm journal printed since 1902 from Des Moines, Iowa, and its online version, *Agriculture.com*, presented articles by technology and machinery editors

---

<sup>469</sup> The view that the pressures of a rational and reductionist system compel farmers to adopt increased mechanization and scientific practices is discussed extensively by Deborah Fitzgerald. Fitzgerald, *Every Farm a Factory: The Industrial Era in American Agriculture*, Introduction.

<sup>470</sup> Thomas Hughes, “Technological Momentum,” in *Does Technology Drive History? The Dilemma of Technological Determinism*, ed. Merritt Roe Smith and Leo Marx (Cambridge, MA: MIT Press, 1994): 101-113; Hughes, “The Evolution of Large Technological Systems,” in *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology*, ed. Wiebe E. Bijker, Thomas P. Hughes, and Trevor J. Pinch (Cambridge, MA: MIT Press, 1994): 51-82.

to show that farmers had reached a level of technology use that made them more modern than the average American. For example, machinery editor Dave Mowitz in a January 1992 edition of *Successful Farming* praised the “wonder of a farmer’s mechanical genius” and exclaimed “There isn’t a staff of engineers in this world that can top the inventiveness of farmers.” Mowitz boasted that without engineering degrees, farmers had invented the combine, the corn picker, the four-wheel drive tractor, the pivot sprinkler, and the pneumatic planter. Mowitz then announced that the journal planned to team up with Conoco to sponsor a National Farmers Inventors Conference, solely to highlight “success stories” of ultramodernity.<sup>471</sup>

In another editorial in *Successful Farming* in September of 2000, machinery editor Larry Reichenberger expressed amazement that his tractor in Kansas used remote radio sensor fuel monitors connected to his fuel company that then used a global positioning satellite to route a fuel truck directly to his tractor in real time. While Reichenberger projected the same ultramodernity as Mowitz, he also wrote “Despite our reluctance, we were surprised this spring to realize that site-specific farming technology found us anyway.”<sup>472</sup> Reichenberger’s fuel supplier simply incorporated him involuntarily into a completely new technological system of fuel, satellites, and remote sensing. While this reflects recognition by some farmers of their ironic lack of agency in forming ultramodern identities, they tend to overlook such self-reflexivity when interacting with urban dwellers. When under the observation of urban residents, the farmer once again becomes conscious of “yokel” stereotypes and normally presents himself or herself as an ultramodern businessperson who willingly, and skillfully, uses technology. In other words, the rural modern

---

<sup>471</sup> Dave Mowitz, “Production,” *Successful Farming* (January 1992): 27.

<sup>472</sup> Larry Reichenberger, “Technology is Trickling Down Into Every Aspect of Agriculture,” *Successful Farming* (September 2000): 39.

discourse driven by rural-urban contestations over the meaning of modernity re-asserts itself. For example, a February 1992 article about a farm family from Missouri participating in a Smithsonian Festival of American Folklife, told the story about how the family resisted efforts of the festival to frame their lifestyle as an example of old-fashioned “folk” culture, to show the urban viewers the true ultramodern character of Midwest farming. The article stated “With Washington’s Smithsonian Institution for a stage and a million eastern urbanites for an audience, the Harlan Borman family taught visitors more than just cow-milking and pie baking. They brought modern agriculture to Capitol Hill.”<sup>473</sup> In a ritual that may have looked quite familiar to Benjamin Rush and the German farmers of Pennsylvania two hundred years before, the article celebrated how the farm family debunked urban “yokel” notions of farm life. The author continued to write “Their mission: To help educate the more than one million urban visitors to the Institution during those two weeks about life down on the farm as it really functions today.” The article described the Borman’s farm in Missouri to highlight its ultramodernity and impressive productive capacities:

The Bormans farm 575 acres just off Interstate 70 east of Columbia. With a milking herd of about 100 head, their rolling herd average is just over 20,000 pounds of milk and 750 pounds of fat. Their registered Holstein herd started from 4-H projects and has been shown successfully at several state and national shows.

They take pride in forages. Last year’s sixth cutting off one 15-acre field yielded nearly 13 tons. Part of the farm is irrigated with a center-pivot

---

<sup>473</sup> Rodney J. Fee, “Successful Family Farm,” *Successful Farming* (February 1992): 42.

system. They plant 150 acres of corn, 100 acres of double-cropped wheat and no-till beans.

A DeLaval Computerized Feeding System meters concentrates to high producers. Programmable transponders program each cow's feed needs.<sup>474</sup>

Above this description of ultramodernity, the author included two revealing photos. One photo shows the family around the dinner table to highlight several features of an older Jeffersonian and German rural morality such as family, production, and independence. The second image pictures two women in a highly technical milking station with the caption "Judy and daughter Kate take an active role in milking when the men are gone in the fields. The clean double six parlor speeds milking chores" in order to juxtapose the latest hardware with a family-based production process.

A few more ads and articles (of literally hundreds) from *Successful Farming* demonstrate the character of this ultramodern discourse. One category of articles draws on Mowitz's imagery of the farmer as an ultra-modern inventor of a completely new technology. For example, an article from June 2000 told the story of David Herbst who invented a way to use solar powered computers to open and close valves on an irrigation system as part of "an ambitious land-leveling program to make the operation more efficient" allowing him to expand a farm "his grandfather had founded as a teenager on 10 acres" to a 3,800-acre farm. Herbst won the American Farm Bureau Federation's Young Farmer and Ranchers Award contest because his use of irrigation technologies offered "unique approaches to caring for the environment and managing in an era of

---

<sup>474</sup> Ibid., 43.



rented land and labor shortages.”<sup>475</sup> The photo accompanying the article shows Herbst in work clothes but he does not perform grueling manual labor. Rather, the photos show him programming his complex computer systems both on the main irrigation console mounted on a large green trailer with wheels and on an irrigation pipe. Another article in January of 1992 related how other farmers modified their corn and soybean drills to create a “super drill” that could accurately plant in different row sizes and configurations. The article characterized Paul Beckman as the “Sperry, Iowa innovator.” The author continued, portraying Beckman’s device as “Farmer ingenuity creates a new generation of high yield planters” and described the design in detail as mounting “an old IH 400 Cyclo blower” on “a John Deer 750 no-till drill.” As Beckman explained, “We pulled the new tube out [of the blower] and inserted the new hose and clamped it in place.” Beckman then reversed the blower’s seed meter to synchronize it with the seed drive system on the drill allowing him to use it to no-till drill for beans and no-till plant corn with the same device. In Beckman’s words, he created “the ultimate do-it-all planter with tremendous down pressure to cut through the residue.” The picture accompanying the article shows Beckman with other male family members kneeling in a perfectly cultivated field with their impressive super drill in the background connected to a tractor complete with a complex mechanism of gears, drums, wheels, and pistons. The title of the article proudly stated, “Farmer ingenuity creates new generation of high yield planters.”<sup>476</sup>

---

<sup>475</sup> Bill Eftink, “Missouri Family Bets on Irrigation: Irrigation Boosts Corn Yields by 30 to 40 Bu an Acre,” *Successful Farming* (May-June 2000): 60-64.

<sup>476</sup> Dave Mowitz, “Super Drills: Farmer Ingenuity Creates New Generation of High Yield Planters,” *Successful Farming* (January 1992): 42-43. See also Rich Fee, “Long-Armed

Another category of *Successful Farming* articles showed farmers creatively using advanced technologies in new and novel ways.<sup>477</sup> Articles from 2000, for example, demonstrated how farmers take it upon themselves to employ satellite data to manage herbicide application and track cattle grazing requiring ultramodern interpretation of graphing data.<sup>478</sup> A photo from a 2000 article in *Successful Farming* entitled “Precision Pastures,” a farmer hangs a GPS unit from a cow’s collar so that he can map his herd’s grazing patterns.<sup>479</sup> In another article from the same year a photo shows one farmer holding a satellite mapping device in a field to identify where different species of weeds growing with more precision. The caption reads, “Each species has a distinct reflection signature, which lets Tim Klaus map leafy spurge infestations.” Klaus, wearing a Valvoline oil hat poses with the device in both hands looking

---

Sprayers: With a Little Ingenuity and a Lot of Built-In Strength, these Sprayers Reach Out and Touch a Bunch of Acres,” *Successful Farming* (February 1992): 26-27.

<sup>477</sup> See for example “Sensor on Center Pivots Offer Site Specific Irrigation,” *Successful Farming* (December 2000): Production; Lisa Foust Prater, “Pioneers Blaze Trail Through Digital Divide: South Dakotans Go On-Line to Learn, Do Business, Keep in Touch,” *Agriculture.com* (Fall 2000): 18-21; Dan Looker, “Click and Contract: Online Marketing gets Serious,” *Agriculture.com* (Fall 2000): 10-11.

<sup>478</sup> Larry Reichenberger, “Precision Pastures: GPS-Equipped Cattle Map Grazing Patterns,” *Successful Farming* (May-June 2000): Special Bonus Page; Mike Holmberg, “Sky-High Scouting: From Ultralights to Satellites, You have More Opportunities to Get a Bird’s Eye View of Your Crops,” *Successful Farming* (May-June 2000): 34-38.

<sup>479</sup> Larry Reichenberger, “Precision Pastures: GPS-Equipped Cattle Map Grazing Patterns,” *Successful Farming* (May-June 2000): Special Bonus Page.

back over his shoulder at the camera. Next to the photo of Klause, another farmer wearing a cowboy hat kneels in his field looking at the camera with a satellite data map spread between his two hands as if interpreting it for precision herbicide application. The article describes the two ultramodern farmers as engaging in “sky-high scouting” through the use of utralights and satellites.<sup>480</sup>

In a special edition of *Successful Farming* entitled *Agriculture.com*, the magazine dedicated a whole issue to articles showing how farmers surpassed urban dwellers in their use of computers to purchase goods, trade commodities online, manage crops and cattle in various ways, and share knowledge.<sup>481</sup> In an article from a 2000 issue of *Agriculture.com* entitled “Milking the Net: Dairy Producer Bases Business Decisions on Internet Info,” Ohio farmer Jay Herron poses with his newest John Deer tractor. He has one foot up on the front wheel well with one hand in his pocket. He holds CDs for aiding in his farm business and tools purchased on the Internet sit on the ground next to the tractor as well as on the huge machine to display to the camera. One sees Herron’s prosperous farm buildings, silos, and grain bins in the background to indicate his success. The photo draws the viewer’s eyes upward as four large Harvester silos in the background rise into the sky. The silo directly behind the machine in the center of the picture displays an American flag that seems to overlook Herren and his ultramodern display of technology. The caption to the picture states “Jay Herron used the Internet to buy or do research

---

<sup>480</sup> Holmberg, “Sky-High Scouting.”

<sup>481</sup> Chester Peterson, Jr., “Milking the Net: Dairy Producer Bases Business Decisions on Internet Info,” *Agriculture.com* (Fall 2000): 36; Paul Schroeder, “Simply Incredible!: Cows Accept the Challenge, Milk Goes Up 8,000 Pounds,” *Successful Farming* (April 2000): 26-27.

on all these farm items, including the tractor.”<sup>482</sup> The article invites the reader to count the number of new technologies purchased or researched on the Internet as if such a tally proves the ultramodern identity of not just Herron but of all farmers in the Corn Belt (note how farm women in the 1924 USDA report in Chapter 4 presented a similar tally of artifacts to demonstrate their modernity). Another article from 2000 in *Successful Farming* discusses use of computers and sophisticated analysis of milk production. It pictures a young farmer at a computer managing each cow from his office. He appropriately wears a “Pioneer” seed shirt with the older farmer symbolically positioned behind him dressed in old-fashioned overalls. The older farmer has his right hand on the young farmer’s shoulder as if to proudly encourage his son to carry on an even more modern legacy. The image is clearly one of ultramodern progress from an urban dominant image of an old farmer in overalls to a young computer-using “pioneer,” the dominant image that rural ultra-modern agrarians would like urban dwellers to see.<sup>483</sup>

Similarly, an article in 1992 featured two farmers in Kansas who modified a Caterpillar tractor to run between narrow rows of corn thereby increasing yields. The article reinforces the view farmers have of themselves as the true modern technology users ahead of both urban businesses and university scientists and engineers by stating “The Larned, Kansas, innovators spent 9 months on and off on making the modifications to mount the narrow tracks on a Caterpillar AG4 (an experimental tractor Caterpillar never brought to market).” The article happily noted that the two farming brothers’ theory that Caterpillar tracks increased yields by

---

<sup>482</sup> Peterson, Jr., “Milking the Net.”

<sup>483</sup> Paul Schroeder, “Simply Incredible!: Cows Accept the Challenge, Milk Goes Up 8,000 Pounds,” *Successful Farming* (April 2000): 26-27.

avoiding soil compaction by standard tractor wheels was “confirmed by a 3-year Iowa State University-USDA study which found a 14% increase in corn yields when track rather than wheel tractors were used.”<sup>484</sup> As with Jay Harren’s photo with his machine, the two brothers pose with their modified tractor with the camera capturing the full length of the added caterpillar tracks. One of the brothers poses with his leg up on the implement attached to the front of the tractor. By using and modifying technologies, “the Crane boys” and other farmers reinforce a discourse identity bundle that frames him or her as more modern than even the most cutting edge tractor companies or innovative university scientists or engineers.

One further article from *Agriculture.com* presented a short biography of a farmer, Gene McCool, who traveled the world designing computer software for companies and used his computer knowledge on his western Iowa farm. The farmer hoped to trade in his “exotic” life as a computer consultant to farm with his wife and son full time in Iowa. When asked “What’s ahead for cows and computers?” McCool’s answer exhibited an ultramodern vision of highly technical progress:

Visualize this: sick cow; it’s 2 a.m. and storming. You take a video of the cow, download it to your computer, e-mail to the vet, who reviews the video and return e-mails a treatment until he can arrive. Computer chips will soon track my cattle all the way through the packer. In the future a computer chip implanted in a cow will be able to tell me her temperature, metabolic rate,

---

<sup>484</sup> Chester Peterson, Jr., “Cats in Corn: The Crane Brothers Tapped the Advantages of Cat Tractors by Converting One to Run Between Rows,” *Successful Farming* (January 1992): page unknown.

whether she is sick, and so on. I envision an implanted chip will tell me the perfect time to AI, or tell me when labor has started. Until now, computers in ag, for the most part, have been used as record keepers. In the future, computers will become as much a tool as a tractor or pickup.

The accompanying photographs show McCool posing in both traditional rural clothes and sophisticated business attire at his farm with a computer perched on a fence.<sup>485</sup> In each picture, one sees McCool's cows and barn in the background so as to challenge urban notions that see a dichotomy between rural and sophisticated modern imagery. The article and the photo convey that farmers participate intimately in a computer revolution as ultramodern developers and designers in order to combat urban images of the yokel farmer. The computer, like the tractor and pickup truck noted by McCool, becomes another device farmers can use to practice their ultramodern identities.

Finally, advertising in *Successful Farming* from 1990 to 2000 appealed directly to an ultra-modern rural identity. For example, in an ad for *Agriclick.com*, a web site for the ultramodern farmer, pictures a computer mouse divided into sections with all of the modern functions for the ultramodern farmer. The list of items encompassing the purview of the ultramodern farmer include "Product innovations, crop report, market forecast, cash markets, futures analyst, events calendar, weather vane, technology advisor, government correspondent, and business news." The list of functions appeals to the farmer's view of himself or herself as an ultramodern globalized businessperson using technology to wield both economic and political

---

<sup>485</sup> John Walter, "People Pages: He Blends Computers and Cows," *Agriculture.com* (Fall 2000):

power. The caption states, “Long before the internet, farmers learned from other farmers. Their knowledge was a collection of experiences, each generation teaching the next. And each generation understanding farming as only farmers can.”<sup>486</sup> An ad for Aventis Crops proclaimed, “America’s farmers thrive on innovative thinking” and then elaborated for two pages, “The American farmer is a born innovator. To be successful, he had to know how to fix things. Or learn fast. When an idea has merit, he’ll try it out. Then if it works to his satisfaction, he’ll show you a better way to do it than you ever imagined.”<sup>487</sup> In another ad, the Council for Biotechnology Information framed the farmer as the expert on using biotechnology to grow and manage soybeans.<sup>488</sup> This image of the farmer as the ultimate expert appeared again in an ad for Pioneer Forage seeds in 1992. The photo shows the farmer surrounded by a team of smiling experts including an agronomist, microbial products specialist, corn breeder, pathologist, nutritionist, and microbiologist.<sup>489</sup> The photo appeals to the farmer’s self-image as the head of an ultra-modern technoscientific network.

This ultramodern rural identity still exists as the dominant discourse identity bundle in the Corn Belt. The *Wall Street Journal* in 2016, for example, reported how farmers in Iowa and Manitoba, Canada, just north of the American Corn Belt, altered software and hardware to produce their own devices. Jim Poyzer of Boone, Iowa redesigned a microprocessor to monitor and adjust seed placement on his planter. Poyzer then moved onto developing a solar-powered

---

<sup>486</sup> “Agriclick.com advertisement,” *Successful Farming* (April 2000): page unknown.

<sup>487</sup> “Aventis Corps advertisement,” *Successful Farming* (April 2000): page unknown.

<sup>488</sup> “Council for Biotechnology advertisement,” *Successful Farming* (May-June 2000): page unknown.

<sup>489</sup> “Pioneer advertisement,” *Successful Farming* (January 1992): page unknown.

sensor to monitor soil temperature. Two other farmers in Elbow Lake, Minnesota worked with software engineers to develop mobile applications to map soil fertility and rocks in fields. While the author of the article, Jacob Bunge, accurately documented practices reflecting an ultramodern identity, he incorrectly (in my view) characterized innovation among farmers as a recent “technology revolution sweeping North America’s breadbasket” resulting from a fall in commodity prices. Indeed, the farmers predictably presented to Bunge, a *Wall Street Journal* reporter, the self-image of rational businessmen by proffering economic explanations for their “high-tech tinkering.” The farmers did not voice unarticulated motivations such as their identities or sense of morality as arising from a Jeffersonian production ethos as motivating factors because they took such notions for granted. Further, the idea that farmers use their creative energies to overcome a fall in farm income lends itself to the Jeffersonian myth of the agrarian as a frontier hero overcoming hardship through grit and determination.<sup>490</sup> Poyzer, for instance, stated, “poverty is the mother of invention,” even though he admitted his planting mechanism saved him only about \$1,000 per year on seeds and cost him \$750. Something other than \$250 in savings in the first year of the device, which also depreciates over time, must explain why Poyzer spent many hours developing the complex planting device. Poyzer’s explanation for this small economic gain, that “farmers are trying to optimize everything,” reflects a deep-seated adoption of the myth of the Jeffersonian frontier hero stubbornly resisting

---

<sup>490</sup> Recall Peterson’s description of this frontier myth feature of Jeffersonian agrarianism in Peterson, “Jefferson’s Yeoman Farmer as Frontier Hero a Self Defeating Mythic Structure,” 9-19.



hardship. Poyzer gives no indication that his solar-powered soil sensor will save him any money, only that it “could help him get a jump on planting.”<sup>491</sup>

In addition, Bunge’s uncritical assumption that farmer’s innovative use of material objects results wholly from a decrease in farm incomes implies that farmers do not engage in such behavior when commodity prices rise. As historian Ronald Kline and I have shown, farmers in the Corn Belt have modified and re-designed material objects on their farms at least since the 1920s in innovative ways regardless of the levels of commodity prices. The actions observed by Bunge do not, therefore, constitute a recent “technology revolution” among farmers but a deeply embedded and historically formed cultural practice. While a drop in commodity prices may occur, the income farmers receive from corn does not really explain why this particular group of agrarians reacts to such financial pressure by choosing to innovate and become even more high tech. This reaction to prices only makes sense within a globalized ultramodern identity, a sense of self that farmers have formed over many years of performative use as a reaction to social contexts.

Other recent reports have documented technology use consistent with a rural globalized ultramodern identity. Many of these pieces also show an urban misunderstanding of the ultramodern way farmers think of themselves reminiscent of Bunge’s *Wall Street Journal* article. As one of many examples, reports regarding the unveiling of the prototype of the Case IH self-driving tractors at the 2016 Farm Progress Show in Boone, Iowa, varied considerably between

---

<sup>491</sup> Jacob Bunge, “Farmers Reap New Tools From Their Own High-Tech Tinkering,” *The Wall Street Journal*, April 18, 2016, TECH. <http://www.wsj.com/articles/farmers-reap-new-tools-from-high-tech-tinkering-1461004688> (accessed 6/1/16).

publications intended for urban and rural audiences. The *Wall Street Journal*, for instance, described the only advantage of the machine as, “An autonomous tractor could theoretically run around the clock.” Rather than outlining other features of the device, the article concentrated on the threat it posed to jobs and the dangers of the machine running into objects such as houses or dogs.<sup>492</sup> Kelly McSweeney, robotics reporter for the global technology magazine *ZDNet*, with its U.S. office in San Francisco, California, lamented that “autonomous tractors could turn farming into a desk job” and highlighted the potential of the tractor to “steal jobs from human workers.”<sup>493</sup> Chicago-based reporter Mario Parker, writing for *Bloomberg* headquartered in New York City, also critiqued that the Autonomous Concept Vehicle “features everything but the farmer.”<sup>494</sup> Importantly, in addition to their urban locations, none of these publications consider farmers their primary audience or even a significant portion of their readership. *ZDNet*, for example targets “IT professionals and decision makers” in Silicon Valley and similar

---

<sup>492</sup> Andrew Tangel, “Farm Show Visitors Marvel, Scoff at Self-Driving Tractor,” *Wall Street Journal*, September 1, 2016, Business.

<sup>493</sup> Kelly McSweeney, “Autonomous Tractors Could Turn Farming Into a Desk Job: CNH Industrial Revealed its Concept for a Self-Driving Tractor that Farmers Control Via Tablet or Computer. Naturally, We had to Ask Whether this Robotic Farmer would Steal Jobs from Human Workers,” *ZDNet*, September 2, 2016, Robotics, <http://www.zdnet.com/article/autonomous-tractors-could-turn-farming-into-a-desk-job> (accessed 9/14/16).

<sup>494</sup> Mario Parker, “Tractor for Modern Farm Features Everything But the Farmer,” *Bloomberg*, September 1, 2016, Technology, <http://www.bloomberg.com/news/articles/2016-09-01/robot-tractor-draws-crowds-on-debut-at-iowa-farm-industry-show> (accessed 9/14/16).

information technology hubs while *Bloomberg* and the *Wall Street Journal* write for financial industry professionals based in New York City and other financial market centers.<sup>495</sup>

In contrast, reports of the self-driving tractor prototype from farm journals or other publications based in the Corn Belt reflect a rural ultramodern discourse. More specifically, these rural reporters viewed the autonomous tractor more positively as bringing progress to the farm and described its functions in much greater technical detail. Further, these rural reports showed greater acknowledgment of how the self-driving tractor prototype would fit into a larger system of autonomous and precision technologies employed by the ultramodern farmer, such as remote sensing satellites. For example, an article posted by the *Nebraska Rural Radio Association* described the possible uses for the autonomous tractor as “Better use of labor, integration into current machinery fleets, plus the flexibility to work unmanned around the clock with real time data monitoring – and, in the future, the ability to automatically respond to weather events.” Rather than characterizing the prototype as a threat to labor, the article contended that it would “help farmers and agribusinesses sustainably boost production and productivity at these times, through the ability to make the most of ideal soil and weather conditions, as well as available labor.” The author embraced the coming of “a future autonomous era” because technologies like the self-driving tractor left the farmer “in control” of production and devices remotely. The article went onto describe the device in great technical detail,

A fully interactive interface has been developed to control the autonomous tractors, while at the same time providing immediate and secure feedback,

---

<sup>495</sup> “About Us,” *ZDNet*, <http://www.zdnet.com/about> (accessed 9/15/16).

recording and transfer of operational data. The process of operating either tractor [New Holland also released a prototype] begins with inputting field boundary maps into the system, and then using the integrated path planning software to plot the most efficient field paths for machines... This system automatically accounts for implement widths, and also plots the most efficient paths when working with multiple machines, including those operating with different implement widths and with varying operating requirements. Manual path plotting can also be carried out for refueling or when custom paths are required.

Once path plotting has finished, the user can choose a job from a pre-programmed menu simply by selecting the vehicle, choosing the field and then setting the tractor out on its task, the whole sequence taking little more than 30 seconds.

The ultramodern agrarian would farm by controlling a multitude of automated machines and precision technologies through several computer screens displaying the devices from multiple angles as well as “big data” such as atmospheric or soil conditions,

Subsequently, the machine and implement can be monitored and controlled either via a desktop computer or via a portable tablet interface, which can both display three operating screens. This enables users to access this data, wherever they are, from locations as disparate as from the comfort of their pick-up truck whilst checking fields, or whilst tending livestock or even at home, and always whenever they need. This facilitates right-time decision

making to enhance operational efficiency and productivity. Furthermore, farmers will maintain full control and ownership of their data.

The article continued to describe how the farmer would control the automated tractor,

A path-plotting screen shows the tractor's progress, another shows its live camera feeds, providing the user with up to four real time views (two front and two rear), while a further screen enables monitoring and modification of key machine and implement parameters such as engine speed, fuel levels and implement settings – seeding rate or planter downforce, for example. The route to the field can also be planned, should this involve negotiable private roads or tracks.

The devices addresses the safety concerns of the tractors running into buildings or animals through “a complete sensing and perception package, which includes radar, LiDAR (range finding lasers) and video cameras to ensure obstacles or obstructions in the tractor's path or that of the implement are detected and avoided.” The farmer would read the images from the cameras and monitor the laser data remotely through a tablet interface. In many cases, the farmer would program the tractors to operate with existing satellites to operate automatically, without human input, to take advantage of ideal conditions. For example, “on private roads, they can be sent to another field destination where conditions are better – soils are lighter or there has been no rain.”<sup>496</sup>

---

<sup>496</sup> “CNH Industrial Brands Reveal Concept Autonomous Tractor,” *Nebraska Rural Radio Association-KTIC Radio*, August 30, 2016, News-Agricultural News,

Other farm journals and rural-based publications reported the autonomous tractor prototype in similar technical detail and in discourse that embraced the association of the device with progress. *CropLife*, headquartered in rural Ohio, for instance, reported excitement that the machines left “the Farm Progress Show crowd buzzing.”<sup>497</sup> *Farms.com*, based in Ames, Iowa, stated that farmers “flocked” to see the “futuristic” new machines described as “An interesting new concept that illustrates some of the new technologies being incorporated into the farm machinery of the future.”<sup>498</sup> In *Farmersadvance.com*, published in rural Michigan, the author described the unveiling of the autonomous tractor in Boone, IA, “once the first images of the video dedicated to the tractor (<https://youtu.be/boOzbF6pkQ8>) and its incredible operational capacities appeared on the screen, everyone understood that they were witnessing a glimpse into the future of farming, one that could feature fully autonomous machinery: something which

---

<http://kticradio.com/agricultural/cnh-industrial-brands-reveal-concept-autonomous-tractor>

(accessed 9/15/16).

<sup>497</sup> Matthew J. Grassi, “New Case IH Autonomous Tractor Concept Leaves Farm Progress Show Crowd Buzzing,” *CropLife*, September 1, 2016, <http://www.croplife.com/equipment/new-case-ih-autonomous-tractor-concept-leaves-farm-progress-show-buzzing> (accessed 9/15/16).

<sup>498</sup> Joe Dales, “Farm Progress Show 2016 Highlights and New Products,” *Farms.com*, September 4, 2016, News, <http://www.farms.com/ag-industry-news/farm-progress-show-2016-highlights-and-new-products-375.aspx> (accessed 9/15/16).

could redefine the agriculture of tomorrow.”<sup>499</sup> A similar article in *Farm and Dairy*, published in rural Ohio, stated that the autonomous tractor “enables farmers to access tractor and implement data, wherever they are, from different locations, while checking fields from the comfort of their pick-up, while tending livestock or from home, and always whenever they need. This facilitates right-time decision making to enhance operational efficiency and productivity.” Again, the article emphasized that farmers maintained control and ownership of their data. While describing the tractor in great technical detail, the article noted that it “follows optimized in-field paths, which are automatically generated by the software... In the future this concept will be able to utilise [*sic*] previously collected yield data for the variable application of inputs and to carry out operations with maximum precision, year after year.” Finally, the *Farm and Dairy* author noted that the self-driving tractor “is able to work alongside other autonomous machines and can also work in tandem with machines driven by an operator.”<sup>500</sup> All of the farm journals and rural reports maintained that the autonomous tractor ensured “maximum flexibility, efficiency and sustainability” as well as to increase “the ability to make the most of short operating windows.” None of these rural articles expressed concern with the displacement of the farmer or rural labor from the actual driving of the tractor because the idea of the Corn Belt agrarian in control of an entire system of advanced automated and precision technologies from

---

<sup>499</sup> “Autonomous Concept Tractor Shows a Vision Into the Future of Ag,” *Farmersadvance.com*, September 6, 2016, <http://www.farmersadvance.com/story/news/2016/09/06/autonomous-concept-tractor-shows-vision-into-future-ag/89916340> (accessed 9/15/16).

<sup>500</sup> “Driverless Tractors Unveiled at Farm Progress Show,” *Farm and Dairy*, August 30, 2016, Other News, <http://www.farmanddairy.com/news/driverless-tractors-unveiled-at-farm-progress-show/359165.html> (accessed 9/15/16).

remote interfaces enhances the ultramodern identity that rural residents have developed. The concern of urban reporters such as in the *Wall Street Journal* article that eliminating the farmer from actually driving the tractor somehow makes the task “fake” farming fails to appreciate the ultramodern self-image farmers have of themselves. As with urban portrayals of farm machinery in *Green Acres* in the 1960s as old fashioned, these urban reporters tend to bring their own ideas of Jeffersonian agrarianism to their views of the self-driving Case IH because they see it as violating their ideas of farming as involving a farmer sitting on a tractor. Corn Belt agrarians themselves embrace the prototype much more because using it allows them to perform their identities as ultramodern. Farmers under this discourse identity bundle do not define themselves just according to whether they drive a tractor but, rather, as users of the most advanced and newest technologies to increase the productivity of their private property. The farmer has exceeded the modernity of his urban cousins, few of whom program or control complex systems of precision and automated technologies or monitor and manipulate “big data” on a daily basis. Further, the authors writing for rural audiences view the self-driving tractor as a moral device because it promises to increase production and allows the heroic farmer to meet the growing threat of global food shortages. Rather than seeing the automated tractor as leading to moral dilemmas such as the displacement of labor and turning farming into “a desk job,” the ultramodern agrarian sees the use of the machine as promoting virtuous results such as increased productivity and greater control over property and material objects.

British global business correspondent, Nathan King displayed a similar misunderstanding of rural globalized ultramodernity dominant in the American Corn Belt. King reported from a 2016 farm equipment show in Des Moines, Iowa displaying the “farm of the future” organized with the goal of “feeding a growing global population” of over 10 billion people. He declares



with wonderment, “If it goes in the ground and grows, there’s now an App for that,” although he stated that what “everyone comes to see” were the “hulking machines.” King interviewed Scott Meldrum, a sales representative and designer with John Deere from the inside of the cab of the tractor which King mocked as something that looked more like something from a race track than a corn field. Meldrum explained, pointing to a computer mounted on the tractor console, “All the tractor health information will come through here, as well as auto-steer functions, documentation functions, and product application functions.” King then discussed drone technology used to spot crop wind damage from the air and employing infrared technology to determine crop health. Again, King interviewed the sales representative from Crop Copter selling the device rather than any farmers at the convention. Throughout the report, King seems to have a condescending tone as if he wants to viewer to ask, “Is this all necessary,” a sarcasm lost on the sales representatives at the farm show who clearly have, from King’s perspective, an impure financial interest. Of course, King is ultimately right in noticing that the technology seems excessive to an outside observer, but he interprets the significance of this hunch the wrong way. Namely, his own analysis concluded that the “small family farmer will find it tough to keep up with bigger, more industrial farms, when it comes to equipment like this” without interviewing a single farmer at the show. King even went as far as reading Meldrum the new tractor’s price tag of \$641, 240.85 asking, “That’s a lot of money?!” Meldrum responded, “Yes it is a pretty steep number. But when you look at it it’s gonna be there to get your job done.” In spite of their ultramodern performance, an outsider like King still viewed the tractor companies as pushing small family farmers unwillingly towards industrial agriculture. On the other hand, it rarely occurs to Meldrum that family farmer *will not* use his product.

As such, Meldrum and King talk past one another throughout the piece. As with another European observer of “strange” agrarians, Théophile Cazenove, over two hundred years ago, King made no effort to understand the production ethos or rural discourses or identities of the farmers themselves. King makes the erroneous assumptions that “all this data, when used properly, is designed to do one thing: boost yields of Iowa’s two most important crops, corn and soybeans.” King makes the common mistake of focusing only on the articulated benefits of technology use (a significant theme of this book). Surely, from King’s perspective, country yokels could have no voice in the process of modernization regardless of how many Apps or computer functions they have in their tractors or combines. In contrast, all that Meldrum had to say from his ultramodern rural perspective to moralize the steep price tag on the new tractor was “It will get your job done,” an agrarian virtue lost on King who sarcastically concludes “Farms of the future, large and small, will help feed a growing planet, one App at a time.”<sup>501</sup> In addition to “feeding a growing world,” the farmer clearly has even more work to do to present a convincing performance through technological use.

King’s view of technology use by farmers in the Corn Belt contrasts sharply with a statement released by the Iowa Pork Producers Association (the “Association”) in 2016 encouraging the public to celebrate “National Agriculture Day... to reflect and be grateful for those who grow and raise our abundant and safe food supply.” One can read the Association’s announcement of the event as a “manifesto” of rural globalized ultramodernity. First, the declaration framed technology in heroic terms as allowing farmers to feed a growing world

---

<sup>501</sup> *Iowa Farms Use Drones and Data to Improve Crop Yields*, Nathan King (2016; Des Moines, IA: CCTV America’s, 2016). <https://www.youtube.com/watch?v=F2LIKr96pF4> (accessed 4/6/16).

population. If one recalls from Chapter 2, Peterson and other scholars have noted that this practice (of viewing the farmer as a hero overcoming difficulty) represents a persistent feature of Jeffersonian agrarianism.<sup>502</sup> This rural hero now takes on an updated form with globalized and technological dimensions. For example, the statement urged the public to “thank a farmer” because “Thousands of hardworking Iowa farm families work diligently every day to bring you the safest, most wholesome and affordable food found anywhere in the world. Each American farmer now feeds nearly 150 people in the U.S. and abroad, up from 25 people in the 1960s.” This increased productivity renders the farm heroic because “U.S. agriculture has evolved and is embracing new and emerging technologies in an effort to be as productive and efficient as possible to meet the nation’s and world’s growing food demands.” Second, the Association viewed the farmer’s use of the most contemporary technologies within vast networks as a point of pride still unappreciated by the urban “other” outside of the farm. The statement sought to define the farmer as a modern technological user rather than a small yeoman yokel through extolling farmers as bringing about progress. In a paragraph that summarizes the ultramodern view of progress, the Association concluded the piece,

Farming has come a long ways since fields were plowed with a couple of horses and livestock suffered through the extreme elements of Mother Nature. Your food still comes from the farm, but it’s raised by hardworking men and women with greater efficiency thanks to decades of technological improvements. Quite simply, Iowa farmers are doing more – and doing it better!

---

<sup>502</sup> Peterson, “Jefferson’s Yeoman Farmer as Frontier Hero a Self Defeating Mythic Structure,”

One senses that the authors of the announcement still suspect that the public views the farmer as Eb Dawson on *Green Acres* instead of as a “born innovator.” The Association emphasized that “Many pork producers and other farmers today have college degrees, they seek out and receive continuing education, they maintain business plans, keep elaborate records, and use the Internet and smartphones to help run their farming enterprises. This is today’s farmer!” Third, the Association moralized Corn Belt farmer’s use of large and expensive technologies within socio-technical networks by associating use with the “family farm” and productive work, two virtues prized by both Jeffersonian and German agrarianism. Not only does the statement aim to distinguish the ultramodern farmer from the anti-modern “bumpkin;” it seeks to separate the moral family farm from the category of immoral “industrialized” agriculture:

You may have heard some people refer to it as “big ag,” “factory farms” or “industrialized farming.” These are some of the favorite phrases people opposed to modern farming like to use.

A family farmer who raises 10,000 pigs and 500 beef cows a year, harvests 3,000 acres of corn and soybeans, uses computer and satellite technology, maintains a grain mill, owns a million dollars’ worth of modern farm implements and has his own trucks to haul livestock and grain may sound like “big ag,” but it’s simply life on the farm today. Farming today is not

done by huge corporations. It's done by real people, families who have deep roots in agriculture and wouldn't do anything else for a living.<sup>503</sup>

The Association's declaration thus articulates the rural globalized ultramodern identity as a means of selling it to an urbanized public. This performance of an ultramodern identity both to convince an outside "other" of farmers' morality and to reinforce a rural sense of self repeats itself as a common cultural practice in the Corn Belt. For example, Missouri farmer and *Wallaces' Farmer* journalist Mindy Ward reported on a Dow Chemical display at the Iowa State fair which asked fairgoers "how do you measure perfect?" Apparently, visitors in the Dow tent encountered buttons that they would press to vote for the answer to this question among three candidates for "How do you measure perfect?: 1. Working with family. 2. Caring for the land. 3. Feeding the world." Of course, Ward came to the conclusion that what made the Dow display so appealing to their rural audience was that it led the person taking the "test" to conclude that all three items "make farming the perfect vocation." Ward's description of the importance of these three items reiterates the Association's statement defining an ultramodern identity, "My eldest daughter would say that 'working with family,' is what makes being involved in the agriculture industry perfect. From our hot summers of putting up fence to cold winters in the lambing barn, it was all about being around family... For her, agriculture is family." Ward then stated,

For my husband perfection comes from "caring for the land." Our operation may be small, but he is constantly looking to improve it. Whether it is

---

<sup>503</sup> *Iowa Pork Producers Association*, "National Agriculture Week 2016: Thank a Farmer," (March 14, 2016). <http://www.iowapork.org/national-agriculture-week-2016-thank-farmer/> (accessed 5/31/16).

rotationally grazing our sheep flock so not to overgraze our pastures or planting cover crops to improve soil health, he is always looking for ways to have our livestock work in harmony with our land. After all, like even the largest farmer, there is a desire to leave the land better than you started for the next generation.

While Ward's discourse on the land exhibited a greater concern with sustainability than the statement by the Association, they both shared the basic sentiment in the valuing of personal property and viewing progress, or "improving the land," as a virtue representing an updated version of German agrarianism. Finally, Ward presented an almost identical notion of the farmer as a hero feeding a growing world population through the use of advanced technologies in ways that debunk urban rube stereotypes about rural America, "The youngest member of the family would definitely say that achieving perfection in the agriculture industry means, 'feeding the world.' With her mind set on breeding the next generation of seed and a college bill to back that up, our daughter has pursued her only dream- -helping to feed a hungry world through plant biotechnology." Ward concluded "the measure of a perfect livelihood comes from working with family, caring for the land and feeding the world. Spot on, Dow. Spot on."<sup>504</sup> Importantly, Ward's article demonstrates that this rural globalized ultramodern identity resides not only on the institutional level among "agribusiness" companies or organizations but also as a deeply imbedded rural consciousness among farmers and their families. Both Dow Chemical, through

---

<sup>504</sup> Mindy Ward, "How Do You Measure Perfect?" *Wallaces' Farmer* (September 9, 2016), Show-Me Life, <http://farmprogress.com/blogs-how-measure-perfect-11319#authorBio> (accessed 9/21/16).

their sign, and Ward's family, through using technology on a daily basis, intended to signal this ultramodernity and its morality to other farmers and, more significantly, to an outside observer. In addition, Ward had another more subtle intention in writing her article. Namely, by personalizing the Dow sign, she intended to place "the family" back at the center of ultramodernity rather than Dow Chemical, an undeniable symbol of a less moral "industrialized" agriculture. While Ward agreed with Dow's assessment of what makes farming the "perfect profession," she aimed to present the company as only the spokesman for a moral identity originating within farm families. As with farm journal advertisers in the 1920s, Dow Chemical knows that by reinforcing farmers' identities as ultramodern and moral, they promote the use of Dow's chemicals and other technologies without even mentioning the company's available products. The rural practice of performative use completes Dow's sales job for them.

The Association's statement and Ward's article reflect how farmers use technology as a way of forming a new sense of self that incorporates elements of prior rural identities as a way of framing the farmer as virtuous. To more fully understand why the Association and Ward exert such great efforts to market farmer's ultramodern identities and why part of the Association's sales pitch involves drawing a distinction between the firmly farm and industrialized agriculture, one must explore how their discourse functions in a broader social context. More specifically, I argue, the scholar interested in the history of technology must view the rural globalized ultramodern identity as influenced by both a past rural-urban conflict and the current perceived struggle between traditional farmers and the organic and sustainable foods movement over the morality of ways of making a living. In the following chapters, I explore two areas in which rural globalized ultramodernity encounters domains in which debates over technology have environmental components. In other words, these two case studies demonstrate how my theory

of performative use and categories of rural identities can provide a deeper understanding of unarticulated notions driving technology-policy debates. In the first, I show how the use of wind turbines as a sustainable energy source fits into a rural ultramodern identity leading to a “Please in My Backyard” (PIMBY) attitude among many Corn Belt residents. In the second, I discuss how the Association’s “manifesto” of ultramodernity previews an unspoken disagreement, from the farmer’s perspective, between those holding a rural organic identity and those adopting rural globalized ultramodernity over the morality of work, gender, and technology use. This clash over rural modern and organic discourses, according to Corn Belt agrarians, also presents an updated urban effort to frame farming as unfeminine much as urban industrialism did in the 1920s. In both eras, rural women resented perceived urban efforts to characterize them as yokels and construct rural production as a purely masculine domain.



## Chapter 7<sup>505</sup>

### “Please in my Backyard” (PIMBY):

#### The Welcoming Acceptance of Wind Turbines and Rural Globalized Ultramodernity

*See those lights? They don't stop.... They're going all the time. Daytime, white. Nighttime, red. And then the sound. Anytime the windmills are turning, if the wind is blowing, you got a hum or a drone or a whooshing sound, depending on the speed of the wind.*

Joyce Manley, retired school teacher, Palm Springs, CA, 2007<sup>506</sup>

I generally avoid attending family reunions, but in 2004, a year after my wife and I married, it seemed like the right time to go to the Brinkman reunion in Greene, Iowa. I had moved to Minneapolis, Minnesota for law school, and I had finally graduated and settled down in the Twin Cities. Greene, Iowa was only three hours away, after all. Driving down I-35W in the middle of June, I had remembered fondly my father looking out the window and saying “Son, there’s Brinkman land” many years before. The corn and the horizon looked the same except for several large groupings of wind turbines after crossing the Minnesota-Iowa border. Arriving at my uncle’s farm, we pulled into the long driveway buttressed by a field of high green corn on the left and his prosperous home on the right with an American flag waiving in the wind.

Everything about my uncle’s property looked clean, neat, and immaculately maintained. One

---

<sup>505</sup> Part of this chapter will be published in the upcoming article, Brinkman and Hirsh,

“Welcoming Wind Turbines and the PIMBY (‘Please in my backyard’) Phenomenon: The Culture of the Machine in the Rural American Midwest,” (forthcoming 2017). Paper accepted for publication by *Technology and Culture* on September 25, 2015.

<sup>506</sup> Bill Redeker, “Blow Back from Neighbors Over Wind Farms,” *ABC News*, May 6, 2007,

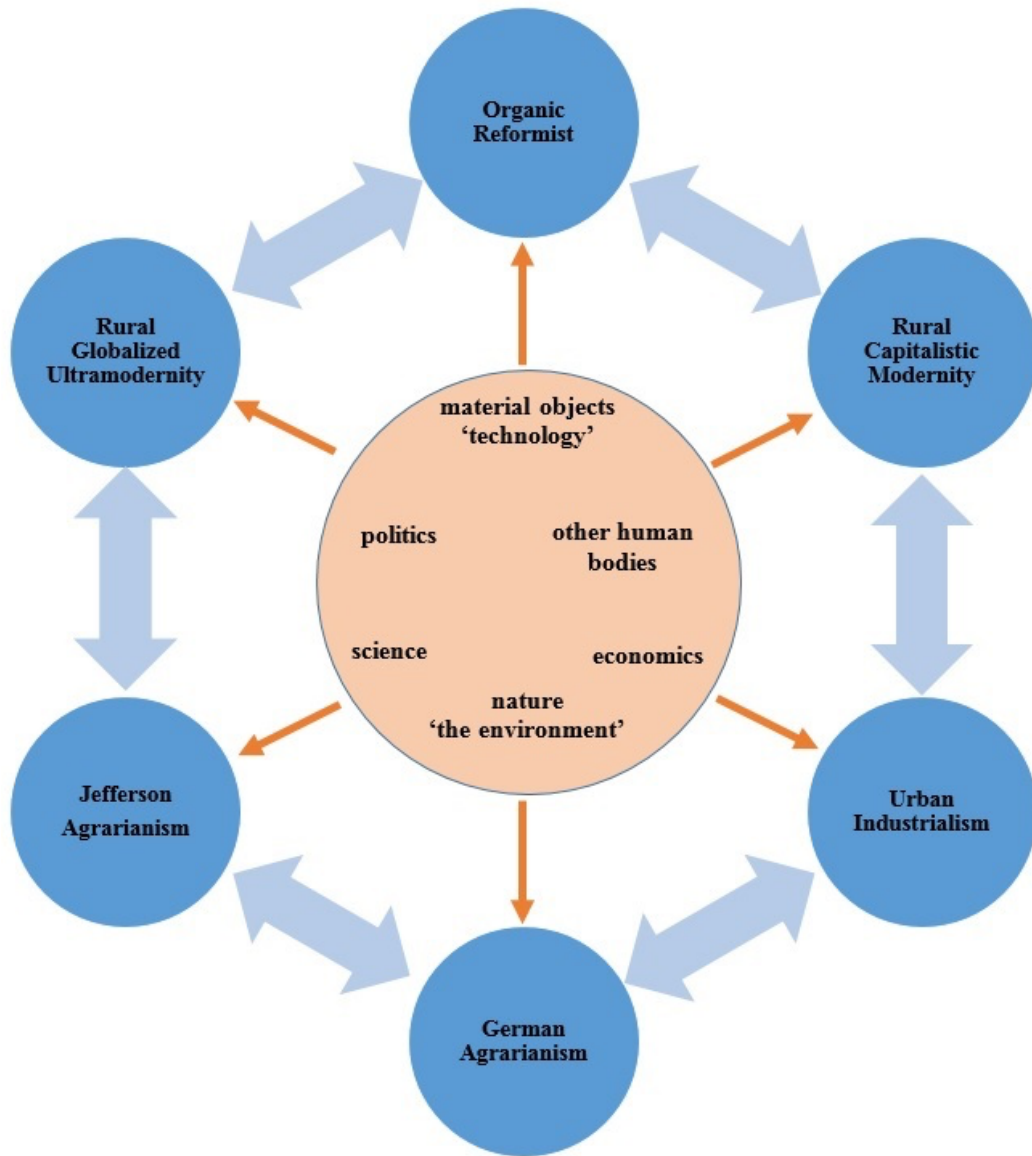
<http://abcnews.go.com/WNT/story?id=3065474&page=1> (accessed 5/15/16).

could spend the entire afternoon trying to find a weed in his yard or field. His pickup truck and tractors appeared so clean as to appear almost unused. Somehow, everything seemed to gleam in the sunlight. A clean line of stone landscaping surrounded his home. The driveway and garage floor looked similarly pristine and unstained. After meeting a legion of relatives who I thought I had never met (although they somehow remembered me), we all piled back in the car with my uncle's pickup truck in the lead. I followed the shining red Chevrolet through several turns wondering how my uncle knew how to navigate miles of grid-patterned roads through identical flat cornfields. Then, in the distance, it appeared. A huge white wind turbine jutted up into the blue flat horizon. It had all of the magnificence of the Washington Monument where I grew up, but more sleek and futuristic. We turned down a dirt road that cut through another cornfield and moved towards the huge rotating object. We stopped next to the base of the "monument" and my uncle declared, "This is my new turbine!" The family members got out of their cars and marveled at the sheer massiveness of the device: it seemed to go up in the sky forever as if to say "I'm the future and no one can stop me!" As with my uncle's farm, everything appeared straight, clean, and new. The turbine itself had sleek lines and rotated almost effortlessly. The ominous "whooshing" sound struck me as quiet relative to the hugeness of the blades. The road to the turbine similarly featured a nice clean border between the dirt of the field and the gravel, which almost looked like small grey geometric pieces. The turbine sat on a clean concrete base with a gravel border that created a perfect clean line with the bordering field. The field, like all of the fields around us, featured rows of corn in almost a straight line. Each corn stalk grew in the same size and shape. The dirt between the rows even looked like one uniform brown-black color. Literally everything appeared neat, clean, ordered...prosperous. My grandfather, now in his late 70s, looked up at the huge blades passing in front of the sun and smiled with an

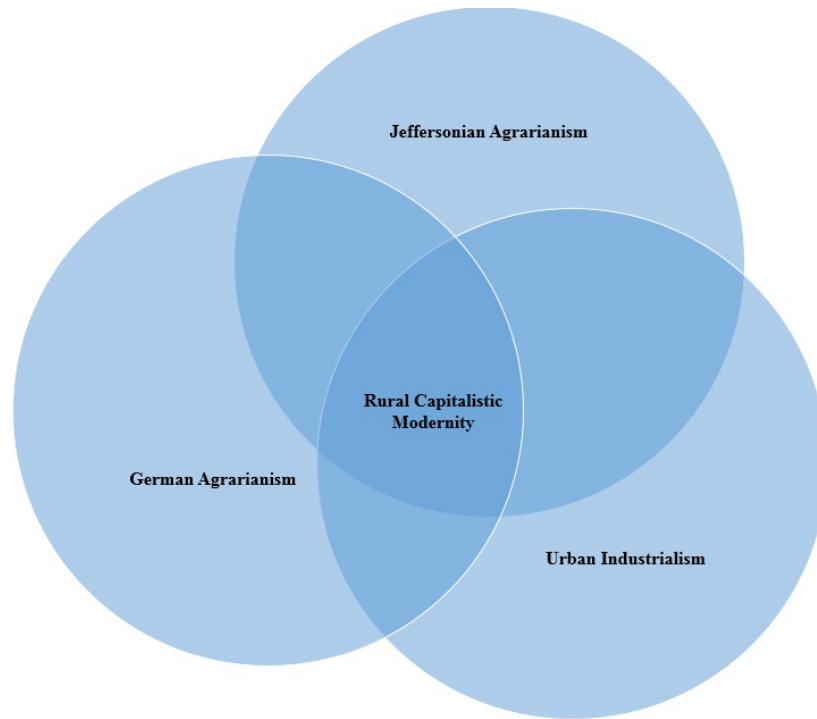
expression as if to say “I can’t believe we’ve come this far.” I thought, “I got through law school but I’ve done nothing like all this. I mean, wow!” My wife, an engineer, was even impressed. The whole family felt visibly proud to be Brinkmans. It was time to go to the reunion.

The massiveness of wind turbines, immediately noted by me and my family members, and the noticeable profiles of the devices across the Corn Belt’s horizon makes them artifacts offering rich insight into how farmers use technology to perform an ultramodern rural identity. Interestingly, the same characteristics of wind turbines that make people dislike them in other parts of the country - their huge size, their metallic appearance, and their connection to vast technical networks, render them particularly suited to form and reinforce farmers’ self images as ultramodern producers.

In Chapters 7 and 8, I turn to how one can employ the concept of performative use within a theoretical framework of discourse identity bundling to gain a more nuanced cultural understanding of controversies over science and technology in rural America. My analysis will show how farmers unconsciously form and alter their discourses and identities strategically as a response to changes in technology, politics, economics, or nature. As in the 1920s and 1950s, discourse still reveals underlying identities driving more articulable positions. Put more simply, referring back to Figure 0.3a and 0.3b in the Introduction (repeated below), I identify what happens to the bubbles when the factors in the social ether feed or apply stresses in rural America.



**Figure 0.3a:** Theory of discourse identity bundling in visual form. The blue arrows between each discourse identity bundle represent sites of conflict. The orange arrows signify that each discourse identity bundle forms as a result of unarticulated but also strategic interactions with the social ether, the orange circle, which includes the use of technology. Technological users then repeatedly perform each bundle of discourses and identities through technological use.



**Figure 0.3b:** This diagram pictures just one example of how a new discourse identity bundle can form through the combination of elements from two or more existing bundles as a response to stimuli in the social ether (the orange circle in Figure 0.3a above). This book has argued that this blending of some, but not all, features of urban industrialism and some, but not all, characteristics of Jeffersonian and German agrarianism formed a new bundle called rural capitalistic modernity (shown in the center of this figure). This new discourse identity bundle then assumes its position in Figure 0.3a above as some actors perform it through technology use.

In this chapter, I apply this approach to analyze how unarticulated discourses and identities shape the relationship farmers have with the wind turbines that have grown rapidly across the landscapes of the Corn Belt in recent years. One can rarely travel in the American Midwest without noticing the miles of enormous rotating machines that break up the horizon during the

day and emit an ominous duo of pulsating red lights and low rumbles at night. Iowa, for example, obtained 31.27 percent of its electricity in 2015 from wind turbines.<sup>507</sup>

In Chapter 8, I draw on performative use to frame the debate over agricultural reform as an unarticulated disagreement, from a rural perspective, between two dominant competing rural discourse identity bundles: organic reformism and rural ultramodernity. As a result of rural experiences with urban industrialism and the pattern of audience, the critique of “industrial agriculture,” which has become so ubiquitous in American discourse that it appears in pop culture (in the 2016 debut of the return of the popular science fiction television show *The X-Files* for example, industrial agriculture was even cited as a crucial weapon of “multi-nationals” in a grand conspiracy to destroy America by making people less healthy<sup>508</sup>), presents not a clash between one idea and another, but a conflict of bundles of values, identities, ideas, and ideologies about many facets of humans, nature, and technology. In both the case of policy debates over wind turbines and industrialized agriculture, combatants mask these underlying discourse identity bundles with “rational” proxy arguments that fail to explore, and thereby reinforce, deeper rifts over the morality of the subjective self. First, I examine how rural residents of the Corn Belt co-construct ultramodernity and attitudes towards wind turbines.

---

<sup>507</sup> *Iowa Utilities Board*, “Wind-powered Electricity Generation in Iowa,”

<https://iub.iowa.gov/wind-powered-electricity-generation> (accessed 9/8/16); Dar Danielson, “Iowa Moves Up to Second in Electricity Created by Wind Power,” *Radio Iowa*, January 28, 2016, <http://www.radioiowa.com/2016/01/28/iowa-moves-up-to-second-in-wind-power-energy/> (accessed 5/13/16).

<sup>508</sup> *The X-Files*, “My Struggle,” directed by Chris Carter, written by Chris Carter season 10, episode 1 (Fox Broadcasting, January 24, 2016).

---

The worldwide growth of the wind energy industry since the 1970s has prompted scholars to explore public perceptions of electricity-producing turbines that dot a diverse range of landscapes. While people generally recognize the value of the machines as sustainable forms of power, surveys reveal that many residents oppose local wind turbine installations because of their noise and impact on wildlife or because they constitute symbols of an undesirable industrialization of natural environments.<sup>509</sup> Several studies document a “Not in My Backyard” or NIMBY phenomenon in various locales, and fervent opposition to construction of turbines remains common. In Massachusetts, for example, citizens have sought to dismantle monumental machines in the Town of Falmouth and prevent construction of gigantic turbines in the ocean off the coast of Cape Cod.<sup>510</sup> As the quotation at the beginning of this chapter demonstrates,

---

<sup>509</sup> Maarten Wolsink, “Invalid Theory Impedes Our Understanding: A Critique on the Persistence of the Language of NIMBY,” *Transactions of the Institute of British Geographers* 31 (2006): 85-91; Patrick Devine-Wright, “Beyond NIMBYism: Towards an Integrated Framework for Understanding Public Perceptions of Wind Energy,” *Wind Energy* 8 (2005): 125-39; Richard F. Hirsh and Benjamin K. Sovacool, “Wind Turbines and Invisible Technology: Unarticulated Reasons for Local Opposition to Wind Energy,” *Technology and Culture* 54 (October 2013): 705-34.

<sup>510</sup> Martin J. Pasqualetti, “Opposing Wind Energy Landscapes: A Search for Common Cause,” *Annals of the Association of American Geographers* 101, no. 4 (2011): 907-17; Patrick Devine-Wright, “Place Attachment and Public Acceptance of Renewable Energy: A Tidal Energy Case Study,” *Journal of Environmental Psychology* 31 (2011): 336-343; Michael Dear, “Understanding and Overcoming the NIMBY Syndrome,” *Journal of the American Planning*

residents have also voiced opposition to wind farms in the San Geronio Pass in California for several reasons including the light and sound pollution emitted by the giant turbines. In discussing the proposed turbines in the San Geronio Pass, another neighboring homeowner cited the impact of the wind farms on “natural” landscapes stating "They want to take this national monument and turn it into an industrial park," while the local Sierra Club chapter noted "The windmills are a known source of avian mortality; they kill thousands of birds every year. The last count I had was 6,800 per year with the windmills we already have."<sup>511</sup>

Less widely publicized, denizens of certain rural communities have welcomed erection of huge wind turbines. In fact, the positive reception has created a new term that mocks the moniker used by opponents. Instead of a NIMBY reaction, these cheerleaders of the mammoth generators exhibit a “Please in my Backyard” (PIMBY) response, as observed by policy analyst Lester Brown, among ranchers in Colorado and dairy farmers in upstate New York.<sup>512</sup> Likewise, *Association* 58 (1992): 288. For information on the problems encountered in Falmouth, see the series of articles created by WCAI, a service of public radio station WGBH, “The Falmouth Experience,” at <http://www.wgbh.org/wcai/turbine.cfm>, obtained January 23, 2015). The offshore wind debate in Massachusetts has been explored in Wendy Williams and Robert Whitcomb, *Cape Wind: Money, Celebrity, Class, Politics, and the Battle for Our Energy Future on Nantucket Sound* (New York: Public Affairs, 2007) and in more recent publications, such as Pasqualetti, "Opposing Wind Energy Landscapes: A Search for Common Cause," 907-17.

<sup>511</sup> Redeker, “Blow Back from Neighbors Over Wind Farms.”

<sup>512</sup> Lester R. Brown, *Plan B 4.0: Mobilizing to Save Civilization* (New York: The Earth Policy Institute, W.W. Norton & Company, 2009), 116-117; Ron Pernick and Clint Wilder, *The Clean Tech Revolution: Winning and Profiting from Clean Energy* (Harper Collins: 2009), 62-64. Also



geographer Jacob Sowers documented a PIMBY dynamic among residents of northwestern Iowa in 2002.<sup>513</sup> By the time Sowers conducted his series of interviews, utility-scale wind turbines had already become prevalent on private land rented from farmers. Sowers found strong support for the technology across communities - from city officials to farmers - even among landowners without turbines on their properties. Similarly, the Wind Energy Foundation reported a 2014 poll in which “87% of Midwesterners support increasing the use of wind energy.”<sup>514</sup>

American scholars of the PIMBY phenomenon in rural communities have generally adopted a model viewing wind turbines as isolated technologies conferring distinct articulable

---

see Michael C. Slattery, Becky L. Johnson, Jeffrey A. Swofford, and Pasqualetti, “The Predominance of Economic Development in the Support for Large-Scale Wind Farms in the U.S. Great Plains,” *Renewable and Sustainable Energy Reviews* 16, no. 6 (2012), 3690–3701; Jeffrey Swofford and Michael Slattery, “Public Attitudes of Wind Energy in Texas: Local Communities in Close Proximity to Wind Farms and their Effect on Decision-Making,” *Energy Policy* 38, no. 5 (2010), 2508-19; Pasqualetti, “Wind Power: Obstacles and Opportunities,” *Environment* 46, no. 7 (2004), 22-38.

<sup>513</sup> Jacob Sowers, “Fields of Opportunity: Wind Machines Return to the Plains,” *Great Plains Quarterly* 26, no. 2 (2006): 99-112. See also Martin J. Pasqualetti, Robert Righter, and Paul Gipe, *History of Wind Energy*, 430.

<sup>514</sup> Wind Energy Foundation, “Polls,” at <http://www.windenergyfoundation.org/wind-at-work/wind-consumers/polls> (accessed 6/7/15).

benefits, highlighting the economic interests of stakeholders.<sup>515</sup> Geographers Martin Pasqualetti and Cleveland Cutler noted, for example that “farmers have learned that wind power can make them money and help them to keep their land.”<sup>516</sup> Sowers acknowledged the symbolic value of the turbines as icons of community pride in an otherwise monotonous landscape, but he attributed PIMBY attitudes primarily to the belief that the payments to farmers helped the community as a whole and allowed residents to maintain their rural lifestyles.<sup>517</sup> Such an analysis that frames wind turbines as technologies conferring *recognized* benefits with an emphasis on economic gain, however, overlooks the *unexpressed* social and cultural views about technology that are deeply and historically embedded in rural farming communities discussed in this book. In short, studies relying on only expressed rational explanations for PIMBY responses to wind turbines in the Corn Belt ignore performative use of technology.

I argue that PIMBY attitudes among farmers of the American Midwest are driven not only by articulated benefits of turbines, but also by a strong cultural tendency to implant values such as prosperity and modernity within all machinery used for productive purposes. Wind turbines constitute simply one artifact farmers use to construct and maintain the discourse identity bundle of ultramodernity. While recognizing that older discourse identity bundles of

---

<sup>515</sup> Sowers, “Fields of Opportunity,” 99-112; Pasqualetti, Robert Righter, and Paul Gipe, ed. Cleveland J. Cutler, *History of Wind Energy*, “Rejuvenated North America,” vol. 6, *The Encyclopedia of Energy* (Elsevier 2004), 430.

<sup>516</sup> Pasqualetti, Righter, and Gipe, *History of Wind Energy*, 430.

<sup>517</sup> Sowers, “Fields of Opportunity,” 109; Slattery, Johnson, Swofford, and Pasqualetti, “The Predominance of Economic Development in the Support for Large-Scale Wind Farms in the U.S. Great Plains,” 3698.

traditional Jeffersonian and German agrarianism and rural capitalistic modernity still exist in the social milieu of rural America, I have also demonstrated that farmers have rehearsed a cultural practice since the early twentieth century of forming rural modern identities through technological use. One should also remember an important caveat here before employing performative use in the context of wind energy. Midwest farmers, after all, have never existed as one monolithic group and identities and discourses of modernity were often contested and used strategically by rural Americans. Historian John Byczynski, for example, has documented the resistance of rural residents in Minnesota to the erection of power lines as late as the 1970s based on a discourse citing “perceived traditions” among farmers. Byczynski’s work suggests that discourses and identities of farmers regarding modernity were contested and possibly co-existing with discourses of traditional Jeffersonian agrarianism.<sup>518</sup> This multiplicity of rural identities, however, is an old phenomenon. Harold Briemyer, in writing about growing up in rural Ohio in the 1920s, for example, notes “early discord” by “traditionalists” over efforts by 4-H leaders to teach “scientific agriculture” at his local high school.<sup>519</sup> Nevertheless, as I have shown in the proceeding chapters, something resembling a “culture of the machine” also developed and still exists in the Corn Belt carrying strong associations between technology, progress, and distinctly rural versions of modernity. The courses in “scientific agriculture” in Briemyer’s town, after all, continued and many farmers also embraced its methods.<sup>520</sup> The PIMBY attitude toward wind turbines exists at the end of this long history of forming rural identities as ultramodern users of

---

<sup>518</sup> John Byczynski, “My Father’s Past, My Children’s Future: Agrarian Identity and a Powerline in Minnesota, 1974-1980,” *Agricultural History* 88, no. 3 (2014): 313-32.

<sup>519</sup> Breimyer, *Over-Fulfilled Expectations: A Life and an Era in Rural America*, 63.

<sup>520</sup> *Ibid.*

technology. Wind turbines, in short, have become well accepted in some (but not all) circles because they symbolize the ultramodern manner by which farmers think of themselves.

My notions of performative use and discourse identity bundling enhance histories of American agriculture and modernization.<sup>521</sup> I concur with scholars who view the farmer as an important decision-maker in the process of twentieth-century agricultural change. However, I aim to add to this historiography by focusing on contested discourses and the use of technologies as a social practice to form rural identities.<sup>522</sup> One should also keep in mind that my depiction of

---

<sup>521</sup> See, for example, Deborah Fitzgerald, *Every Farm a Factory: The Industrial Era in American Agriculture*, 1-9; Danbom, *Born in the Country: A History of Rural America*, 234-48; Hamilton, "Agribusiness, the Family Farm, and Politics of Technological Determinism in the Post-World War II United States," 560-90; Wiebe, *The Search for Order, 1877-1920*, viii; Anderson, "The Metamorphosis of American Agrarian Idealism in the 1920's and 1930's," 182; Danbom, "Romantic Agrarianism in Twentieth-Century America," 1-12; Peterson, "Jefferson's Yeoman Farmer as Frontier Hero: A Self Defeating Mythic Structure," 9-19; Conklin, *A Revolution Down on the Farm: The Transformation of American Agriculture Since 1929*, 51-91; Dimitri, Effland, and Conklin, "Economic Research Services/USDA," 9-12.

<sup>522</sup> Kline, *Consumers in the Country: Technology and Social Change in Rural America*, 6; see also Hal S. Barron, *Mixed Harvest: The Second Great Transformation in the Rural North, 1870-1930* (Chapel Hill, NC: University of North Carolina Press, 1997), 7-16, 243-45; Curtis S. Beus and Riley E. Dunlap, "Endorsement of Agrarian Ideology and Adherence to Agricultural Paradigms," *Rural Sociology* 59, no. 3 (1994): 462-84; J.L. Anderson, *Industrializing the Corn Belt* (DeKalb, IL: Northern Illinois University Press, 2009), 5, 192; Kendra Smith-Howard, *Pure*

the farmers' emerging self-image draws on sociologist Anthony Giddens' theory of modernity as a *state of mind* characterized by constant reflexivity and an emphasis on the new.<sup>523</sup>

Conceptualizing modernity as a sensibility rather than a strict set of rules or definitions allows the historian to understand why a group, such as Midwest farmers, could develop a discourse of modernity containing both elements of older Jeffersonian and German agrarianism with newer elements such as a faith in technology, rationalism, state-of-the-art business practices, and capitalist competition in bringing about progress. In apparent contrast to the dominant modern conception, as I have shown, the rural discourse injected traditional agrarian notions about morality, prosperity, and ethical ways of living. In other words, Corn Belt farmers aided in forming a distinctly rural discourse, which influenced how farmers used technologies and thought about themselves.

Throughout my analysis, I have argued that many farmers have never objected to modernity per se. Rather, farmers rejected a version of modernity based on urban industrialization advocated by city-based progressive reformers, government bureaucrats, and academic researchers in the 1920s and 1930s. This supposed rural industrialization, represented by collectivization, external management, and factory organization, not only advanced an overly-logical scientific reductionism, as Fitzgerald points out; it also carried a discourse of rural inferiority, implying that farmers did not know how to farm and that rural communities remained fraught with social and economic ills. The culture of the machine and rural global ultramodern

---

*and Modern Milk: An Environmental History since 1900* (New York: Oxford University Press, 2014), 3-11.

<sup>523</sup> Rubin, *Ottoman Nizamiye Courts: Law and Modernity*, 13-14, 105; Giddens, *The Consequences of Modernity*, 36-45.

identities emerged not just at the USDA or the land-grant universities, which sought to advance the well being of rural citizens, but also by farmers within rural communities. In this way, “successful” farmers used new technologies to claim a version of modernity that they owned on their terms and by way of an independent capitalism that did not arise out of urban notions of what the farmer *should* do. The tractor and other mechanized technologies gave the farmer both a way of fitting into American twentieth-century modernity and a weapon to fend off urban reform based on false stereotypes about farmers and rural life. The rural-urban conflict in the twentieth century, viewed through this lens, was not simply a conflict over work processes or even lifestyles; rather, it constituted a battle to define the meaning of modernity. In determining their own rural definition of modernity, farmers and farm journals co-constructed agricultural work processes, technologies, and cultural identities. While farmers’ magazines published in cities helped to develop and reinforce rural identities, this rural capitalistic modernity grew from 1920 to the 1950s because it incorporated cultural values important to the farmers themselves such as independence, property ownership, and technical sophistication.

The PIMBY attitude toward wind turbines results as a manifestation of this ultramodern culture that rural residents in the Corn Belt helped create. Corn Belt farmers employ an ultramodern discourse to hail the benefits of wind turbines within a rural ethos while discounting drawbacks highlighted by residents opposing the erection of wind turbines in other parts of the U.S. While the landscapes in Iowa and the San Geronio Pass in California *do* in reality look different, this actual difference in terrain cannot fully explain the divergence in attitudes residents have in these two places towards wind turbines. The machines, after all, kill birds and emit the same noise and light pollution in both places. Attributing NIMBY or PIMBY attitudes to the relative beauty of scenery is simply to reify or “black box” socially constructed aesthetics.

There is nothing “inherently” more attractive about one landscape over the other as they exist outside of a social and cultural lens.<sup>524</sup> Alternatively, I argue that unarticulated historically determined differences in the way people in these two places view themselves and nature offer richer explanations for why people embrace or reject wind turbines. For example, in a 2006 article, farmers Elaine Robertson, Tom Watne, and Deloris and Everett Smith of Blairsburg, Iowa declared that they overlooked the constantly blinking red lights emitted by the 135 wind turbines surrounding their land as well as the disruption caused by the installation process, which damaged several drainage tiles.<sup>525</sup> The farmers saw the turbines as simply the latest in a long line of progressive energy technologies beginning in 1812 when their ancestors installed windmills. As a result, the farmers in the article ignored inconveniences to them and emphasized benefits that they did not personally gain, such as the tax dollars generated by the wind turbines for the local governments, the jobs created, and the ecological benefits of renewable energy. The inclusion of wind turbines within a suite of technologies that reinforce a discourse of rural capitalistic modernity underlies a statement made by Watne in the article: “I thought the towers would be more irritable to your sight, but now they seem stately, quite pretty even.”<sup>526</sup> Similarly,

---

<sup>524</sup> For a discussion of social constructions of nature, see Peter Coates, *Nature: Western Attitudes since Ancient Times* (Berkeley, CA: University of California Press, 1998), 3-17.

<sup>525</sup> Agricultural drainage “tiles” normally come in the form of perforated tubes buried in the ground to remove excess water from the soil profile to enhance crop production. “Ag 101-Drainage,” “Ag 101-Drainage,” U.S. Environmental Protection Agency, <http://www.epa.gov/agriculture/ag101/cropdrainage.html> (accessed 5/8/15).

<sup>526</sup> Melissa Hemken, “Wind Aids Local Economy,” *Wallaces’ Farmer* (February 2006): 42.

Iowa corn and soybean farmer David Ausberger welcomed the erection of wind turbines on his farm even though a “bulldozer came through the most beautiful field of beans I’d ever had.”<sup>527</sup>

Other farmers expressed the association of wind turbines with modernity and progress more directly. For example, Wisconsin crop farmers Charles Hammer and Nancy Kavazanjian went as far as obtaining a USDA grant to erect their own wind turbine, which would sell electricity back to “the grid.” In a 2009 article, Hammer explained his motivations for writing the grant proposal: “We feel like we’ve always been innovators.” Kavazanjian adds “Charlie was the first farmer to no-till soybeans into corn- stalks back in the 1980s... Now it’s a common practice.” The farmers continued that “[w]hen you’re an innovator, some things you try don’t always work out, but you learn and go on... Now we’re the first farmers in the area to be zone tilling and using GPS to apply fertilizer and weed control.”<sup>528</sup> Wisconsin dairy farmer Cory Holig, who also holds a university soil science degree, included among his reasons for installing a wind turbine (and solar photovoltaic panels) the desire to preserve his recently deceased father’s legacy as a technological pioneer. He observed “[m]y dad was an innovator, and my grandfather was, too. We are always looking for new opportunities. When they come your way, you can’t wait. You have to take a chance.”<sup>529</sup> In a 2007 article, Illinois farmer Kurt Williams overlooked compaction of soil caused by the wind turbine construction company because the impressively massive turbine represented a “legacy” for his five and seven-year old sons much as the 1851 windmill still standing on his farm represented his ancestors. In the article’s

---

<sup>527</sup> Susan Thompson, “Iowa’s turn,” *Wallaces’ Farmer* (February 2008): front page.

<sup>528</sup> Fran O’Leary, “Taking ‘a Chance’ on Wind,” *Wisconsin Agriculturalist* (August 2009): 8.

<sup>529</sup> Ethan Giebel, “Teamwork Fuels Success at Dairy,” *Wisconsin Agriculturalist* (November 2013): 50.



accompanying front page photo, Williams stands in front of his wind turbine and the red arm of a piece of complex mechanical hardware displaying wires (possibly a portion of the connected power station). The caption of the picture reflects the ultramodern tendency to frame innovation as an inborn trait residing within farm families, “ON BOARD: Ellsworth farmer Kurt Williams is part of a new legacy of Prairie State farmers who are cashing in on a commercial wind farm, Twin Groves.” Inside the pages of the *Prairie Farmer* issue, the first photo in the article, Williams poses with his wife and two boys with a vast expanse of Illinois farm land in the background and a barn far in the distance.<sup>530</sup> These articles demonstrate a link (commonly expressed in discourses of rural capitalist modernity) between technology, ancestry, and legacy that reinforces rural identities as ultramodern users of technology.<sup>531</sup>

Residents and farmers of King City, Missouri expressed a similar view of turbines as symbols of progress and modernization by describing the coming utility-scale wind farm as something “cutting edge.”<sup>532</sup> One resident even postulated that, in the future, the town would build a “museum honoring wind power.”<sup>533</sup> As Minnesota farmer Theodore Scharden stated simply, “I think the windmills are neat.”<sup>534</sup> Similarly, the Iowa Farm Bureau web site, proffering

---

<sup>530</sup> Anna Barnes, “Harnessing the Wind,” *Prairie Farmer* (April 2007): Front Page, 8-9.

<sup>531</sup> The reader should also keep in mind the farm journal articles discussing agricultural technology shows in the Corn Belt discussed in chapter 1, such as Mowitz, “Ageless Iron: Reunions that Revive the Past,” 23-37.

<sup>532</sup> Matthew Lablanc, “Change in the Wind,” *Columbia Daily Tribune*, November 12, 2006, 1-4.

<sup>533</sup> Jerilyn Johnson, “Wind Power Takes Off,” *Missouri Ruralist* (March 2008): 6.

<sup>534</sup> Scharden meant “wind turbines.” Douglas Jehl, “Curse of the Wind Turns to Farmers’ Blessing,” *New York Times*, November 26, 2000, 1-2.

the motto “People. Progress. Pride,” boasts that “Iowa has also capitalized on its geography and high prevailing winds to harvest the newest and most bio-friendly energy crop yet - wind power.” While the article extols the benefits to farmers in the form of lease income, more importantly, it observes that turbines lead to progress by “adding to the energy independence of Iowa and America.”<sup>535</sup>

The association of technology with a form of rural modernity pervades statements from farmers praising wind turbines in the 1990s and 2000s.<sup>536</sup> In addition, farm magazine articles reflect a strong production ethos that views the wind as another “crop” and the wind turbines as serving the same purpose as the tractor or combine. As stated by Missouri farmer Mike Waltemath after receiving a wind turbine, “[n]ow we are farming the wind.”<sup>537</sup> Iowa farmer Roger Kadolph also viewed the wind turbines through the lens of a modern capitalist producer: “I didn't really expect them [the power company] to come all the way out here in northern Iowa

---

<sup>535</sup> *Iowa Farm Bureau*, “Energy: Harnessing the Power in and Above Iowa Fields,”

<http://www.iowafarmbureau.com/public/114/ag-in-your-life/energy> (accessed 6/1/15). see also

Rod Swoboda, “A Wind Energy Lesson at the Fair,” *Wallaces’ Farmer* (September 2007): 30;

Tom J. Bechman, “Rural Revival in Wind,” *Indiana Prairie Farmer* (February 2008): Front Page.

<sup>536</sup> See for example Mauricio Espinoza, “Wind Blows Dollars Into Northwest Ohio,” *Ohio Farmer* (May 2012): 26; Johnson, “Wind Power Takes Off,” 6; Johnson, “Wind Energy is Now a Reality in Rock Port,” *Missouri Ruralist* (March 2008): 7.

<sup>537</sup> Johnson, “Wind Power Takes Off,” 6.

to start a wind farm," he says. "But this is really great. Now we grow corn on the ground and generate power in the air - all on the same piece of property."<sup>538</sup>

While farmers with turbines on their land obtain lucrative economic benefits, their support for the devices (and the support gained from townsfolk who do not have turbines on their property) stems, in large part, from a conception derived from an amalgamation of the old rural-urban conflict and a new globalized sensibility. These farmers view the turbines as symbols of their technological savvy, represented not just by these machines, but also by their GPS- and laser-guided tractors, their yield monitoring systems, and the computerized networks they develop themselves and employ in global commodity markets.<sup>539</sup> Many farmers view wind turbines not simply as profit-making devices, but as symbols of an in-born ultra-modernization that they inherited from their ancestors and will pass onto their children. Hence, the front cover of *Progressive Farmer* in 2009, typical of the way rural publications display wind farms, shows six large turbines jutting gloriously into a bright blue sky with a verdant expanse of crops below. The top of the machine in the foreground grazes the bottom of the title *Progressive Farmer*. Thus, similar to the way electric utility ads in the 1920s directed the eyes upward to associate the artifact with the future and progress (recall my discussion of National Electric Light Association advertisements in Chapter 4), the wind turbines visually lead the viewer upwards towards becoming a more "progressive farmer."<sup>540</sup> As I have argued in this chapter, this type of positive

---

<sup>538</sup> Abraham McLaughlin, "Reaping the Wind," *Christian Science Monitor*, March 9, 1999, 2; see also "Putting Wind in the Rotation," *Wallaces' Farmer* (April 23, 2012), <http://farmprogress.com/story-putting-wind-rotation-9-58874>.

<sup>539</sup> See for example, *Progressive Farmer* (October 2009): front cover.

<sup>540</sup> *Ibid.*

depiction of wind turbines only makes sense if one understands it within the context of an ultramodern rural identity. Such an agrarian self- image gives a particularized meaning to all artifacts used for productive purposes, not just wind turbines. According to farmers' view of themselves, the sophisticated technological knowledge they have acquired supersedes, at least in their minds, the know-how of city folk who delight in the latest smartphones but who rarely design or operate equally complex hardware and software.

In sum, this cultural analysis may explain why many Midwestern farmers embrace wind turbines and PIMBY views, even though they did not build or design the machinery themselves. The turbines, along with other modern and sophisticated technologies, represent symbolically the most recent step in a long-term transition of farmers who have contributed to creating an ultramodern identity, one that still goes largely unappreciated by their relatively backward urban cousins.

## Chapter 8<sup>541</sup>

### Gender, Work Processes, and the Modernization of American Agriculture: Exploring Historical and Cultural Challenges Faced by the Organic Foods Movement

*The corn picker had put an end to the tall corn. Uniformity was now the goal and Ioway was the place where the tall corn grew-once-but now conformed to the demands of machines. Uniformity-that was the criterion of excellence. In Iowa. Ioway was gone.*

Winifred M. Van Etten, "Three Worlds," 1978<sup>542</sup>

In the fall of 2015, the Chatterdon family began their corn harvest as they had for four years on their Illinois farm. The Chatterdons had farmed for many generations. The family, consisting of Erin (Chatterton) Featherlin, her mother Charlotte, her uncle Brett, her cousin Jason, and her brother Josiah had all inherited their Illinois farm from Erin's father, Greg, after he died in a car accident. Brett Chatterdon had previously worked in a partnership with his brother Greg on the farm. In a recorded interview by *Prairie Farmer* editor and *Wallaces' Famer* blogger Holly Spangler, the family took a break from the corn harvest to discuss the production process. Spangler opened the interview with a short introduction about Greg Chatterdon, a friend of her and her husband's, stating "Greg was the kind of person who would

---

<sup>541</sup> Part of this chapter was presented as a paper before the Society for the History of Technology Annual Meeting, Brinkman, "Gender, Work Processes, and the Modernization of American Agriculture: Exploring Historical and Cultural Challenges Faced by the Organic Foods Movement."

<sup>542</sup> Winifred M. Van Etten, "Three Worlds," in *Growing up in Iowa*, ed. Clarence A. Andrews (Ames, IA: Iowa State University Press, 1978), 141.

drop everything to help somebody. And his family was his life. And I've watched his family over the last four years and I have marveled at how they have held each other up and how they've reorganized their farm. And how in many ways they've made it look easy and, yet, we know it wasn't." The interview took place in one of the Chatterton's corn fields towards the end of the harvest. The family stood in work clothes next to their combine in a tan field littered by recently harvested corn stalks:

Spangler:       What would you say has changed since Greg's death?

Brett:            Opportunities for Erin and Jason, who are very motivated to be involved in the family business. There have been doors that have been opened because of Greg's absence, which is awkward and uncomfortable in a lot of ways, but yet we're just continuing the family legacy. And I think legacy is probably one of the biggest things my wife and I talk about a lot, is just leaving a family legacy. And it's not about the land, and it's not about...farming even. It's about family and faith and teaching your kids about what's important, and your family about what's important.

Erin:            So when you talk about legacy, it's not necessarily even about farming per se, something that you planned on, it just happened in your family that way?

Brett:            Right, it's absolutely not about farming. It's about family... My grandfather was killed by a train, in '45? Right after my father was in World War II he came back and was in Bradley University majoring in engineering. My dad always said he wanted to build bridges. And, uh,

when my grandfather was killed my father came back to the family farm. He took over for his father to help out his mother. And then my father raised his family running a farm.

After explaining that part of the family “legacy,” included the wise execution of several “buy out agreements” and “trust plans” by his grandfather, father, and between himself and his brother Greg, to distribute land among family members in a fair way that preserved “love” and avoid family disputes, Brett continued to explain:

Brett: We love farming, but it’s just where God has put us and, and, if God moves us someplace else, closes the door on farming for some reason, we’ll go raise our family and pursue that godly legacy and wherever avenue He plants us, so I don’t feel like we want to be caught up in that farming is what it’s all about. We love farming, it’s a great way of life.

Here’s another point to partnerships and family operations-give room for everybody to do something that’s theirs...

Spangler: Um um, Yah...

Brett: There are, people, I think there are operations where there’s the guy that runs the show and everything goes through him. And Greg and I always tried to find that I took care of hogs, and Greg didn’t have much say about the hogs, and he took care of cattle. He did fertility. I drove a truck and he drove a combine.... And Jason, and we’re tryin’ to, we’re getting’ more and more, gearin’ more and more towards doin’ stuff with precision and lettin’ that be hers [Erin’s], we’re workin’ on that. Jason’s makin’ most of

the farming decisions, and I still manage the trucks. I'm really gonna try to continue to do that, to let them have theirs. And let them have their own successes and own failures. Sometimes that's hard to do when you're the, the, the buck does stop with me, ya know? But to give them room. And I want to do that for them. And Greg and I always tried to do that. To stay out of each other's way a bit.

Spangler: Check out if you've studied, like, successful business models and, all, and non-farming stuff [a cell phone rings], I bet that's the way a lot of those are structured, don't you think? I mean, you've gotta' have your area that your responsible for?

Brett: Yah, it [the business model] goes down like this...

Spangler: Right.

Brett: Yup.

Spangler: So you have ownership in it, that's your thing...

Brett: And people, people, function better that way. Erin wants to have goals and have successes on her own. If I'm tellin' her what to do all the time, it takes away human desire to achieve things and to have success and ownership and stuff....

Erin: Have some independence.

Brett: Yah, Erin, share about why you like farming. And that's part of why it works for your legacy that you can work...



Erin: Right, that I love it. The schedule of farming allows for me to still help be a part of the continued legacy but be able to help provide for my family too. I still get to be a mom, and I have my children with me in the field, but I still get to be available for my sick children, and to have the laundry done, and supper on the table, and supper in the field.

Spangler: And plenty of company in the combine?!

Erin: Exactly, exactly I'm never alone! [laughter by several people and inaudible comments]

Erin continues to discuss her involvement in the business of the farm after the passing of her father:

Erin: And I was really excited about all this stuff I was getting to do. I've always loved to 'play' business, I've always loved to drive tractors.... But the thing that ran over in my mind that I thought if I had the opportunity to say it was gonna' be to talk about the relationships that Brett, and Jason, and I share within the business because Brett, and Jason, and I are family and we're business partners but for my end of things though I feel like, ya know, we're best friends too and we, we, at the end of the day when it's all said and done we can all hold hands with each other and pray. That relationship I have with them is huge, ya know. I don't go more than twenty-four hours without talking to them, that's a very odd thing. I

appreciate that relationship that we that have. Everybody is very honest and loving with each other and I think that's what makes us work.<sup>543</sup>

During the short interview, Brett and Erin's voices tremble as if to cry with emotion at times. This wavering of the voice occurs when Brett discusses his father and grandfather and at the end when Erin states "at the end of the day when it's all said and done we can all hold hands with each other and pray. That relationship I have with them is huge, ya know. I don't go more than twenty-four hours without talking to them, that's a very odd thing." At the conclusion of the interview Erin, Brett, and Jason return to driving trucks and combines to finish the corn harvest.

---

<sup>543</sup> Erin (Chatterton) Featherlin and Brett Chatterton, interview by Holly Spangler, "Sudden Succession" in "Chatterton Family: A Corn Field Conversation," *Wallaces' Farmer and Prairie Farmer -Confessions of a Farm Wife Blogs*, My Generation (January 18, 2016), <http://farmprogress.com/blogs-chatterton-family-corn-field-conversation-10567> (accessed 9/12/16); see also Erin (Chatterton) Featherlin and Brett Chatterton, interview by Holly Spangler, "Sudden Succession" in "Chatterton Family: A Corn Field Conversation," *American Agriculturalist* (January 17, 2016), <http://www.americanagriculturist.com/blogs-chatterton-family-corn-field-conversation-10567> (accessed 1/18/17); I have edited this interview transcript for clarity.

My theory of performative use not only offers greater insight into why many rural residents exhibit PIMBY attitudes towards wind turbines. It also reveals how farmer's experience with urban industrialism in the 1920s as well as the pattern of audience leads to unarticulated disagreements between organic and sustainable food advocates and mainstream Corn Belt farmers' in the debate over the reform of agriculture. This chapter will show how the unexpressed use of artifacts to reinforce identity manifests itself in controversies over technology and production. More specifically, I argue that one seeking to account for rural perspectives should view the debate over "industrial" agriculture posed by the organic food movement as a controversy between two bundles of discourse and identities: organic reformism and rural modernity/ultramodernity. I contend that both organic reformism and rural modernity often use technology performatively to establish and reinforce a set of conflicting ideas about work, gender, technology, history, nature, and morality. Many of the actors on the two sides offer rational proxy arguments masking these clashing collections of ideas because both bundles have become deeply ingrained through historically contingent cultural factors to such an extent that neither side gives them much thought. But the inability of both sides to confront these unexpressed fundamental differences (which I outline below) leads to the familiar "pattern of audience" (discussed in Chapter 3) whereby rural residents perceive an outside "other" as threatening and the outsider regards the farmer as backwards. This repeated social practice of performance and "othering," I argue here and in my concluding chapter, creates a roadblock to agricultural reform by simply solidifying opposing discourses and identities.

Perhaps the most important factor in understanding the unarticulated notions driving the rural resentment of organic discourse is the way female farmers see the organic view of the relationship between gender and technology. From the perspective of many farmwomen, a wide

array of “urban” voices have sought to frame their modern identities as male and immoral at least since the 1920s. Indeed, since the 1990s, some historians of technology have argued that the two main movements to reform American farming - the organic foods movement and sustainable agriculture - constitute feminized sentiments because of their appeal to emotion and an emphasis on the “family farm.” As a corollary, academics view industrial agriculture as hyper-masculinized due to its over-mechanization and corporate control.<sup>544</sup> While other historians (and philosophers) such as Donna Haraway have rejected the stereotype-reinforcing views of eco-feminists, who see nature as inherently feminine and technology as essentially masculine, Ruth Oldenziel and others have recognized the socially constructed “Western tendency to view technology as an exclusively masculine affair.”<sup>545</sup> Even Carroll Pursell, who rejects the view of technology as essentially masculine, takes for granted that the division of work has contributed to the socially constructed notion of technology as a male domain (since men are viewed as engaging in labor and production while women resign themselves to leisure and consumption in the home).<sup>546</sup>

In this chapter, I argue that many scholars and organic food advocates have incorrectly interpreted the historical relationships between gender, technology, work, and family on farms in ways that prevent producers and reformers from participating in useful dialog about agricultural

---

<sup>544</sup> Carroll Pursell, “The Rise and Fall of the Appropriate Technology Movement in the United States, 1965-1985,” *Technology and Culture* 34, no. 3 (1993): 629-637.

<sup>545</sup> Haraway, “A Cyborg Manifesto: Science, Technology, and Social-Feminism in the Late Twentieth Century,” 149-181; Oldenziel, *Making Technology Masculine*, 10.

<sup>546</sup> Pursell, “The Construction of Masculinity and Technology,” *Polhem* 11 (1993): 206-207.

reform. Within my theoretical framework, many maintaining an organic reformist identity and rural denizens with an ultramodern identity engage in performative use with different material objects to reinforce contending unexpressed ideas about technology, work, and gender. Through an analysis of farm journals and farmers' memoirs in the 1920s and from the 1990s to the present, this chapter demonstrates that Corn Belt farmers held a strong cultural view of only *some* technologies as masculine, particularly mechanized objects related to crop production. Moreover, I contend that this gendering seems to arise from the division of work processes on the family farm beginning with the increasing use of technology in American agriculture early in the twentieth century. Crucially, my perspective differs from traditional scholarly views of gender and work by demonstrating that *both* men and women on Midwest family farms participated in important "production" processes and formed a modern rural identity based on the use and adoption of technology. Further, I seek to challenge the dichotomy between a feminized "family farm" and a masculinized "industrial farm" by showing that *both* technology and glorification of "the family" form important aspects of farmers' identities and discourses as modern producers for men and women.<sup>547</sup>

I contend that scholars such as Haraway and Pursell, in seeking to combat the essentialism of eco-feminists of the 1970s, may have gone too far in denying an inherently masculine character to technology. I seek to conduct my analysis not from my admittedly male point of view, but by looking at how women on farms in the Corn Belt actually saw themselves and their relationship to material objects. Consistent with my user perspective on technology, I

---

<sup>547</sup> This challenging the dichotomy between "the family farm" and industrialized agriculture aligns with recent work by Smith-Howard, *Pure and Modern Milk: An Environmental History since 1900*, 1-20.

aim not to take a reductionist view by claiming that all organic advocates promote a certain discourse bit, rather, to understand how organic identity looks from the perspective of farmers as well as historicize today's rural resentment towards organic reformism. In the context of early twentieth-century American agriculture, people regarded certain technologies as "male" while they saw other technologies as "female," and this gendering did not depend on creating an exclusively male-dominated domain of "production." In addition, I contend that by creating a discourse viewed by rural residents as characterizing large American farms and their technologies as "industrial," "masculine," and overly mechanized, organic food advocates and scholars attack the identity of farmers of *both* genders who regard themselves as moral, family-oriented, and modern producers. This attitude thereby creates a roadblock to true agricultural reform endorsed by advocates of sustainable and organic agriculture.

My theoretical approach focusing on discourse identity bundling and performative use builds on previous historical treatments of the mechanization of American agriculture in the twentieth century. Importantly, however, I seek to question the traditional meaning of "industrialization" using perspectives introduced by scholars interested in gender, discourse, and the cultural and symbolic meanings of material objects.<sup>548</sup> Further, through the following

---

<sup>548</sup> For useful traditional histories of the "industrialization" of American agriculture see Danbom, *Born in the Country: A History of Rural America*; Fitzgerald, *Every Farm a Factory: The Industrial Era in American Agriculture*; Kline, *Consumers in the Country: Technology and Social Change in Rural America*; Barron, *Mixed Harvest: The Second Great Transformation in the Rural North, 1870-1930*; Peter D. McClelland, *Sowing Modernity: America's First Agricultural Revolution* (Ithaca, NY: Cornell University Press, 1997); Beus and Dunlap,

analysis, I aim to employ historical methodologies to construct a genealogy of discourse and cultural meanings embedded within technologies and nature that have significant implications for agricultural policy. Through a more thorough understanding of the historical “situatedness” of these attitudes about material objects, rural identities, and moralities employed by both sides of the debate over the reform of American farming practices and food production, I hope to, at least, begin a process by which actors may construct a more fruitful dialog over the state of global agriculture. The debate over agricultural reform most often takes the form of proxy arguments over science or economics that stand in for the real underlying clash between the discourse identity bundles of organic/sustainable rural reform and rural ultramodernity. Both sides often engage in the performative use of material objects (i.e. “technology”) to practice their respective discourses and identities. These two competing forms of performative use have deeply embedded historical and cultural trajectories such that they constitute both a way of reinforcing internal notions of self and as ways to perform identities for others. I further explore the policy implications of my theory of performative use as it applies to organic and sustainable critiques of mainstream Corn Belt farming practices further in my conclusion in Chapter 9.

**Elements of the Organic/Sustainable Agriculture Reformist Discourse Identity Bundle that  
Tend to Alienate Corn Belt Farmers**

Scholars and policy advocates urging the reform of American agriculture towards a more sustainable model based on organic food production do not constitute one monolithic group. Nevertheless, many do organize themselves around a dominant discourse that assumes clear

---

“Endorsement of Agrarian Ideology and Adherence to Agricultural Paradigms,” 462-484; and Anderson, *Industrializing the Corn Belt*.

dichotomies between characteristics of “family farms” and “industrialized farms.” From a rural perspective, organic discourse frames farmers’ technology use as immoral and attacks female farmer’ identities as moral producers by framing modern farming practices as a male domain. While the organic food movement has origins in the early twentieth century, the discourse I present here has existed at least since the 1960s and early 1970s.<sup>549</sup> In addition, this dominant bundle of discourses and identities views the history of American agriculture as devolving from a family-oriented production process closely resembling the ideals of the organic or sustainable foods movement to corporate-controlled industrial farming damaging to both families and the environment. In short, this discourse identity bundle views the history of agriculture in terms of a clear “break” between the first and second halves of the twentieth century in which a previous moral bucolic ideal became swallowed by the rise of immoral factory farms antithetical to nature. As with rural discourses of rural capitalistic modernity and ultramodernity, rural organic reformist discourse often incorporates older notions of morality from traditional Jeffersonian agrarianism particularly the notion of the pastoral. Sustainable food advocate and writer John Seymour, for example, in *The Complete Book of Self-Sufficiency*, quotes Jefferson as stating “I have often thought that if heaven had given me choice of my position and calling, it should have been on a rich spot of earth well watered, and near a good market for the production of the garden. No occupation is so delightful to me as the culture of the earth.”<sup>550</sup>

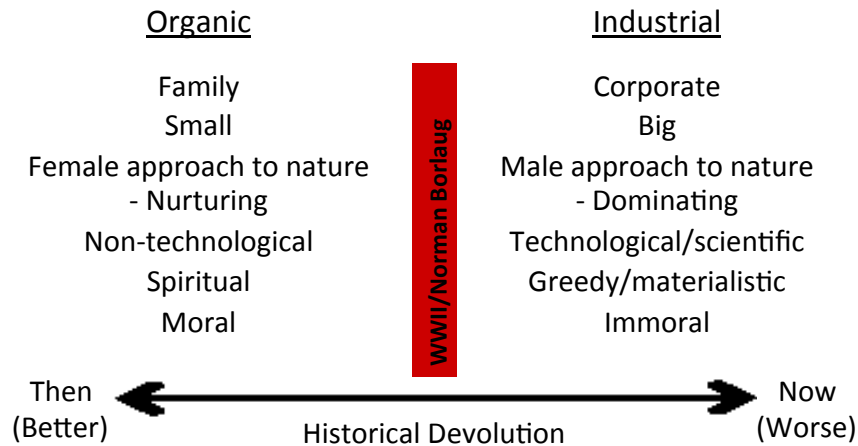
---

<sup>549</sup> See Timothy Vos, "Visions of the Middle Landscape: Organic Farming and the Politics of Nature," *Agriculture and Human Values* 17, no. 3 (2000): 246-47; William Lockeretz, ed., *Organic Farming: An International History* (Cambridge, MA: CABI Publishing, 2007), Ch. 3.

<sup>550</sup> John Seymour, *The Complete Book of Self-Sufficiency* (London: Corgi Books, 1978), between 133 and 134.



Technological use forms the foundation for this dichotomy between the family farm and the industrialized farm. Simply put, I argue that the family farm stands as a lost ideal for some organic and sustainable agriculture advocates because, according to the dominant discourse identity bundle, these farms used less technology and were, therefore, closer to nature than the later highly mechanized industrial corporate farm. Further, since the reformist discourse sees American family farms in the early twentieth century as the cousins of the idealistic organic or sustainable farm since the 1970s, the “back to nature” advocates tend to see the “pre-industrialized” family farm as more feminine than the current masculinized industrial farm. According to this element of the dominant organic discourse identity bundle, the American family farm prior to industrialized agriculture was more “feminine” because, like current organic farms, it nurtured the environment by using less technology. In contrast, the industrialized farms of today are “masculine” because they dominate and control nature through mechanization. In short, the images of the nurturing female, the family, and nature all form a unified ideal underlying the dominant organic/sustainable reformist discourse identity bundle. This discourse, therefore, often reinforces a worldview that regards an essentialized feminine “nature” and a masculine “technology” as mutually exclusive (I have visually represented this dichotomic organic discourse in Figure 8.1).



**Figure 8.1:** The dominant organic discourse identity bundle as based on clear dichotomies between a moral “organic” and an immoral “industrial” way of farming. The horizontal line on the bottom represents the binary conception under organic discourse that assumes a more moral rural lifestyle the further backwards one goes back into human history (a narrative of historical devolution). Organic discourses often identify World War II, which roughly corresponds to when microbiologist Norman Borlaug began his “Green Revolution” research, as the turning point where agriculture started to become immoral.<sup>551</sup>

One can see evidence of this dominant discourse identity bundle used by advocates of organic and sustainable farming in a wide variety of domains. Critics of mainstream American agriculture writing for popular audiences such as Michel Pollan, Barbara Kingsolver, Wendell Barry and Edward Wilson exhibit perhaps the most explicit expression of this identity. Pollan argues that “the process of industrialization [of organic agriculture] will cost organic its soul”

<sup>551</sup> For a detailed synopsis of the life and career of Norman Borlaug see Phillips, *Normal E.*

*Borlaug 1914-2009, A Biographical Memoir.*

and he advocates a return to the organic ideal which describes “a landscape of reconciliation that proposed to replace industrialism’s attitude of conquest towards nature with a softer, more harmonious approach.” He sees a clear distinction between a farm using technologies such as petroleum-driven machinery and synthetic fertilizers and chemicals and one not using technology as “a way to feed ourselves more in keeping with the logic of nature, to build our food system that looked more like an ecosystem that would draw its fertility from the sun.”<sup>552</sup> Further, Pollan portrays mainstream farmers not as the moral family farmers of the past “but as ‘agribusinessmen.’”<sup>553</sup> He sees the history of agriculture as “In the years immediately after the war, industrial agriculture (which benefitted from the peacetime conversion of munitions to chemical fertilizer and nerve gas research to pesticides) also consolidated its position: there would be no other kind.” While Pollan remains ambiguous about his view of agriculture prior to World War II, he implies that it resembled the kind of “nurturing” farming much more than it resembled the “domination” of nature currently practiced by “industrial” agriculture.<sup>554</sup> Kingsolver also expresses this concept of a clear break between a more “natural” form of agriculture and an overly mechanized industrial agriculture. She writes, “Most people of my grandparents’ generation had an intuitive sense of agricultural basics” consisting of a long list of skills including “when various fruits and vegetables come into season... What an asparagus patch looks like in August... Most importantly: what animals and vegetables thrive in one’s immediate region and how to live well on those, with little else thrown into the mix beyond a bag

---

<sup>552</sup> Michael Pollan, *The Omnivore’s Dilemma* (New York: Penguin Press, 2006), Ch. 9.

<sup>553</sup> *Ibid.*, 52.

<sup>554</sup> Pollan, *In Defense of Food* (New York, Penguin Press, 2008), 100-101.

of flour, a pinch of salt, and a handful of coffee.”<sup>555</sup> Kingsolver’s list of “agricultural basics” lacks knowledge pertaining to material use of “higher tech” artifacts such as how to repair a tractor engine or how to maximize the efficiency of combines. In fact, the most moral way to reinforce an organic identity, for Kingsolver, involves avoiding the use of man-made artifacts completely.

Popular poet and environmental advocate Wendell Berry views agriculture prior to “industrialization” in similarly idealized terms. In one poem entitled “Enriching the Earth,” Berry states, “To enrich the earth I have sowed clover and grass/ to grow and die. I have plowed in the seeds/ of winter grains and of various legumes,/ their growth to be plowed in to enrich the earth.”<sup>556</sup> In another poem entitled “The Man Born to Farming” Berry describes the virtuous farmer as, “The grower of trees, the gardener, the man born of farming, whose hands reach into the ground and sprout, to him the soil is a divine drug.”<sup>557</sup> In contrast to this moral farmer, Berry sees a faceless network of industrialized agriculture and corporate biotechnology as “directly corruptible by personal self-interest and greed.”<sup>558</sup>

Pollan, Berry, and Kingsolver see work processes using less technology not just as better practice, but also as a more *moral* and even spiritual activity. In other words, these writers view

---

<sup>555</sup> Barbara Kingsolver, *Animal, Vegetable, Miracle* (New York: HarperCollins Publishers, 2007), 8-9.

<sup>556</sup> Berry, *Collected Poems* (New York: North Point Press, 1995), 110.

<sup>557</sup> *Ibid.*, 103.

<sup>558</sup> Berry, “Twelve Paragraphs on Biotechnology,” in *Citizenship Papers*, ed. Wendell Berry (Berkeley, CA: Counterpoint Press, 2003), 53.

nature as a moral guide.<sup>559</sup> For Kingsolver, the lack of technological use prior to industrialization created more virtuous families with children living closer to nature. Kingsolver contrasts this moral upbringing with that of one of her friend's sons who did not know how carrots "got" into the ground. In a case of subtle literary critique, the "ignorant" child's father worked as a biology professor and grew up an Iowa Corn Belt farm.<sup>560</sup> Immoral science and "industrialized" farming stand in contrast to Kingsolver's own virtuous "natural" family farm.<sup>561</sup> Green environmental advocates Andrew Dobson and Peter Bunyard express the spiritual elements of Kingsolver and Pollan's discourse even more explicitly. "The search for self-sufficiency is, I believe, as much spiritual and ideological as it is one trying to reap the basic necessities of life out of the bare minimum of our surroundings," Dobson explains.<sup>562</sup>

This dominant discourse of popular authors advocating agricultural reform also appears in practical or self-help literature aimed at those wanting to "live the organic dream." This literature aimed at practical farming contains narratives, similar to that presented by Kingsolver, where urban people experience a sort of spiritual awakening and choose a more moral lifestyle consistent with the organic ideal. The first sentence of *The Organic Farming Manual* clearly

---

<sup>559</sup> For a discussion of social constructions of nature, including nature as a guide, see Peter Coates, *Nature: Western Attitudes since Ancient Times*, 3-17.

<sup>560</sup> Again, the Midwest Corn Belt consists of Illinois, Missouri, Iowa, Wisconsin, Indiana, and Minnesota and today contains mostly large grain farms and animal feedlots dependent on the feed corn economy.

<sup>561</sup> Kingsolver, *Animal, Vegetable, Miracle*, 11-12.

<sup>562</sup> Andrew Dobson, *Green Political Thought* (New York: Routledge, 1990.), 93-94.

creates a dichotomy between moral non-technological, small family farms, and immoral mechanized corporate agriculture when it states:

Organic farming is family-friendly, economically viable for small and midsized farms, and a boon to our stressed environment-and its products taste great. For the farmers themselves, there's a real joy that comes from working with the natural cycles of the soils, plants, and animals, instead of trying to beat them into submission for profit and convenience.<sup>563</sup>

The forward to perhaps one of most popular self-help books, John Seymour's *The Self Sufficient Life and How to Live It*, alleges "In the modern world, during the last hundred or so years, there has been an enormous and historically unique shift: away from self-reliance and toward organization" leading to a dangerous dependence of people on "complex organizations, on fantastic machinery, on large money incomes." In language similar to Berry's, Seymour suggests that allowing "ourselves to be dependent on some vast 'Thing created by the Merchants of Greed' is madness." For Seymour, this "vast thing" is the globalized food system. Seymour uses not only nature as his guide to morality, but ancient work processes prior to this "historically unique shift" including Namibian nomadic hunters, isolated olive farmers in Crete, and nineteenth-century peasants in England's Golfen Valley as living more sustainable and moral lives closer to nature. In Seymour's view, "to say that an invention is labor-saving is the highest praise, but it never seems to occur to anyone that the work might be enjoyable. I have

---

<sup>563</sup> Ann Larkin Hansen, *The Organic Farming Manual* (North Adams, MA: Storey Publishing, 2010), 2.

plowed all day behind a good set of horses and been sad when the day came to an end!”<sup>564</sup> All of these groups of pre-industrial producers, according to Seymour, “have found good, honest, and useful ways of making a living. Some are fairly well off with regard to money; others are poor in that regard but they are all rich in things that really matter.”<sup>565</sup> One can observe what the dominant image of what a moral nature and relationship with technology “looks like” for Seymour and others forming a rural organic reformist discourse identity bundle in a drawing in his book *The New Complete Book of Self-Sufficiency*. In the picture a family walks in between a patch of cabbages and onions. The family looks more urban than rural as they wear shorts, sandals, and polo shirts. The family dog runs in front of them and the cat sits beside the onion patch. Several glass boxes sit in the garden but no other artifacts appear in the drawing. While the vegetables grow in rows and have an ordered appearance, a less structured nature surrounds and encroaches on the garden. Several birds, two rabbits, a squirrel, a mouse, and a vole exist along with the ordered rows of vegetables. Overall, one notices the distinct lack of man-made material objects, the literal closeness of non-agricultural nature in the form of trees and wildlife, and the prominence of the family including family pets.<sup>566</sup> In short, the less technical the process of food procurement, the more natural and virtuous it becomes in keeping with the discourse proffered by Pollan, Kingsolver, Dobson, and Berry.

---

<sup>564</sup> Seymour and Will Sutherland, *The Self-Sufficient Life and How to Live It* (New York: DK Publishing, Inc., 2009), 6-13.

<sup>565</sup> *Ibid.*, 13.

<sup>566</sup> Seymour, *The New Complete Book of Self-Sufficiency*, Illustration (London: Dorling Kindersley Publishers, Ltd, 2003), 52-56. See also <https://weedsuptomeknees.wordpress.com/2012/04/> (accessed 1/27/16).

Several academic scholars have drawn on or reinforced elements of the dominant discourse, particularly in moralizing less technological work processes of the past. In rejecting technology use, these older means of production imitated nature, promoted the family, and constituted a feminine nurturing sensibility, as opposed to technological, masculinized, and corporatized industrial agriculture. For example, philosopher of technology Albert Borgmann expresses the same discourse as Seymour in a more philosophical rhetoric. For Borgmann, labor saving technologies in agriculture remove people from a “focal practice,” in this case, the arduous laboring over land. Technology, from Borgmann’s perspective, leads to the loss of human engagement with nature and family. In language mirroring Kingsolver’s, Borgmann also laments the decline of “pretechnological” knowledge and skills and their replacement by technologies and networks that do the work for humans without any “practice” or sense of accomplishment. As with Pollan, Kingsolver, Berry, and Seymour, less technological work processes become imbued with morality.<sup>567</sup>

Other scholars have reinforced the idea that a feminine nurturing of nature formed the crucial aspect of the morality of pretechnological agricultural production. For example, historian Carolyn Merchant views the rise of science and technology in Western Europe in the seventeenth through the nineteenth centuries in terms of replacing a society more conducive to a feminine nurturing of nature by market-oriented structures promoting the male domination of nature and of women. In Merchant’s view, modern science and technology enhanced the use of both women and nature as a resource as opposed to a “premodern organic world.” Beginning in the sixteenth century, Europeans used science and technology to rationalize, objectify, and

---

<sup>567</sup> Albert Borgmann, *Technology and the Character of Contemporary Life* (Chicago, IL: University of Chicago Press, 1984), 195-205.



commodify the environment transforming nature from an organic cosmos with a living female at its center to a dead and passive machine controlled by men.<sup>568</sup> While some feminist scholars like Donna Haraway have rejected Merchant's tendency to essentialize nature based on gender, historians such as Londa Schiebinger and Ruth Oldenziel, while recognizing the socially-constructed nature of gender, offer theories supporting Merchant's claim of a Western tendency to view nature as female and technology as male.<sup>569</sup> These scholarly conceptions of nature and technology as gendered can claim inclusion within the dominant discourse of the organic and sustainable foods movement because it sees a clear demarcation between a pretechnological and industrialized agriculture in which prior farming methods aimed for a moral nurturing of nature, a female quality, as opposed to current immoral domination of nature, a male quality. In short, the organic discourse identity bundle incorporates the idea that men immorally use science and technology for "the domination of both nature and women" under a corporate system of exploitive industrialized agriculture.<sup>570</sup> In addition, these scholars tend to view a moral pretechnological farming as more conducive to preserving families. Historian of technology Carroll Pursell has observed that "A study of farmers in Wisconsin who were dedicated to the practice of what they called 'sustainable agriculture' revealed that an overwhelming number of them did so in the name of family farms, or domestic rather than market values." Pursell then

---

<sup>568</sup> Merchant, *The Death of Nature*, 42-78.

<sup>569</sup> Londa Schiebinger, "Why Mammals are Called Mammals: Gender Politics in Eighteenth Century Natural History," *The American Historical Review* 98, no. 2 (1993), 382-411; Oldenziel, *Making Technology Masculine*, Introduction; Haraway, "A Cyborg Manifesto: Science, Technology, and Social-Feminism in the Late Twentieth Century."

<sup>570</sup> Merchant, *The Death of Nature*, xxi.

reified the opinions of these sustainable farmers and assumed that all farmers held a dichotomous view of technology and the family. “They [the farmers] believe the principles of sustainable agriculture that could help preserve family farming (the reliance on small-scale, labor-intensive production using nonsynthetic chemicals, for example) are inseparably related to values that sustain farm families. These values include the integration of work life and family life, and environmental conservation.”<sup>571</sup> Pursell, in arguing that the backlash in the 1980s against the sustainable foods movement resulted from the re-masculinization of society, adopts the same worldview exhibited by Pollan, Kingsolver, and Berry in which a set of ideas about morality, nature, work processes, and gender all form one consistent dominant discourse used to conceptualize and critique modernity and modern agriculture.

Nor should one regard this organic discourse identity bundle as existing only among those participating in small hobby farming outside of the rural Midwest. In keeping with the recognition that rural Americans have always contested discourses and identities, the scholar must keep in mind that the organic discourse identity bundle constitutes one possible identity, albeit a less pervasive and dominant one, available to farmers in the Corn Belt in forming identities. Distinguished Fellow for the Leopold Center for Sustainable Agriculture and Religion and Philosophy Professor Frederick L. Kirschenmann, for example, manages a 3,500-acre organic farm near Des Moines, Iowa in the heart of the Corn Belt. In discourse resembling that of Kingsolver and Merchant, Kirschenmann argues that:

---

<sup>571</sup>Carroll Pursell, “The Rise and Fall of the Appropriate Technology Movement in the United States, 1965-1985,” 635.

Our modern industrial culture tends to view not only food but almost all of reality as a collection of fragments (things) rather than a web of relationships. Modern philosophers trace this tendency to the 17<sup>th</sup>-century scientific revolution. Rene Descartes wanted science to become a “universal mathematics,” which, of course, tended to reduce all of reality to measurable things and ignored dynamic relationships.

While Kirschenmann does not address technology use directly, he advocates Michael Pollan’s call “to start thinking about food as less of a thing and more of a relationship” including reducing fossil fuel, irrigation, pesticide, and artificial fertilizer use. In rhetoric similar to Wendell Berry and John Seymour, Kirschenmann additionally advocates for smaller, less mono-cultured, farms using more labor implying less use of technology. “The notion,” Kirschenmann laments, “that farming is drudgery is still deeply engrained in our culture.”<sup>572</sup> Thus, the dominant organic discourse that views a dichotomy between large, masculinized, reductionist, mechanized, and industrialized agriculture and small, feminized, relational, less technological, and family-oriented farming helps to form identities among some residents of the Corn Belt as much as it does among academic environmentalists. The crucial conceptual frame for the scholar, therefore, is not to focus on rural versus urban or even Midwestern versus Eastern discourses, but to acknowledge that once rural Americans strategically choose a discourse identity bundle, they commit themselves to many unarticulated relationships, assumptions, and practices historically embedded within those bundles including how they interact with material objects.

---

<sup>572</sup> Frederick L. Kirschenmann, “Food as Relationship,” *Journal of Hunger & Environmental Nutrition*, 3 no. 2 (2008): 106-121; *Leopold Center for Sustainable Agriculture*, Iowa State University, <http://www.leopold.iastate.edu/about/staff> (accessed 1/27/16).

## **Work Process, Technology Gendering and Rural Discourse Identity Bundles of Modernity and Ultramodernity among Farmers in the Corn Belt**

From Chapters 3 through 6, I have extensively discussed the historical development of the rural discourse identity bundles of modernity and ultramodernity in the Corn Belt and have argued that farmers help to form and reinforce their identities through technological use. Through this chapter as well as in my discussion of rural PIMBY attitudes towards the erection of wind turbines, I have alluded to the role of independence and the family as two important dominant images within these bundles with genealogies rooted in tradition Jeffersonian and German agrarianism. Here, I intend to flesh out these genealogies in greater detail by analyzing how rural ideas about independence and family, embedded in these discourse identity bundles, arose out of work processes and technological use on Midwest farms early in the twentieth century. I intend to focus here on the experience of farm women who use technology performatively. Further, I argue that these rural views have created an unarticulated disagreement over the relationship between gender, nature, and technology among those adhering to rural ultramodern and organic rural reformist discourses and identities. Interestingly, both of these discourses adhere to *the same* original notions of independence and the morality of a family-based production process, but they have used material objects differently and have constructed opposing notions of nature in incorporating these ideologies into their respective identities. As such, every seemingly mundane use of an artifact in a rural context becomes a strategic performance of an identity. If one defines politics broadly as a struggle over the authority to speak for nature or human nature (including gender), then one may go as far as saying that *technological use is not just identity-forming but political* because artifacts in use *necessarily interact* with human bodies and nature, however one constructs “nature.”

Performative use, therefore, stands as a crucial tool in the political struggle between rural ultramodernity and rural organic reformism. I will first argue that technological use and work processes on American farms in the early twentieth century reveals that the clear break between a bucolic pre-technological, feminized, and family-oriented agriculture and an “unnatural” masculinized industrial, corporate, and mechanized agriculture largely exists as a myth. Such a fictitious family/industrial dichotomy underlies organic reformist discourses. This misinformed assumption--that one can classify some farms as “family farms” and other farms as “industrial farms” in the Corn Belt--dates at least to the 1920s when policymakers developed categories of “self-sufficient” and “commercial” farms for purposes of economic and social analysis. As Jane Adams points out, these binaries have always presented “an outsider’s misconception” that reflects an attempt to view rural America through the lens of urban ways of life.<sup>573</sup> In reality, both farm men and women adopted a discourse of rural capitalistic modernity in which both sexes sought to participate in technological production processes as a means of creating a rural identity as modern producers, in which the family comprised a key component.<sup>574</sup> As this chapter will show, rural discourses and identities moralize the family and productive work, not nature untouched by technology. For instance, Mildred Armstrong Kalish recalls the following about growing up on an Iowa farm in the late 1920s and early 1930s, “Besides making the world go around, those folks who did their assigned chores were identified as ‘goodworkers.’ They were respected, held up as an example to others, greeted with a smile and a hearty handshake,

---

<sup>573</sup> Adams, *The Transformation of Rural Life*, 53.

<sup>574</sup> For evidence that farmers, both men and women, sought modernity as early as the 1920s and 1930s see “Why We Made Our Home Modern,” *Farm Journal* (February 1930): 32, 89.

and privileged to enjoy a feeling of goodwill throughout the community.”<sup>575</sup> In other words, some feminist scholars and advocates drawing from feminist perspectives assuming a gendering of technology and production as exclusively male domains, while assigning the family and nature to female spheres, have oversimplified the relationship between work, technology, and gender in the rural Midwest. In the process, this underlying assumption of duality has led critics of modern agriculture to overlook more important rural discourses and identities driving the relationship between technology and people.

A careful reading of farm journals and memoirs from the early twentieth century reveals that *many rural Americans did not view production and technology as exclusively male spheres*. While the role of women on farms in the U.S. varied from family to family, women in the Corn Belt seemed particularly likely to view themselves as participating in, and sometimes leading, the modernization of both the home and production processes on the farm. If one recalls the USDA report by Emily Hoag Sawtelle in 1924 discussed in Chapter 4, farm women thought themselves superior and possibly more “modern” than urban women in part because they worked with their husbands as equal partners in the business.<sup>576</sup> While the journal *Farmer’s Wife* noted that many in rural America showed ambivalence towards women participating in production on the farm, it also noted “The farm woman, because of the very nature of the farm and home enterprise, naturally takes a larger part in the money-making of her husband’s business than the

---

<sup>575</sup> Mildred Armstrong Kalish, *Little Heathens: Hard Times and High Spirits on an Iowa Farm During the Great Depression* (New York: Random House, 2007), 114-115.

<sup>576</sup> Sawtelle, “The Advantages of Farm Life: A Study by Correspondence and Interviews with Eight Thousand Farm Women,” 4, 14, 29.

doctor's or merchant's wife."<sup>577</sup> Thus, keeping women in a completely domestic sphere and men in a world wholly outside the home simply did not present a viable practical option for many families in the Corn Belt. As Mary Walton Hill recalls of her mother on their Illinois farm in the early twentieth century, "I never saw her sit down and just lounge and not do anything. There was always so much to do."<sup>578</sup> But women participated in production and sought to use new technologies for many non-economic reasons as well. Historian Sonya Salamon argued that two different husband-wife relationships existed on farms according to ethnicity. Families with German heritage, according to Salamon, featured women more prominently in work processes outside the home than did "Yankee" families without a German lineage. Salmon contributes this greater involvement of German-American women in farming activities to the fact that in those families, the wife also brought more land into the marriage,. While ethnicity may have contributed to how closely women participated in production, it does not sufficiently explain the widespread participation of women in productive work processes in the rural Midwest even

---

<sup>577</sup> For a view of ambivalence over women earning money on a Corn Belt farm, see Breimyer, *Over-Fulfilled Expectations: A Life and an Era in Rural America*, 44-45 in which Briemyer states that boys in the 1920s were viewed as financial assets and girls financial liabilities. Briemyer's own account of his family's financial state, however, shows that his mother contributed significant income through her newspaper distributing business. It should also be noted that Briemyer writes as a Washington, D.C.-based agricultural economist remembering his childhood rather than as an actual farmer in the 1920s.

<sup>578</sup> Adams, *The Transformation of Rural Life*, 89.

among “Yankee” farm families.<sup>579</sup> Indeed Salamon’s model of static ethnic norms presents a problematic notion if one accepts recent theories of identity as a fluid contestation of “dominant images,” and existing as a signaling process within broader social contexts.<sup>580</sup> Certainly, Rush, as far back as the eighteenth century, noted the view of women as agricultural producers under the discourse identity bundle of German agrarianism, and this female role influenced the way women viewed themselves in the early twentieth century. In addition to the influence of German heritage, I propose that the rural-urban conflict intensifying in the 1920s may have also served as a great motivation for women of all backgrounds to farm in the Corn Belt, perhaps leading to a wider adoption of the German agrarian views of gender and production. A debate over whether women should conform to more urban conceptions of domesticity or join their husbands as modern producers existed within a broader rural-urban conflict that pointed towards women choosing the later. Men and women on farms in the Corn Belt slowly realized, as the 1920s progressed, that rural America would not win its contest with urban industrialism if only men joined the fight, even if many women found simultaneously occupying domestic and productive roles exhausting.<sup>581</sup>

---

<sup>579</sup> Ibid., 85-86; Salamon, *Prairie Patrimony: Family, Farming and Community in the Midwest*, Ch. 5.

<sup>580</sup> See Downey, “What is Engineering Studies For? Dominant Practices and Scalable Scholarship,” 55-76; Elliott, *Better than Well: American Medicine Meets the American Dream*, 41.

<sup>581</sup> See for example, “Our Page: Should Farm Women Make Money?” *Farmer’s Wife* 31, no. 6 (June, 1928): 10; Grace Farrington Gray, “What is Success?” *Farmer’s Wife* 30, no. 1 (January 1927): 11.



Women on farms also knew that their work as productive units combated the traditional urban view of women reflected in the Census Bureau listing of many farmwives as “Women of No Occupation.”<sup>582</sup> Jane Adams, writing about her childhood on an Illinois farm in the 1940s, angrily notes the failed attempt by urban “policymakers” to “remove women from farming and make them full-time homemakers,” and she laments official narratives contained in literature written by scholars outside the farm that failed to recognize “that wives were as much farmers as husbands.”<sup>583</sup> This role of women as productive actors outside the home continued a rural tradition from the late nineteenth century in which one could not easily distinguish activities of production and consumption on farms as both men and women produced and consumed many commodities. When farmers began to sell commodities on capitalist markets and then buy what they consumed, many women saw no reason to abandon the production side of farming simply because urban discourses sought to create “separate spheres.”<sup>584</sup> So not only did women seek to combat yokel stereotypes, they also had to keep urban ideas about gender roles from infiltrating the farm where work processes were organized much differently. In short, rural women faced an extra layer of complexity during the rural-urban conflict. So when Edith Rendleman recalled that her mother in the 1920s “bought a lot of things with that butter, milk, and egg money” on their Illinois farm, including new modern clothes for the family, she did so to perform both a modern and a productive identity that conflicted with urban conceptions.<sup>585</sup> Another woman on a Midwest farm, Grace Gibbard Lentz, wrote a short story for *Better Farming* entitled “Evolution

---

<sup>582</sup> “Dignifying the Work of Farm Women,” *Farmer’s Wife* 23, no. 8 (January 1921): 1.

<sup>583</sup> Adams, *The Transformation of Rural Life*, 2.

<sup>584</sup> *Ibid.*, 49-50.

<sup>585</sup> *Ibid.*, 91.

of a Real Farmer's Wife," who "evolved" to manage a large cow operation that eliminated the family's debt. As a result, Lentz wrote "she gained respect for herself. She realized her dream of becoming a really modern farmer's wife."<sup>586</sup> While Lentz presents a fictional woman in her article, the reader gets the impression that if the character is not actually Lentz herself, she at least writes from personal experiences.

The reality of activities on many farms in the Corn Belt reveal that women and men often divided work in and out of the home even though women considered themselves heads of the domestic sphere. In other words, many Corn Belt farm families seemed to view the home and the farm as one hybrid unit of production, which both sexes could occupy and make decisions to modernize. As Jane Adams explains, "a wife could have a commercial strawberry patch... a husband could bake cakes."<sup>587</sup> Ruby Weaver, a woman on one of the Illinois farms interviewed by Adams even recalled how her husband gave her a tractor as a birthday gift early in the twentieth century so that they could work in the fields at the same time. Many other women Adams interviewed remembered handling horses and field machinery.<sup>588</sup> Mildred Armstrong Kalish, who grew up on an Iowa farm in the late 1920s and early 1930s, recalled "though certain work was usually thought of as man's work, on our farm, everyone male, female, and kids, lent a hand to get the job done... The same was true of 'women's work.'" Kalish discusses how women loaded hay in hay mows, shocked wheat, and harvested corn and clover while men often canned meat, washed clothes, or churned butter. Nor did women only participate in these "male"

---

<sup>586</sup> Grace Gibbard Lentz, "The Evolution of a Real Farmer's Wife," *Better Farming* 47, no. 6 (June 1924): 4.

<sup>587</sup> Adams, *The Transformation of Rural Life*, 85.

<sup>588</sup> *Ibid.*, 96-98.

activities like harvesting hay casually or do activities that did not require great physical strength. Kalish noted that the women on her family's farm often operated a "murderously heavy hay fork" and "The whole family worked all day in this manner until all of the hay from the fields had been gathered and as much of it possible stored in the mow."<sup>589</sup> Given how women like Kalish's experienced work on a Corn Belt farm early in the twentieth century, it should be no surprise that women did not view new tractors or other modern artifacts as a "male" threat to a "female" nature. Similarly, given that men participated in work in the home, one should also not be surprised to learn that men did not view rural capitalistic modernity as an exclusively male identity.

Women also employed the latest technologies and modern business practices in poultry and egg production, for example, and often published detailed records of "poultry figures" in farm journals such as *Farmer's Wife*.<sup>590</sup> Millions of women also invested in new egg machines in the mid-1920s to increase their commercial poultry businesses.<sup>591</sup> Other women on Corn Belt farms in the 1920s, such as L.R. Marrs from Martinsville, Missouri, used middlemen to distribute their eggs as far as Colorado and New York City to take advantage of higher prices outside the Midwest.<sup>592</sup> As with a female farmer named only as "Mrs. George Penn" of Worthington, Ohio, these chicken-raising efforts sometimes even bought entire farms and

---

<sup>589</sup> Kalish, *Little Heathens: Hard Times and High Spirits on an Iowa Farm During the Great Depression*, 108-111.

<sup>590</sup> F.A. Millard, "My Poultry Figures," *Farmer's Wife* 23, no. 8 (January 1921): 312.

<sup>591</sup> "The Farm Women's Poultry Business," *Farmers' Wife* 26, no. 12 (December 1926): 604-605.

<sup>592</sup> L.R. Marrs, "Shipping Eggs," *Wallaces' Farmer* 46, no. 3 (January 21, 1921): 113 (21).

occupied women for well over eight hours a day. Penn's sale of eggs "bought an 80-acre farm, put up the buildings, put in furnace, lights and bath, bought a car and a cow."<sup>593</sup> One *Farm Journal* article in 1928, entitled "Mother and the Radio" by self-described "farmer's wife" Ethel Morrison-Marsden, describes a woman on a farm not just using the radio as a domestic consumer but as a savvy businessperson producing a product and manipulating markets. Morrison-Marsden writes, "Just before dinner the markets come in, with quotations on eggs, poultry and butter. Very often this knowledge means the saving of money to the housewife; she may be shipping eggs to private customers in the city, as I do, and awaiting the day's quotations before setting the price. Or she may be selling poultry and needs the knowledge of the day's poultry market so as not to be at the mercy of the buyer." The article shows a farmwoman using the radio at a desk seriously jotting down commodity prices. The austerity of the photo highlights her business-like persona as it features only a desk, a pen, note cards, and a large black radio speaker. The discourse used by Morrison-Marsden is not one of working with nature but of technological progress, as she exclaims, "It [the radio] has made the impossible possible."<sup>594</sup>

Another female poultry producer in Missouri wrote an editorial to *Wallaces' Farmer* sharing modern remedies for sick poultry that increased commercial profit.<sup>595</sup> Similarly, in a 1930 article, Grace Jenney give instructions on how she built a more modern and industrialized poultry house on her farm because "Big business (and that's poultry-raising) demands big

---

<sup>593</sup> Clara M. Sutter, "The Farm Woman's Poultry Business: These Chickens Buy a Farm," *Farmer's Wife* 31, no. 6 (June 1928): 36.

<sup>594</sup> Ethel Morrison-Marsden, "Mother and the Radio," *Farm Journal* 52, no. 3 (March 1928): 32, 65.

<sup>595</sup> "How to Get More Eggs," *Wallaces' Farmer* 51, no. 1 (January 1, 1926): 22 (22).

methods, and I am not sure if there isn't a decided labor advantage in large individual pens.” The article pictures Jenney's “double-decker” poultry-house for “200 birds to the floor” as a model of rural capitalistic modernization. The photographer took the picture from an upward angle to highlight the impressive size of Jenney's modern structure complete with two levels of large windows. Jenney did not purchase her poultry house or have a builder come to construct one. Rather she designed the entire building herself in the name of “progress.” Jenney even subtly, and humorously, remarks on her independence and the relative uselessness of men in the design process stating, “...if you are planning new stairs in any farm building, know your carpenter. In my case, I married him, but I don't advise that as a wholesale program.”<sup>596</sup> While Jenny farmed in New England, the journal considered women in the Corn Belt as an audience receptive of her methods.

Women in the Corn Belt also headed the modernization of large-scale dairy production. S.C. Campbell of Hennepin County, Minnesota, for example, started her own dairy farm. The *Farmer's Wife* described Campbell's farm as, “Maplewood Farm is a complete, modern dairy plant with well-arranged sanitary barns and milk house, two silos of 190-tons capacity each, and a large, comfortable, modern farm house with huge screened porches and an amazing number of large air windows.” Campbell's farm does not exhibit a small level of milk production simply for family use in the home but a vast network of wholesale distribution to hotels, hospitals, and grocery stores. After describing the details of Campbell's modern farm, the article moralizes the production arrangement by placing it in an idealized family scene that would have looked familiar to Lewis Krimmel a century earlier, “It was a pleasant picture, this comfortable home, with its piano and books and magazines testifying that the values of mental culture had not been

---

<sup>596</sup> Grace Jenney, “Rooftries for Our Chickens,” *Farm Journal* 54, no. 3 (March 1930): 70-71.

ignored, its orderly rooms, its well-kept grounds and neat, substantial buildings, the contented herd of profitable cows in the pasture beyond - and all of it the result of one woman's vision and faith and work."<sup>597</sup> Another female dairy producer Harper Christensen on the Minnesota-Iowa border extolled the benefits of electricity on her family's farm in a way that showed that she conceived of work in the home and in the barnyard as covered by one umbrella of productive labor:

The greatest asset with an electrically equipped farm is on the labor saving side. We milk with electricity, separate the milk with it, wash and iron with it and in the near future expect to clean the house with electricity. Running the milking machine with a motor is much quicker and handier than a gasoline engine. Sometimes I have cranked a gas engine until I was blue in the face only to have to milk by hand, and the same applies to the cream separator with the motor attached - it runs much more smoothly and more even.

Christensen uses the word "we" implying that more than one family member had responsibility for duties both in and outside of the home. *Farmer's Wife* also published regular reports of extensions and cow testing associations entitled "Of Interest to Dairy Women," indicating that women often oversaw "scientific" commercial dairy operations.<sup>598</sup> This journal, describing itself

---

<sup>597</sup> Bernice H. Irwin, "A Modern Dairy Farm: Minnesota Woman Demonstrates the Profitableness of Milk Production," *Farmer's Wife* 23, no. 8 (January 1921): 312-313.

<sup>598</sup> "Of Interest to Dairy Women: The Cow Keeps Her Place as Man's Best Friend, Nutritionally," *Farmer's Wife* 33, no. 8 (January 1922): 696.

as a “Magazine for Farm Women,” published in St. Paul Minnesota, boasted of selling over 800,000 copies a month in 1926.<sup>599</sup>

While one could dismiss the role of women as producers on Corn Belt farms as a subordinate position to farm husbands who operated large machinery in the fields, many people farming in America in the 1920s and 1930s saw the poultry and dairy commodities produced and marketed by women as essential income streams on a successful modern farm. A *Wallaces’ Farmer* article in 1925, entitled “Why Some Farms Pay,” reported on a Department of Agriculture study of 160 farms in central Indiana that made a profit even during “the depression period” compared to less successful farms in the area. The study concluded that farmers reported “poultry played an important part” on the profitable farms as did less diversified crops and a “scientific layout.”<sup>600</sup> In a front page article in 1925 on “Pulling Back to Prosperity” following the “deflation of the farmer in 1920,” Iowa farmer W.J. Breakenridge credited part of his regained prosperity to his wife’s modern poultry management techniques and her strict attention to markets. Breakenridge talks about his wife more like a top performing business manager than as a woman whose place belongs in the home stating, “The future of the chicken and egg business looked good so we expanded the farm flock. This was done under the direction of Ms. Breakenridge for it has been her department thruout [sic].”<sup>601</sup> Another article about an event honoring Master Farmers in 1927 noted that, “All the Master Farmers, in one way or another, gave credit to the folks back home for any success that had come to them. The wives and

---

<sup>599</sup> *The Farmer’s Wife* 29, no. 12 (December 1926): Front Cover.

<sup>600</sup> “Why Some Farms Pay,” *Wallaces’ Farmer* 50 (March 20, 1925): 440 (28).

<sup>601</sup> D.F. Malin, “Pulling Back to Prosperity,” *Wallaces’ Farmer* 50 (January 2, 1925): 1 (1), 12 (12).

children were declared to be entitled to a greater percentage of each Master Farmer medal.”<sup>602</sup> Similarly, one article in *Better Farming* urging farmers to increase their poultry production framed women as experts stating “Thousands of women who see profits in poultry have become expert raisers.” The article recognizes the activities of these “expert raisers” not as a hobby or side-job but as an integral part of a successful farm business.<sup>603</sup> Jane Adam’s study of women recalling their lives in rural Illinois in the early and mid-twentieth century found that “no woman I interviewed saw her work as a ‘sideline’” and all of them disproved urban conceptions of “separate spheres” for men and women. Adams also noted that women in interviews evaluated the worth of themselves and others by how hard they worked.<sup>604</sup> Similarly, Louisa Stephens recalls how she began running a poultry business at the age of 13 in Missouri. Her family saw her production activities important enough to send her to courses in poultry management at the Missouri College of Agriculture.<sup>605</sup>

In addition, several articles in farm journals reveal that women’s productive work provided the extra income needed to modernize in the first place. Thousands of farming women organized co-operative markets in the Corn Belt to sell agricultural products and prepared foods directly to the consumer in order to buy electric appliances, modern plumbing, college education,

---

<sup>602</sup> “Master Farmers of 1927 Honored: Presented to Corn Belt Over WHO and to Iowa Notables at Banquet,” *Wallaces’ Farmer* 53, no. 3 (January 20, 1928): 91 (7).

<sup>603</sup> E.R. Wiggins, “How to Make Poultry Produce Profits,” *Better Farming* 48, no. 1 (January, 1925): 6, 19.

<sup>604</sup> Adams, *The Transformation of Rural Life*, 2-4.

<sup>605</sup> Louisa Stephens, “A Farm Girl’s Poultry: How She Grew Up in the Business and Has Made it a Success,” *Farmer’s Wife* 33, no. 8 (January 1922): 693.



or newer farm buildings. One woman farming in Illinois reported \$6,700 in profits from these co-operative market sales, allowing her to pay off the mortgage on her family's farm.<sup>606</sup> A North Dakota woman calling herself "Mrs. Albert Limbaugh" discussed how her cake-making business allowed her husband to keep and modernize their farm stating, "My husband and I have always been partners."<sup>607</sup>

Many farm women and men shared tasks on the farm also as a form of insurance so that the wife could keep the farm going in the event of the husband's death. For example, May E. Craw spoke in 1926 about modernizing the farm in Champaign County, Illinois after her husband died, "we've gone right ahead and prospered. In ten years we've bought the homestead of Mr. Craw's family, remodeled the house, put electricity in house, barnyard and outbuildings and acquired about everything in the way of modern equipment, from a pressure cooker and sweeper to a radio outfit." Craw attributed her success to the fact that she shared production and business duties with her husband prior to his death and to her careful study of farm journals and farm bureau publications "to keep up with the times." She also regularly listened to the program "the Practical Course in Farming" over her radio. Craw seems to have monitored every aspect of production down to the most mundane detail explaining, "None of us are afraid to work... At

---

<sup>606</sup> Carroll Streeter, "Building Markets by Cooperation," *Farmer's Wife* 31, no. 6 (June 1928): 9, 32.

<sup>607</sup> "How Some Women Succeed: True Stories About Real Farm Women," *Farmer's Wife* 27, no. 5 (October 1924): 126-127.

threshing time and corn husking I do every bit of the 'weighing of the grain myself. Then I know what I get."<sup>608</sup>

Farm bureau meetings in the American Midwest in the 1920s and 1930s demonstrated a similar rural view that the work processes of women formed *part of* the project of modernization and increased technology use on farms. Women, not just men, used artifacts to form identities as modern technical producers.<sup>609</sup> One *Wallaces' Farmer* article in 1925 reported on a “number of special sessions for women” at the upcoming annual Iowa Farm Bureau Federation convention “to take up questions especially relating to women’s work on farms and the problems of farm betterment.” The keynote speaker to the approximately 1,000 women in attendance with their husbands was not an expert in homemaking or domestic work but “L.G. Michael, special investigator of foreign markets for the U.S. Department of Agriculture” to lecture on the “[d]evelopment of foreign markets for American farm products.” The article described the other speakers at these sessions, whose lectures they broadcasted over the radio, about “women’s

---

<sup>608</sup> “How Some Women Succeed,” *Farmer’s Wife* 29, no. 5 (May 1926): 270, 301.

<sup>609</sup> Farmers formed state farm bureaus and the national American Farm Bureau Federation (AFBF) from 1900 through the 1930s for the purpose of giving farmers more power in modernizing agriculture both in terms of farming methods and political lobbying. Over 300,000 members from 28 states approved the AFBF in March of 1920. Gilbert C. Fite, *American Farmers, the New Minority* (Bloomington, IN: Indiana University Press, 1981), 39; “June Meeting of Farm Bureau Federations,” *Indiana Farmer’s Guide* (July 10, 1920): 32; “Farm Federation’s Power: Life Topsy, Bureau ‘Jes’ Grew,’ and Now Numbers 100,000 Members,” *New York Times*, July 4, 1920, 70.

work” as “all other important problems now affecting the farmers.”<sup>610</sup> The convention planners literally saw the husbands and wives in attendance as dual productive units seeking to modernize production and expand marketing processes rather than as a male producer and a female domestic consumer. In other words, “women’s work” did not seem to have the same pejorative implications within the early twentieth-century discourse of rural capitalistic modernity as it may have under our own contemporary rhetoric about gender. While women did attend sessions by home economists, they even framed work processes occurring in the home, such as making clothes, within a broader production context. As one attendee stated “Everyone seems to have caught the big vision of this work - that it is a means to an end, and that end [is to] better agriculture.”<sup>611</sup>

The modernization of activities of women in the home also became linked to a broader effort to bolster the rural cause in the context of the rural-urban conflict. In the annual convention of the AFBF in December of 1920, male and female speakers urged women to view their work more scientifically and in modern business terms as a means of preventing women from migrating to cities. Not only did the city offer a potential opportunity for a woman to earn an independent income, but many associated the city with a sophisticated femininity that many rural women saw as lacking on the farm. Farm journals in the 1920s contain many letters and articles by women urging other women to stay on the farm arguing that they could reach the same wealth and sophistication as their urban cousins by participating in their own modern production processes. In farmwife Grace Gibbard Lentz’s fictional piece in *Better Farming*, the

---

<sup>610</sup> “Iowa Farm Bureau Convention,” *Wallaces’ Farmer* 50, no. 2 (January 9, 1925): 43 (11).

<sup>611</sup> “With the Women of the Farm Bureau,” *Wallaces’ Farmer* 50, no. 4 (January 23, 1925): 113 (15).

heroin Marian found herself married to a husband who farmed by himself while she stayed in the home. In this situation, Marian “was a disillusioned farmer’s wife. No longer had her form the dainty, graceful curves. She was discouraged farm women.” After Marian started using the latest technology to start a successful modern dairy operation, “with her self-respect came back her form, a mature strong woman’s form that city women work for in the gymnasiums.” Marian’s husband, Arthur, had grown apart from his wife, but after she became a success outside of the home, “Arthur realized his dream of a fine herd” and their marriage improved. The picture showed Marian and Arthur in a loving relationship with the caption “Joy and Pride Swelled in Her Heart When She Caught Arthur’s Proud Look and Knew That Together They Had Earned All These Good Things.”<sup>612</sup> Thus, in Lentz’s social context of rural-urban conflict, modern technology use became a way of performing a greater femininity because rural actors had to confront urban discourses that intertwined modernity with a dominant image of a woman and man who looked and behaved in certain ways.<sup>613</sup> In short, the “rube” that rural Americans sought to counter was not exclusively male. As such, the *Farmer’s Wife* and other farm journals also featured articles about the latest fashions for both sexes. All of these letters also seek to reinforce Jeffersonian ideas of the morality of rural life.<sup>614</sup> Since rural modernity incorporated Jeffersonian and German notions that the family and productive work moralized rural production and that this virtuous farm supported the rest of the nation, the President of the AFBF, J.R.

---

<sup>612</sup> Lentz, “The Evolution of a Real Farmer’s Wife,” 4.

<sup>613</sup> See for example “Hearts and Homes: A Review of Spring Styles,” *Wallaces’ Farmer* 53, no. 15 (April 13, 1928): 604 (22).

<sup>614</sup> See for example Mrs. C.A.B., “Letters From our Farm Women: Not Sorry I Stuck,” *Farmer’s Wife* 31, no. 6 (June 1928): 8.

Howard stated, "The foundation of America, the very heart of America, is the farm home... I am not going to give up until every farm home in the country is as good as any other home."<sup>615</sup> A woman, C.H. Sewall of Oberlin, Indiana expressed similar sentiments when serving as the keynote speaker of the Iowa farm bureau meeting stating that "twenty-five years ago a farmer's wife would not have been asked to go visiting and talk before an audience of farmers. She was expected to stay at home and do the housework and wipe the noses of the children. She complimented the men on their graciousness in passing a resolution 'Inviting women into full participation in the task' of advancing the cause of American agriculture."<sup>616</sup> With this greater task of rendering rural America on equal footing with a threatening urban world, women in the Corn Belt also formed hundreds of county "home bureaus" in the 1920s in which attendees would observe home demonstrations and test out new "home equipment."<sup>617</sup>

Thus, farmwomen expressed similar concerns over the rural-urban conflict as men, and they similarly viewed technology and modern business practices as means to combat urban industrialism. In a series of articles in *Farmer's Wife* entitled "What are Farm Women Thinking About," women express desires for "more knowledge of business methods," "all the latest machinery," support for cooperative marketing associations, and "less pity and sympathy from city people and greater appreciation on their part of the joys and values of country life." In fact,

---

<sup>615</sup> Bess M. Rowe, "American Farm Bureau Convenes," *Farmer's Wife* 23, no. 8 (January 1921): 289.

<sup>616</sup> "Keeping Up With Father and the Boys," *Wallaces' Farmer* 46, no. 3 (January 21, 1921): 114 (22).

<sup>617</sup> "Home Demonstration Agents: News of Important Results Being Accomplished in Various States," *Farmer's Wife* 23, no. 8 (January 1921): 290.

many saw women as leading the migration to the cities because “the boys go into town because the girls go.” Therefore, a central role for women in the modernization of productive processes on the farm promised perhaps the most effective means of reversing rural-to-urban migration.<sup>618</sup>

Although farm men and women both sought to construct their identities as modern producers through use of technology, gendering of work processes did occur on American family farms with operation of large field machinery designated as a masculine domain. Evidence suggests that what made fieldwork “men’s work” was the large machinery itself, not the act of producing or even of farming crops. In addition to the fact that both men and women saw themselves as producers, women also wrote into farm journals to discuss how to improve crop production techniques. For example, a woman identified only as Mrs. E. J. Kirk of Ohio wrote to *Wallaces’ Farmer* in 1925 on techniques for growing and harvesting barley to supplement the corn crop used to feed hogs. Kirk’s editorial used the term “we” suggesting that she participated in the planting and harvesting process as well as the care for large animals.<sup>619</sup> Therefore, work with large field machinery appeared only *weakly* gendered. To the extent that tractors and combines comprised a masculine domain, the machinery itself led to its gendering, not the activity of producing commercial agricultural products. In other words, while scholars like Oldenziel and Haraway correctly point out that there is nothing inherently masculine about technology, there is something about large field machinery that seemed essentially masculine to Americans on farms in the early twentieth century that had nothing to do with efforts to

---

<sup>618</sup> Bess M. Rowe, “What Are Farm Women Thinking About?” *Farmer’s Wife* 29, no. 5 (May 1926): 268-269.

<sup>619</sup> E.J. Kirk, “Barley for Hogs Next Summer,” *Wallaces’ Farmer* 50, no. 7 (February 13, 1925): 222 (18).

subjugate women or with different female or male approaches to nature. Rural Americans, in other words, saw tractors and combines as “male” even without a clear demarcation between a male sphere of productivity, technological use, and work and a female sphere of consumption, nature, family, and home.

Kenneth Hassebrock’s memoirs about growing up on an Iowa farm in the 1920s and 1930s sheds light on how and why rural Americans viewed field machinery as weakly masculine that goes beyond the anachronistic dualisms of technology and nature proposed by organic food advocates and many feminist scholars. While Hassebrock does not state the age in which he joined his father in the fields, he does comment that, “Doing such work was definitely a milestone for those of us growing up in Iowa” and that in spite of the fatigue caused by plowing soft ground by walking behind a spike-tooth harrow and four horses, “there was no shot of slowing down or stopping-after all, I was now a man.”<sup>620</sup>

Several aspects of Hassebrock’s detailed narrative of farm practices reveal important cultural and technological influences on the gendering of large field machines on American farms in the early twentieth century. First, Hassebrock discusses large farm machinery as a continuation of the draft horse, traditionally handled by men for many centuries in Western agriculture. Historians Paul A. David and Robert Friedel discuss the concept of “path dependency” to describe how technological design features become embedded in later technical

---

<sup>620</sup> Kenneth Hassebrock, *Rural Reminiscences: The Agony of Survival* (Ames, IA: Iowa State University Press, 1990), 88-89.

devices.<sup>621</sup> The historian of technology and environment Finn Arne Jørgensen in his history of Norwegian recycling makes use of the slightly more abstract theory of cultural scripting in technological systems. For Jørgensen, large technological systems contain scripts that direct consumer action and enroll users in the system. Jørgensen and design historian Kjetil Fallen maintain that “the inscription of meaning in an artifact is by no means limited to its technical content” but, rather, scripts construct a “product’s utilitarian functions, aesthetic expressions, social meanings, and cultural identities.” Jørgensen extends this theory of scripting by adding that later users may follow, modify, or ignore the script once the product reaches the marketplace.<sup>622</sup> These theories of incumbency and scripting still rely on the original designers embedding intentions for the product’s use within the technology’s hardware. As such, all of these theorists impart artifacts with design strategies that reinforce social hierarchies. In this book, I have extended these concepts of social or cultural embeddedness even further by conceiving of incumbency or scripting as something that can originate with the artifact’s users regardless of the designers intent. Further, because both Friedel and Jørgensen begin with a *designer* rather than a *user* perspective, neither considers the possibility that artifacts *used* in similar ways can exhibit some form of cultural incumbency or scripting. While horses and tractors obviously do not have the same “hardware” in them, Hassebrock suggests a kind of

---

<sup>621</sup> Robert Friedel, “Why You Need to Understand Y2K,” *Invention and Technology* (2000), 24-31.

<sup>622</sup> Finn Arne Jørgensen, “The Backbone of Everyday Environmentalism: Cultural Scripting and Technological Systems,” in *New Natures: Joining Environmental History with Science and Technology Studies*, ed. by Dolly Jørgensen et al. (Pittsburg, PA: University of Pittsburg Press, 2013), 72-73.



*gender incumbency* in which similar features of use mean that prior gendering becomes embedded within the new technology.

In this sense, tractors *are* inherently masculine not because of some essentialized or universal notion of gender and technology or nature, but because culturally-specific work processes and practices of use write cultural scripts influencing later users, including gender identities. For Hassebrock, what made performance of field work an inherently male activity came from “not only the ability to control horses or drive a tractor, but also sufficient maturity to act in a rational manner when the unexpected happened, which was not infrequent.”<sup>623</sup> This quotation as well as other aspects of Hassebrock’s narrative reveals a second cultural aspect of the gendering of large machines used for fieldwork. The horse not only carried with it an incumbency passed on to tractors in terms of how farmers used it, it also carried similar risks that the user had to avoid through a kind of emotionless problem-solving ability, a trait regarded by Hassebrock, and other early twentieth-century Americans, as male. For Hassebrock, just as a horse could become stuck or difficult to control, field machinery could break down at any moment when the time demands of harvest or planting required quick and creative solutions. Even when machinery did not malfunction, early farm equipment often did not perform the intended function and farmers had to modify machinery. For example, Hassebrock recounts how in the early 1920s, his father purchased a corn picker that he planned to power with his old Hart Parr tractor, only to discover that the wheel spacing of the tractor prevented the picker forks from aligning with the corn rows. Hassebrock describes his father’s creative solution to the problem, reflecting an impressive technical acumen:

---

<sup>623</sup> Hassebrock, *Rural Reminiscences: The Agony of Survival*, 88.

The engine in a 1918 Chevrolet car Dad had junked was still operable. Using the engine to power the mechanism of the picker while it was being pulled across the field with three horses appeared feasible. Dad and Wilber proceeded to mount this engine on the picker and make all the necessary modifications. A chain sprocket wheel was attached to the drive shaft that extended from the transmission of the engine, and another one replaced the small flywheel of the picker. Clutch and throttle controls were placed near the operator: the small front carriage was put back into place and the boom arm was removed. Picking would now proceed with Dad operating the picker and Wilbur the wagon.<sup>624</sup>

Finally, large farm machinery by its design, which placed the driver high on a seat, created a very different lived experience for the operator than walking behind a team of horses pulling a plow in a way that tended to romanticize male fieldwork. The horse or ox required the farmer to either attach himself to the plow and direct it on the ground while pulled by horses or sit on a small plow that did not elevate the operator above the back of the horse. Harold Briemyer as a boy hated this work with horses, writing that he “remembers to this day how tiresome it was to walk behind a spike-toothed harrow that his team dragged over a 20-acre field. The operation seemed interminable.” Horse farming, down on the ground trudging endlessly with the horses, was “devoid of any artistic or spiritual uplift.”<sup>625</sup> In contrast, in the extremely flat landscape of the Corn Belt, the new tractors that farmers encountered early in the twentieth century placed them literally on top of the world in control of a symbol of strength and power in a way that

---

<sup>624</sup> Ibid., 31-33.

<sup>625</sup> Breimyer, *Over-Fulfilled Expectations: A Life and an Era in Rural America*, 49.

accentuated American ideas about masculinity. Boys growing up in the Midwest recalling tractor farming spoke of their fathers in heroic overly masculinized terms. David Hamilton described how his uncle appeared to him as a young boy helping with harvest on their Missouri farm:

On the tractor, Unc stood straight, his worn fedora shading his eyes, one hand on the wheel, the other resting on his hip, his feet spaced for balance, and he rocked with the tractor as it picked its way across old furrows that had settled back into each other. The big wheels on either side held him high. I imagined him standing higher on them, straddling the two, stepping as they turned, and by a kind of moonwalk striding hugely across earth that ran back beneath the tractor to meet the plow.

Hamilton described work in the fields with a tractor as if writing about play or recreational activity commenting “And when have you ever known a boy who did not want to take the wheel of a tractor?”<sup>626</sup> Later in his memoir, Hamilton describes a recurrent dream he had of cultivating with a John Deere G where ease in operating machinery and an idealized nature created a heavenly experience. “I was mesmerized by the widening strip of black earth against the lime-green of new wheat in spring,” Hamilton writes and adds “We could have named our daughter ‘Chartreuse,’ but we didn’t think of that. I think instead of how visible work, with land, machines, and tools, has nudged me towards mysteries, often feminine, and how the boyishness of trying to master such work knocks on the door.” After mastering the tractor in a way that the operator and Hamilton became one efficient mechanism, he finished his work as “then with a

---

<sup>626</sup> Hamilton, *Deep River: A Memoir of a Missouri Farm*, 87.

smile that I'm glad no one was around to record, I could loaf and invite my soul."<sup>627</sup> Certainly, simple functionalist economic explanations for rural technological use cannot account for such emotive and poetic prose about artifacts.

Importantly, while fieldwork became a male-dominated domain and large machinery rendered masculine (although each remained only weakly gendered), both sexes regarded the use of tractors or combines as serving the family and constructed identities in which technology, nature, modernity, and family legacy became intimately intertwined. In other words, the dualities of rural versus urban and modern versus old fashioned became more central to rural identities than male versus female or natural versus technological. In short, nurturing of nature and rejecting technological use formed an important aspect of *neither* gender in rural America, and family and technology as a general category became gendered as *both* male and female. As the poet James Hearst recalled regarding the change he witnessed on his family's Iowa farm in the early twentieth century, his family lost its capacity of self-sufficiency, but both men and women "welcomed the machine age with open arms. Engine power instead of muscle power, large farms, private telephones, balanced account books, asphalt roads, bathrooms, promise of a better, at least easier, life."<sup>628</sup> Similarly, the USDA report by agricultural economist's Emily Hoag Sawtelle in 1924 quoted a Michigan farm woman who described herself as the daughter of a pioneer farmer. She saw "progress" as a steady campaign of using technology to subdue untouched nature:

---

<sup>627</sup> Ibid., 144-146.

<sup>628</sup> James Hearst, "Young Poet on the Land," in *Growing up in Iowa*, ed. Clarence A. Andrews (Ames, IA: Iowa State University Press, 1978), 58-59.

I have lived to see towns and cities, where once I saw bear and deer and lynx. In the Wild Wood I married a young man who worked in the lumber yards and we hewed a house out of the wild woods. What was a wilderness when I was a child is now beautiful farms. The old log cabins have been replaced with fine dwellings; wild animals with fine stock. We farm women do work hard but we are not lonesome or discouraged. Fifty years ago my mother never heard of a gasoline engine. Most farmers use them now to saw wood, pump water, churn, run the cream separator, run the washing machine.<sup>629</sup>

Additionally, a non-technological agrarian existence under Hassebrock's discourse of rural modernity has none of the morality of John Seymour's organic reformist discourse, but rather is an "*Agony of Survival*" in a constant struggle against a menacing and harsh nature and the constant threat of financial ruin, not just for him personally as a male producer but for the entire family as a productive unit.<sup>630</sup> Hence, Hassebrock chose as the photo on the front cover of his memoir (written in the 1980s) an image of his family with an early twentieth century automobile, an old technology, as an appropriate representation of this "agony." Hassebrock aims to contrast this less modern agony with the much better rural existence that ultramodern technologies have allowed, a lifestyle that his struggling farm family had always hoped for. Such views of technology as a means to combat the agony of rural life, or as Frederick L.

---

<sup>629</sup> Sawtelle, "The Advantages of Farm Life: A Study by Correspondence and Interviews with Eight Thousand Farm Women," 9.

<sup>630</sup> Hassebrock, *Rural Reminiscences: The Agony of Survival*, Front Cover; see also Scot, *Prairie Reunion*, 57-58; Breimyer, *Over-Fulfilled Expectations: A Life and an Era in Rural America*, 44-45.

Kirschenmann terms “drudgery,” is a common feature of discourses of rural capitalistic modernity/ultramodernity as it gives ideas about a family unit evolving towards a more progressive state greater strength. Rather than extoling the spiritual aspects of working with the land without modern technology as many organic advocates do, for example, Harold Breimier recalled cultivating before mechanization at the dawn of 1920 as “boring” and a task his parents forced him to do.<sup>631</sup> This description differs greatly from the heroic description David Hamilton gave about he and his father mounted on tractors and his desire as a young boy to sit at the wheel.<sup>632</sup> Hassebrock’s memoir cover reflects the rural tendency to view older technology as evidence of a progressive inborn identity. Similarly, tractor “jamboree” participants viewed antique machinery in the Introduction as material representations of their family’s inherent modernity. Repeating this pattern, the farmers embracing wind turbines in Chapter 7 saw the progression from their grandfather’s windmills to their contemporary large wind farms as proof that “we are born innovators.” Importantly, this discourse of evolution strikingly opposes an organic discourse of devolving rural relationships between technology and nature.

In addition, while rural Americans regarded rural machinery as inherently male, women still used field machinery and regarded it as a sign of their family’s progress and modernization. Winifred M. Van Etten recalled plowing fields in the 1920s as an important part of her childhood and bringing her closer with her father. “I regarded myself as an expert” at operating the plow, she recalled.<sup>633</sup> Another female author, Julie McDonald recalled how her family “was pleased

---

<sup>631</sup> Breimyer, *Over-Fulfilled Expectations: A Life and an Era in Rural America*, 49.

<sup>632</sup> Hamilton, *Deep River: A Memoir of a Missouri Farm*, 87.

<sup>633</sup> Hassebrock, *Rural Reminiscences: The Agony of Survival*, Front Cover; see also Scot, *Prairie Reunion*, 141.

to exchange them [the mules] for a John Deere tractor, and we all cheered when the mules went down the lane for the last time. The new tractor reminded me of a giant grasshopper.”<sup>634</sup> In addition, if rural Americans in the Corn Belt of both genders see nature as moral, they do so primarily because the landscape represents family legacy and productivity. While unaltered nature may have some inherent value, it carries less moral cache than it does under an organic discourse identity bundle. One can even make the claim that both men and women on farms *see* a cornfield differently than those with an organic identity. For example, in Emily Hoag Sawtelle’s 1924 report interviewing 8,000 farm women seeking to perform their rural modern identities, she viewed the family, the farm home, and the land in almost equivalent terms, all of which technology renders more moral,

The farm homes of America keep alive the sacred traditions of our land....  
Every field has its story; this splendid old field, for instance, was drained with laborious toil by the grandfather and planted with high hopes by the father and is now tended with pride by the grandson who reaps the harvest of fruit and victory. In the older states, home traditions have sometimes accumulated until, the farm as it has been handed down from one generation to the next, has become a venerable spot... In newer sections of our nation

---

<sup>634</sup> Julie McDonald, “Growing Up in Western Iowa,” in *Growing up in Iowa*, ed. Clarence A. Andrews (Ames, IA: Iowa State University Press, 1978), 116.

the land becomes endeared to us because here have striven and conquered  
pioneer parents.<sup>635</sup>

Thus, rural capitalistic modernity imbues the land with meaning that differs from organic reformist discourse regarding nature as having an inherent value. The less humans have impacted untouched nature with technology, the more virtuous land and production processes become for those holding organic identities. In contrast, farmers with rural modern identities view nature as moral because it documents family conquest or inborn capacity to initiate progress. In anthropologist Jane Adams' ethnographic study of farmers in Illinois she eloquently explains this rural view of nature as "The landscape encodes memories."<sup>636</sup>

### **Understanding Debates Over Organic and Sustainable Agriculture Through an Analysis of Conflicting Discourses about Gender, Work, Modernity, and Technology**

I argue that many advocates and scholars critiquing mainstream agriculture have failed to recognize an alternative discourse regarding the relationship between morality, work processes, gender, and technology arising out of the rural Midwest that competes with the dominant discourse identity bundle of writers like Pollan and Kingsolver and scholars such as Merchant and Bergmann. More importantly, advocates seeking to reform agriculture have not appreciated how the history of urban observances and stereotyping of rural life leads farmers to resent elements of organic identity, even though such critics of agriculture may actually hold more nuanced views. This rural discourse of modernity and ultramodernity traces its genealogy to the

---

<sup>635</sup> Sawtelle, "The Advantages of Farm Life: A Study by Correspondence and Interviews with Eight Thousand Farm Women," 28-29.

<sup>636</sup> Adams, *The Transformation of Rural Life*, xvii.



division of labor on family farms in early twentieth-century America, as discussed above, and formed a portion of a broader rural modern discourse in which technology became heavily associated with progress and moral ways of making a living. Women as well as men used technology to perform identities of rural modernity and ultramodernity. For example, a woman, JoAnn Wilcox, served as one of the chief technology editors of the farm journal *Successful Farming* in the 1990s. She titled her monthly column “Production,” not anything dealing with homemaking or preserving nature.<sup>637</sup> In one article she launched “Yield Monitor Watch 2000,” in which she supplied a Minnesota farmer with a yield monitor system, a global positioning system, and yield map software and documented how she and the farmer used the technology on his combine over a year. Wilcox proudly begins her article by stating “Every high-tech thing I know, I learned in farmer kindergarten, so to speak. By that I mean I started at ground zero and learned by doing. I’ve gone to countless meetings on precision agriculture. I’ve ridden in many combines with yield monitors. And I’ve climbed on dozens of tractors, sprayers, fertilizer applicators, and ATV equipped with high-tech gadgets.”<sup>638</sup> The article, clearly written to demonstrate the farmer’s ultramodern technical know-how, showed a picture in which Wilcox and the ultramodern farmer stood in front of his largest and most impressive combine. The combine sits in the farmer’s massive machine shed with a metal ceiling and featuring another grain chute in the background. Wilcox and the farmer prepare to render the combine even more modern by installing the new yield monitoring system. The farmer admitted he feared looking

---

<sup>637</sup> See for example Wilcox, “If There’s a Rattle and a Sputter, Aren’t You Going to Fix It?” *Successful Farming* (May-June 2000): 33.

<sup>638</sup> Wilcox, “Every High-Tech Thing I Know I Learned in Farmer Kindergarten,” *Successful Farming* (December 2000): 24.24.

foolish during the experiment in front of other technologically savvy neighbors.<sup>639</sup> The article pictures Wilcox handling the technology with the male farmer as equals in the project of ongoing ultramodernization. In another example of rural ultramodern discourse, one may recall self-described farmer Nancy Kavazanjian in 2009 from Chapter 7 stating, “When you’re an innovator, some things you try don’t always work out, but you learn and go on... Now we’re the first farmers in the area to be zone tilling and using GPS to apply fertilizer and weed control.”<sup>640</sup>

For both men and women in rural America, particularly in the Corn Belt, technological use serves as a way to practice and perform family legacies as well as embody rural ideas about moral ways to acquire and display wealth and success. In practicing her identity as a modern businessperson, the Corn Belt agrarian must do so through a culturally determined practice of displaying wealth through utilitarian objects of production as the only proper or moral performance.<sup>641</sup> Seen through this lens of conspicuous production and *habitus*, many *men and women* in Corn Belt communities approach their machinery through deep-seated and unconscious ideas about success as associated with the newest technology and the morality of a

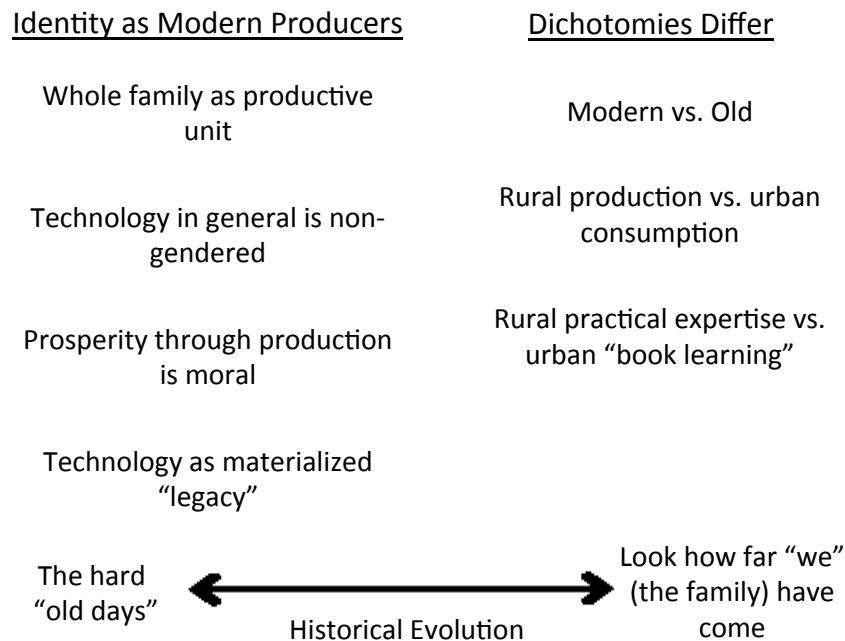
---

<sup>639</sup> Ibid.

<sup>640</sup> Fran O’Leary, “Taking ‘a Chance’ on Wind,” *Wisconsin Agriculturalist* (August 2009): 8-NewsWatch.

<sup>641</sup> For a discussion of farmers and conspicuous production, see chapter 3 and Veblen, *The Theory of the Leisure Class*; Bourdieu, *Distinction: A Social Critique of the Judgment of Taste*, 169; and Elliot, *Better than Well: American Medicine Meets the American Dream*, 100-127. In addition, Harold Cook explores social and cultural conceptions of moral displays of wealth in Dutch consumer and merchant culture in the sixteenth and seventeenth centuries. Cook, *Matters of Exchange: Commerce, Medicine, and Science in the Dutch Golden Age*, 14-15, 43, 68-69.

way of life based on production and the family. As I have argued extensively in this book, people on Midwest farms use the tractor to reinforce their identities. I have represented rural discourse identity bundles of rural capitalistic modernity and ultramodernity in visual form in Figure 8.2 below. One may particularly notice how these rural modern discourses and identities commit the farmer to a bundle of ideas about history, moral performances, gender, productivity and technology that differ significantly from those proffered by the organic discourses and identities pictured in Figure 8.1 above. By stating that “technology in general is non-gendered,” I simply mean that not all technology under a rural modern conception is viewed as an exclusively male sphere notwithstanding the fact that certain devices, such as large field machinery as I have discussed, have become gendered masculine (Figure 8.2).



**Figure 8.2:** Rural modern discourse identity bundles as a general framework for conspicuous consumption. In contrast to the organic reformist discourse, rural capitalistic modernity and ultramodernity view history as an evolution or progress narrative where the family becomes more technological and, hence, better off. This view of history moralizes the use of newer artifacts. In addition, rural modern discourses emphasize dichotomies that differ from the organic vs.

industrial binary of organic reformist discourse. Rather than evaluating morality according to a framework that seeks to categorize lifestyles and objects as either organic and moral or industrial and immoral, rural modern discourses view rural ways of living and artifacts as more virtuous than those that are urban. In addition, rural modern discourses view new objects or work processes as more moral than the old ones, whereas organic reformist discourse tends to view older and less technologically advanced objects and work processes as imbued with higher morality.

Importantly, as the farm equipment jamboree participants in the Introduction indicate, material objects also incorporate and produce cultural memory. Part of farmers' forming identities through the technologies they use involves embedding within them family histories or memories of past labor activities which defined family relationships. As with Hassebrock's front cover, photographing and using farm machinery both preserves memory and gives future generations a way to see how far they have come since the "good old days." Rather than associating a lack of technology with morality as with the organic discourse identity bundle, the rural capitalistic discourse identity bundle always associates a less-technological past with poverty.<sup>642</sup> Carl Thomson, for example, in his account of attaining his first Ford Model T in rural Indiana in the 1920s recalled, "We was so stinking poor." Thompson's account, and the account of other rural actors recalling the past, seems geared towards reminding the reader of an impoverished past to such an extent that the new technology almost fades into the background.<sup>643</sup>

---

<sup>642</sup> Breimyer, *Over-Fulfilled Expectations: A Life and an Era in Rural America*, 50-51; Scot, *Prairie Reunion*, 141; see also Kalish, *Little Heathens: Hard Times and High Spirits on an Iowa Farm During the Great Depression*, 104.

<sup>643</sup> Carl Thomson, "The Model T," in *Plain Talk*, ed. Carol Burke (West Lafayette, IN: Purdue University Press, 1983), 35; see also Adams, *The Transformation of Rural Life*, 1-2.

In another compilation of stories of residents of Buffalo Center, Iowa recalling life in the late nineteenth and early twentieth centuries, farmers like John L. Howe focus on the hardships of draining wetlands, the dirty state of town streets, or the constant threats posed by nature such as snakes and pests.<sup>644</sup> Such a view of history serves an important identity-maintaining function for rural Americans in the Corn Belt. Namely, the display of old technology, as well as stories about the hardships of past farming eras, forms part of a broader rural social practice of framing history extolling, in writer Barbara J. Scot's words, "the self-sufficiency of the earliest settlers.... These 'steady, hard-handed folk,' with 'pluck, spirit... and a firm grip upon the purse strings' replaced their early log cabins with white green-shuttered houses and wisely planted windbreaks northwest of them."<sup>645</sup> The comparison between old and new farm machinery, and the association of old machinery with poverty, serves as material evidence of rural denizen's self-image as having inherited these settler characteristics and as the agents of progress.<sup>646</sup> Crucially, for purposes of my discussion in this chapter, both men and women participate in this cultural practice at antique farm machinery shows in the Midwest. In one photo accompanying the article discussing one such "jamboree," a husband and wife stand together in the middle of a row of Farmall tractors from the 1930s. The caption reads, "Jim and Deb Kufahl of Cambridge, Wisconsin, proudly display their 1933 Farmall F-12 at the Rock River Threshere in Janesville, Wisconsin." The husband wears a Farmall baseball cap with his left arm around his wife and his

---

<sup>644</sup> Ruth Wilson, *Buffalo Chips: The History of a Town* (unpublished book, Buffalo Center, IA, year unknown), 5-16; it should be noted that John L. Howe is the author's great grandfather.

<sup>645</sup> Scot, *Prairie Reunion*, 55.

<sup>646</sup> For an example of the rural capitalistic view of technology as only leading to progress see Breimyer, *Over-Fulfilled Expectations: A Life and an Era in Rural America*, 49.

right around the exhaust pipe sticking out of the top of the old tractor as if he regards the machine as another family member.<sup>647</sup>

The 1992 article in *Successful Farming* reporting on one large farm machinery reunion (introduced in the Introduction) features men and women with a strong association between technology and the family. The author describes the event as, “family fun and sharing” stating “Their show, like all machinery shows, will center around the family... The Jamboree also provides Fed Federler’s family a chance to show off their ‘relics.’ The Chester, South Dakota, family all pitched in to sand and paint a one-row John Deere corn binder this fall that they hope to demonstrate at next year’s show.” The article further explains that women played a crucial role in organizing these machine reunions. Lynette Briden, president of the “Western Minnesota Region” in an interview commented, “I have three daughters who are also very much involved in the show.”<sup>648</sup> While the article reminds the reader that many of the reunions also gave “pioneer homemaking demonstrations,” they also presented both men and women as embedding machinery with family legacy and a production ethos. For farmers, the family serves as a signal to outsiders that they should grant her way of life a high moral standing. Family-centered production also represents a sense of independence, which the farmer must heroically defend through conspicuous production. The embodied *habitus* of farm men and women regards success in terms of family and machinery, both of which he and she have produced and can, in turn, become productive units.

---

<sup>647</sup> Dave Mowitz, “Ageless Iron: Reunions that Revive the Past,” *Successful Farming* (February 1992): 23-37.

<sup>648</sup> Mowitz, “Ageless Iron: Reunions that Revive the Past,” 26, 36.

One can observe what the dominant image of a moral relationship with nature and technology “looks like” for both men and women under a discourse identity bundle of rural capitalistic modernity and ultramodernity in a 2008 print by Dave Barnhouse entitled “New Tractor for Show.” In the idealistic print, one notices that the man drives the John Deere tractor but he does so towards his family bathed in the center of the scene in warm light emanating from the barn. The woman, while she holds a child, also stands outside next to another tractor rather than in a farmhouse. Other family members, three children, the family dog, and two grandparents, wait with the woman to greet the man mounted on the tractor as if he has heroically returned from the fields, a subtle representation of the Jeffersonian hero myth.<sup>649</sup> Much like Lewis Krimmel’s painting of a German farmer’s home over two-hundred years earlier (Figure 3.1b in Chapter 3), Barnhouse maintains an aspect of traditional German agrarianism by strategically placing the family in a prominent position in the scene to moralize rural identity. In Barnhouse’s case, due to his ascribing to a discourse identity bundle of rural capitalistic modernity or ultramodernity, the family moralizes the farmer’s technology use.

Conspicuous production may explain why farm journals in the late twentieth century reflect women engaging with masculinized technologies such as large tractors and computerized global positioning units: their identities as independent and modern technical users within a moral framework as “family farmers” functions to dispute perceived urban-based gender identities. I have argued that masculinized technologies for many women on farms represent moral values rather than immoral “domination” of women and nature. The discourse of organic and sustainable farm advocates alienates those in rural America ascribing to a rural modern

---

<sup>649</sup> Dave Barnhouse, “New Tractor For Show,” painting on canvas (2008) - See more at: <http://www.galleryone.com/fineart/BARNE5.html> (accessed 1/28/16).

identity because it frames their “moral” ways of making a living in “immoral” terms. The tractor representing progress, independence, family legacy, and the family itself headed by a benign “father figure” in rural America becomes, in the discourse of the organic movement and feminist interpretations, an unnatural industrial tool for the domination and destruction of women and nature. As Barbara J. Scot, a feminist author, recalls in speaking with her mother in 1983 about her life as an Iowa farmwife, “‘I don’t understand the lot of you.’ Why is it so important to stay on the farm? The farm. That hallowed ground. The father, the son, and the holy farm.’” Scot went onto ask her mother, “‘Were you trapped or were you there by choice?’” Scot’s mother replied emphatically, “‘*You’ll never know how much.*’” Scot’s autobiographical story proceeds to recall how she slowly abandoned a view of the farm as a male-dominated system of oppression of nature and women to adopt her mother’s emotional tie to the land based on family legacy and Jeffersonian beliefs in the mythology of farming (although Scot retained ambivalence over “becoming my mother”). Scot noted such feelings about the farm even though her family “was always behind financially.”<sup>650</sup>

The struggle within Scot’s mind about how to think about herself and her family’s farm mirrors unarticulated tensions in debates over the American farm more broadly. Namely, the incongruence of organic and ultramodern discourses and conceptions about technology underlies current debates over organic foods, sustainable agriculture, and genetically modified organisms preventing consensus over needed agricultural reform. One can view the debate over the reform of mainstream agriculture and global food systems as a clash of competing agrarian identities in

---

<sup>650</sup> Scot, *Prairie Reunion*, 42, 53; for similar emotional attachments to the family farm among men see Hamilton, *Deep River: A Memoir of a Missouri Farm*, 16.



which both sides use discourses of the family and independence to moralize historically and culturally embedded relationships with material objects (technology) and nature.

In the context described above, seemingly technical or scientific claims about the safety of genetically modified organisms or synthetic fertilizers become judgments of the rightness or wrongness of agrarian ways of life and value systems. These cultural and historical value systems in turn shape scientific claims and technological use such that political positions over the reform of agriculture become solidified and immovable within a matrix of science, technology, and morality. For example, as one woman living on a grain farm in Illinois, Emily Webel, stated on her blog entitled *Confessions of a Farm Wife*, “There's a craze going on. A food craze. An ‘eat nuts and berries and twigs’ and ‘processed foods are the devil’ craze, and while I agree, I would rather my kids eat fruit than fruit snacks, does that make corn bred to withstand drought that we planted evil? Does that genetic modification make us as farmers evil?” Webel answered this question with a decided “No” because:

Scientists are in the lab, researching, and they're not evil scientists. They are just regular dudes who are wearing white coats and looking at CELLS. They're not figuring out a way to make the American public fatter. They have extensively studied this particular crop and have found a way for farmers like us to continue to survive during the driest of years and now the wettest of springs, and still harvest a corn crop so you folks can fuel up your SUVs with gas to get to Trader Joe's to purchase organic, non-GMO (supposedly) food and then make a stand on not eating conventionally grown food (sorry for the sarcasm, I'm grouchy today).

Webel concluded her blog post with some advice for those proffering organic and sustainable discourses that reveals alienation of rural modern identities,

So before you post another shared “eat this not that” article on Facebook, check your sources, and think of my face, my husband's face, and know that we're not in cohorts [*sic*] with some big agricultural company, or trying to give you cancer or get you fatter or whatever. We're just trying to make a living in this crazy occupation that doesn't get a regular pay check [*sic*], is dependent upon the weather, and has the responsibility to fuel and feed a growing global need. Lucky us.<sup>651</sup>

In one picture on Webel's blog, she performs her morality under a rural ultramodern discourse. She stands with her husband and four children in a harvested cornfield in front of their newest John Deer tractor and corn bin. Her husband, wearing jeans and a plaid shirt, hold one of her children in his arms and all of her family members smile to pose as a happy family with the tractor. Interestingly, the photo on Barbara Kingsolver's book jacket of *Animal, Vegetable, Miracle* also features her smiling family but this time they all hold baskets of home-grown foods such as eggs and onions. Kingsolver, her husband, and two daughters, stand on a staircase surrounded by verdant vines and other plants but with no material objects other than the wire basket held by one of her daughters. Importantly, the photo of Webel and Kingsolver

---

<sup>651</sup> Emily Webel, “Sticks and Stones May Break My Bones, But Will GMOs Really Hurt Me?” *Confessions of a Farm Wife*, April 25, 2013.

<http://webelfamilyfarm.blogspot.com/2013/04/sticks-and-stones-may-break-my-bones.html> (accessed 4/17/15).

present almost identical scenes of family bliss except Webel's features technology prominently and Kingsolver's displays a conspicuous lack of high-tech material objects. In other words, both Webel and Kingsolver unconsciously engage in the Jeffersonian and German practice of employing the family to moralize their production processes, but as a means of performing opposite technological identities.<sup>652</sup>

Other farmers, both male and female, exhibit the same rural cultural practice displayed by Webel of performing for outsiders in order to demonstrate the morality of ultramodernity. For example, at the 2016 Women in Ag Conference in "the Quad Cities" (the border of northwestern Illinois and southeastern Iowa), Webel and another self-described "farm wife," Holly Spangler, held a panel featuring Natasha Nichols, a blogger from Chicago. All three women introduced themselves to their audience first as mothers of several children and then as urban or rural dwellers. The two farm wives saw Nichols as a worthy panelist because she valued her identity as a mother, rendering her moral, and because she represented an unusual city dweller wanting to learn about "real" farm life. Thus, the panel itself offered an opportunity for the rural women to perform for an outsider sympathetic to ultramodernity and who could potentially relay this positive impression to other urbanites through a blog. The interview of Nichols also revealed further instances of rural performances. For example, when one of the farm wives asked how she first "got it," Nichols replied that when touring a large hog farm as part of a "Farm Families tour" for urban Chicago dwellers interested in "learning where their food came from," the owner of the farm, Steve Ward, stated "I don't think lots of people when they're going on and on about the bad things that farmers do and how they don't trust farmers-we feed our children and our families with the food we raise, ya know, with the animals we raise." Nichols characterized this

---

<sup>652</sup> Webel; Kingsolver, *Animal, Vegetable, Miracle*, Back Jacket Cover.

statement as the “ah ha moment for me, where it really solidified my trust in the food system in general and the fact that this is serious work, ya know, this is their well-being and that they are really passionate about it.” When asked by the farm wives if Nichols had any “pre-conceived notions” before going on the farm tour, she related that, “we had lots of people in our tour really really against GMOs, that was the big buzz word in our class” and that she found herself “alone” among her classmates of “trusting” GMO food as a result of her biology degree. Nichols also saw GMOs as a “buzz word” such as “gluten free” rather than an actual threat to her health. One of the farmwives praised Nichol’s GMO stance exclaiming “And you understand science, it sounds like, which would separate you from a lot [of people].” Nichols responded, “Yah, I’m a bit of a nerd that way” followed by a story about a fellow Chicagoan who saw one of her large tomatoes from her garden saying “Yah, you probably used those GMO seeds” causing laughter from the farm crowd. Nichols also elicited laughter from the audience of farm wives when she claimed that most anti-GMO urbanites confused GMOs with hybridization. Nichols also characterized that making companies spend money to label all items in the grocery store GMO-free as “stupid.” Nichols admitted that few of the women on the Farm Families tour who initially opposed GMOs “came around” as a result of the tour. One of the farmwives made an analogy between Nichols and British environmentalist and former anti-GMO advocate Mark Lynas who “was part of torching research plots and stuff, and he’s come around, the last, I think two to three years, and said ‘Oh wait, I’ve stopped and studied the science and this all makes sense.’” The three moms agreed that if GMO labeling legislation passed, that urban dwellers would blame farmers for raising food prices and that “You’re never ever gonna’ make everyone

happy.” The farmwives then asked Nichols what grocery stores were like in Chicago as if Nichols lived in a foreign country.<sup>653</sup>

In addition, other members of rural America exhibit Weibel’s sense of rural resentment of urban views of farmers reminiscent of the alienation felt by Corn Belt agrarians during the rural-urban conflict of the 1920s. Wyoming farmer and rancher Linda M. Hasselstrom exhibited similar rural resentment, “Now agricultural labor pollutes our water and soil; newspapers tell us so daily. Country people who love the land are suddenly its worst enemies.” Hasselstrom ends her essay with a curious statement that almost sounds like a threat to those framing the farmer as the “enemies” of the land. She reminds environmentalists that farmers and ranchers have a deep appreciation for their past and that “folks like that can wait out a lot of social upheaval before they change their behavior.”<sup>654</sup>

In English professor David Hamilton’s memoir about growing up on a farm in Missouri, which involved extensive drainage of bottomlands, he too expressed a defensive stance “...farming means drainage, cutting ditches and setting culverts so the fields will dry out enough to work. Among my university friends and others, that has become a transgression of the worst order; those being the same people, often, who find transgression thrilling when it is their own

---

<sup>653</sup> Spangler, “Confessions of a Farm Wife: Vol. 18,” *Wallaces’ Farmer and Prairie Farmer-Confessions of a Farm Wife* Blogs, My Generation (April 12, 2016), <http://farmprogress.com/blogs-confessions-farm-wife-vol-18-10824#authorBio> (accessed 9/20/16).

<sup>654</sup> Linda M. Hasselstrom, “Addicted to Work,” in *Rooted in the Land*, 66-75.

adventure in science or art.”<sup>655</sup> Farmers voiced similar views of alienation with use of a family-centered discourse in an article about a debate over GMO foods held in Des Moines, Iowa in 2013 and attended by over 1500 anti-GMO advocates and large grain farmers. The *Wallaces’ Farmer* writer Rod Swoboda described how the only Corn Belt farmer on the debate panel, Bill Horan, countered anti-GMO arguments about unknown effects of GMO crops on human health and the environment. Swoboda wrote:

The other farmer on the panel, Bill Horan, said yields and grain quality on his farm have improved thanks to biotech crops. And so has family life. A past president of the Iowa Corn Growers Association, Horan says he spent a large part of his summers as a kid with a hoe in hand, walking bean fields, hoeing weeds out by hand. “My kids got to play Little League baseball, swim team, dance lessons and, because of biotechnology, I got to go watch them. That was a luxury my parents never even dreamed about. Biotechnology offers me the opportunity to be a better husband and father, something that is hard to quantify.”

Thus, Horan’s argument reminds the reader of Grace Gibbard Lentz’s fictitious farmwife in 1924 in which the latest technology use became virtuous due to the improvement in family life and the user becoming more of a “real man” or “real woman.”<sup>656</sup> In contrast to his own family-centered moral lifestyle supported by technological modernization, Horan dismissed the anti-GMO

---

<sup>655</sup> Hamilton, *Deep River: A Memoir of a Missouri Farm*, 158.

<sup>656</sup> Lentz, “The Evolution of a Real Farmer’s Wife.”

advocates as "groups and individuals who make their living scaring people about food."<sup>657</sup>

Horan, therefore, frames anti-GMO advocates as performing a less moral non-productive work that damages families. Thus, while Swoboda interpreted the debate over GMOs as a technical disagreement over the correct or incorrect interpretation of scientific data, the argument is not about that at all. Rather, underlying these articulated technical arguments over the safety, efficiency, or even profitability of GMOs and organic or sustainable foods lies a debate over the morality of rural identities. Scientific and economic claims serve as “rational” proxy arguments standing in for clusters of beliefs about morality, views of nature, and meanings of material objects that comprise two clashing discourse identity bundles.<sup>658</sup> These conflicting underlying value systems also explain why organic farm advocates find themselves getting nowhere among many in rural America even after pointing out that organic and sustainable farming potentially brings greater efficiency than the methods used by mainstream farmers in the Corn Belt.<sup>659</sup> This claim by organic advocates offends the identity of mainstream farmers who see themselves as moral and modern producers who “feed the world” through an efficient and globalized food

---

<sup>657</sup> Rod Swoboda, “The Great Debate on GMO Crops.” *Wallaces’ Farmer* (2013), [http://farmprogress.com/blogs-great-debate-gmo-crops-7797-bpx\\_3](http://farmprogress.com/blogs-great-debate-gmo-crops-7797-bpx_3) (accessed 4/17/15).

<sup>658</sup> For a similar discussion of the use of proxy arguments in technoscientific policy debates, see Hirsh and Sovacool, “Wind Turbines and Invisible Technology: Unarticulated Reasons for Local Opposition to Wind Energy,” 705-34.

<sup>659</sup> For a similar perspective of scientific controversies see Daniel Sarewitz, “How Science Makes Environmental Controversies Worse,” *Environmental Science & Policy* 7 (2004): 385-403.

system and “nature” as an ordered, productive, and controlled unit of production.<sup>660</sup> Farmers in the Corn Belt have regarded the exact straightness of cornrows, for example, as a crucial aesthetic virtue at least from the 1920s to the present.<sup>661</sup> Hence, more data or evidence proffered by organic and sustainable advocates will not dislodge the views expressed by one farm journal editor that “biotechnology could mean the difference between an underdeveloped country feeding its population or millions starving because of grain disease. Anything that reduces the time it takes to develop new food crops is an incredible scientific advancement.”<sup>662</sup>

Indeed, if the debate over organic and sustainable foods simply revolved around a technical problem over the efficiency of farming methods, the articulated technical arguments proposed by Frederick L. Kirschenmann and other sustainable advocates since the 1970s would have led to more Corn Belt farmers drastically revising their farming methods by now. As argued extensively in this book, Midwest farmers seek to form and reinforce unarticulated

---

<sup>660</sup> For a view of the ideal of an ordered and productive nature held by mainstream farmers, see “Farm Beautiful Contest,” *agriculture.com*, 2013.

<http://community.agriculture.com/t5/contests/v2/contestpage/blog->

[id/farmbeautiful/tab/entries%3Amost-kudoed](http://community.agriculture.com/t5/contests/v2/contestpage/blog-id/farmbeautiful/tab/entries%3Amost-kudoed). (accessed 4/19/2015). See also Frederick Kirschenmann’s critique of mainstream farmer’s view of nature in terms of fragments rather than in terms of relationships, Kirschenmann, “Food as Relationship,” 106-121.

<sup>661</sup> “Planting a Straight Corn Row,” *Wallaces’ Farmer*, 50, no. 17 (April 24, 1925): 605 (3), 612 (10); “What is the Secret to Planting Straight?” *Successful Farming* 95, no. 12 (December, 1997): 36L.

<sup>662</sup> Harry Cline. “Anti-Biotech Crowd Convinced GMO Food is Road to Extinction,” *Western Farm Press* (September 27, 2011): 1-3.



identities and moralities when using technology, not simply to increase efficiency or productivity. In other words, more or better scientific or economic data will not resolve the debate over a whole suite of mainstream agricultural practices in the Corn Belt - from GMOs to the use of large-scale mono-cultured crops. These controversies present competing agrarian identities rather than technical problems. This underlying clash of discourse identity bundles explains why farmers failed to convince anti-GMO advocates and consumers at a recent Cass County Farm Bureau GMO forum in North Dakota that “GMO foods are safe to eat and good for the planet.” At the meeting, the president and CEO of Peterson Farm Seed held up a two to three inch stack of paper containing over 1700 scientific papers characterizing GMO foods as safe to eat. The *Wallaces’ Farmer* editor and part-time farmer Lon Tonneson observed that this display by the Peterson Farm Seed president failed to “hit a home run” but then claimed “Hauling in a pallet load of the actual studies would have been the homerun.” In addition, farmers attending the meeting failed to persuade the audience of activists with other “rational” arguments. For example, Val Wagner, described as a North Dakota “farm wife,” argued that “farmers aren’t pouring tanker loads of glyphosate on GMO corn and soybeans like some of the critics seem to think. It’s more like a can of pop spread over a football field,” and North Dakota farmer Mark Belter “pointed out that the Bt in some GMO corn hybrids is the same stuff that organic farmers spray on their crops.” Tonneson seemed exasperated at the fact that none of the anti-GMO advocates or consumers left the forum persuaded by these scientific and “rational” arguments. Indeed, Teonneson regarded the crowd as “silly” as evidenced by asking questions such as:

Why do you grow GMOs when GMOs are bad for the environment and bad for human health?

If you think glyphosate is so safe, will you drink a glass of it?

Why should we believe the government when it says GMOs are safe?

Aren't all university GMO studies funded by Monsanto?

I read on the internet that GMOs are bad for you. Isn't it true?

If you grow GMOs, don't you contaminate your neighbors' crops?

Does Monsanto force you to buy its GMO seed?

Tonneson hoped that when farmers reading his article encountered these questions, they could “hit a home run,” by presenting even more rational and scientific evidence of the safety of GMOs. Tonneson himself, however, recognized that many Corn Belt communities have held similar forums where farmers and seed representative present nearly identical arguments to anti-GMO audiences with little effect.<sup>663</sup> In spite of this acknowledgment, Tonneson continues to present the debate over the safety and environmental impact of GMO foods as a scientific or technical one. Another *Wallaces' Farmer* writer and editor of *Indiana Prairie Farmer*, Tom Bechman, urged farmers to “stand up for agriculture in the GMO foods debate” as his wife did when judging food with an anti-GMO judge at the Indiana state fair. Bechman's wife had grown up on a farm and “still has strong ties to agriculture.” After making the point that the anti-GMO judge first incorrectly pronounced GMOs “HMOs” and told his wife “Whatever they are — they're in our food today and food just isn't the same,” Bechman wrote, “This was her [his wife's] chance to defend agriculture to someone who obviously had misinformation, not facts. It

---

<sup>663</sup> Lon Tonneson, “GMO Forum in Fargo Draws a Crowd,” *Wallaces' Farmer* (October 28, 2015), <http://farmprogress.com/blogs-gmo-forum-fargo-draws-crowd-10331> (accessed 9/16/16).

was her chance to take a stand for agriculture, and she was up to the challenge.” Bechman’s wife “defended agriculture” with the following fact-based reply:

Let me clear up some things... First, GMO stands for genetically modified organism. They aren’t just “something” in your food. It’s a trait, part of the genetic makeup of a plant that produces food.

Those traits include ones that help farmers better control insects and weeds that would otherwise require spraying more chemicals. If a corn plant has a trait inside itself that produces a substance toxic to a certain insect, then the insect will eat a small bite and die from the toxin. Without these traits in corn, the farmer might have to spray insecticides to control the same insects.

We’re going to have to feed more people on less land as time goes along...

Second, companies have invested years of testing and millions of dollars before any of these products with GMO traits ever come to market.

Government agencies make them jump through all kinds of hoops. If a new GMO trait is labeled and comes onto the market, odds are that it’s very safe or it never would have been approved in the first place.

Bechman related pride in his wife for this response because she “took a clear stand for agriculture.” Bechman, however, did not relate to his farming audience whether the anti-GMO judge changed her views on GMOs as a result of his wife’s response. In fact, the anti-GMO judge remained silent throughout Bechman’s wife’s tirade, so one can only assume that the judge

clung to her “misinformation.”<sup>664</sup> As with Tonneson and Emily Webel, Bechman’s wife showed a level of alienation rarely elicited from mere “incorrect” presentation of scientific data. Thus, even though Bachman and his wife articulate “the facts” as the best means of countering criticisms of GMOs, in actuality they aim to “defend” their identities and their conceptions of themselves and their families as moral ultramodern producers. In addition, this unarticulated discourse identity bundle of rural globalized ultramodernity has become so embedded, such a part of the rural *habitus*, that it prevents Bechman and his wife from seeing how any “rational” person faced with these “facts” could possibly believe anything else. Thus, these rural ultramodern commentators can conceive of irrationality or misinformation as the only possible explanations for an anti-GMO stance even though the way they themselves approach technology, such as GMOs, is highly culturally and historically contingent (as I have shown throughout this book). As Bechman asks his readers in another article, “Why do some people in this world ignore science and believe only bad things? Why do they think all big companies and industries like agriculture are up to no good? Where do they get these ideas?”<sup>665</sup> For Tonneson and many other farmers, this ignorance of the facts occurs not because of a different identity held by organic advocates but because these critics have never experienced “real farming.” As Tonneson

---

<sup>664</sup> Tom Bechman, “Stand Up for Agriculture in the GMO Foods Debate, *Wallaces’ Farmer* and *Prairie Farmer* (August 15, 2016), Hoosier Perspectives, <http://farmprogress.com/blogs-stand-agriculture-gmo-foods-debate-11225#authorBio> (accessed 9/19/16).

<sup>665</sup> Tom Bechman, “Have Marketing Techniques Fueled the Fire for Those Who Oppose Agriculture?,” *Wallaces’ Farmer* and *Prairie Farmer* (April 7, 2016), Hoosier Perspectives, <http://farmprogress.com/blogs-marketing-techniques-fueled-fire-those-oppose-agriculture-10793#authorBio> (accessed 9/19/16).

explains in another article, “I usually sigh and roll my eyes when I hear the phrase ‘sustainable agriculture.’ There they go again, I think.” From Tonneson’s point of view, “organic proponents, who probably have never set a foot in a plowed field, ignore the impact tillage has on soil health. The nation’s farms were all virtually organic in the 1930s, and look what happened. We almost lost the ability to feed ourselves during the Dust Bowl.”<sup>666</sup>

This same process of presenting “the facts” to defend an unarticulated identity also occurs when advocates adopting an organic reformist identity bundle cannot understand why Corn Belt farmers overlook “clear” scientific evidence of the environmental impacts of monoculture or the high levels of petroleum use of contemporary farming. In this case, advocates such as Pollan and Berry can only conceive of these farmers as selfish, ignorant about environmental science, and fooled by greedy agribusiness corporations. Neither side appreciates their own or the other side’s discourse identity bundles or the possibility that these complex packages of discourse and identities impact the way the parties to the debate view or use technologies. As a result, the sides present “facts” with little effect and characterize the other side as silly or corrupt thus precluding any real solution to the “debate.”

One may ask why Tonneson, Bechman, Webel, and other Corn Belt farmers support the use of GMO crops so vehemently and view anti-GMO advocates with so much derision. After all, selling 300 bushels of non-GMO corn promises a profit as well and many farmers grow non-

---

<sup>666</sup> Lon Tonneson, “Sustainable Agriculture: It’s About Your Kids’ Kids’ Kids,” *Wallaces’ Farmer* (September 12, 2016), Inside Dakota Ag, <http://farmprogress.com/blogs-sustainable-agriculture-kids-kids-kids-11321#eAuthor> (accessed 9/19/16).

GMO crops for European markets. The “threat” posed by anti-GMO advocates goes beyond economics. I have argued in this chapter that mainstream Corn Belt farmers view attacks on GMOs as a critique of their rural globalized ultramodern identities and the morality of their way of making a living. Thus, Tonneson and Bechman’s continued belief that the debate over GMO’s involves a technical scientific question in spite of the failure of scientific and rational arguments to persuade critics makes more sense if one views Tonneson’s faith in science as a proxy argument for the morality of ultramodernity. I have shown that these clashes over the identities of rural people and an outside “other” and debates over the morality of rural ways of life have occurred in America since at least the late eighteenth century when Benjamin Rush observed his German neighbors. As such, scientific and rational arguments stand in for a more fundamental pattern of rural performance and resentment in relation to an outside threat. Throughout this book, I have presented this menacing “other” in several forms from the aristocratic Théophile Cazenove of the eighteenth century to the urban progressive reformer or industrialist of the 1920s and, now, the organic and anti-GMO advocate. In each case, the farmer uses technology to perform his or her identity as a moral producer. When Tenneson, Webel, Bechman’s wife, and other farmers hear a critique of GMO’s, they therefore see it as an attack on themselves and their families. For example, *Wallaces’ Farmer* editor and “family farmer” John Vogel expressed the view of most Corn Belt farmers, in response to speaking with a GMO food labeling advocate at a booth at the Iowa State Fair in 2013, much more succinctly by titling his article “Anti-GMOers Aim to Kill Food Abundance With GMO-Labeling.” The advocate told Vogel “As an organic gardener, a mother, a grandmother, and someone with a food-sensitive

chronic disease, I want and need to know what's in my food.” Vogel tellingly responded: “Spare me the tears, please.”<sup>667</sup>

To conclude, the notion of performative use not only can provide insight into the meaning farmers attach to material objects such as wind turbines; it can also reveal the use of technology in forming distinct identities that influence the way social actors respond to technoscientific controversies. The idea that people employ material objects to form and reinforce their embodied identities allows the scholar to view debates about technology that appear narrow, such as the productive capabilities of large farm machinery, as moral disagreements implicating a complex array of historically formed ideas about technology and the self. In this chapter, I have focused on how rural people have used material objects to reinforce their identities as modern producers and the relationship between this sense of self and gender in the Corn Belt. I argued that the clash between rural modern and organic conceptions of technology, production, nature, and gender influences the way people holding these two identities view one another as immoral. Technology plays a central role, therefore, not only in debates about the morality of high-tech farming, such as whether or not to use pesticides, but in reinforcing conflicting identities through the use of material objects. The performative use of artifacts by those on both sides of the controversy over “industrial agriculture” establish and

---

<sup>667</sup> John Vogel, “Anti-GMOers Aim To Kill Food Abundance With GMO Labeling.” *Wallaces’ Farmer* (September 20, 2013). <http://farmprogress.com/blogs-anti-gmoers-aim-kill-food-abundance-gmo-labeling-7637>. (accessed 4/17/15); Richard White has also argued that the environmental movement more broadly has not reconciled the relationship between nature and work in Richard White, “Are You an Environmentalist or Do You Work For a Living?,” in *Uncommon Ground*, ed. William Cronon (New York: W.W. Norton & Co., 1995), 171-185.

solidify unexpressed identities driving more articulated policy debates. As such, I have shown that by using technology, people not only perform an embodied sense of self but also a view of morality connected to their identities. The mundane everyday use of material objects is a political act. The use of artifacts helps people answer both the questions “who am I” and “how should I and others behave?” Since questions of policy and politics revolve around notions of “should,” solutions to controversies such as the reform of mainstream agriculture must identify and reconcile conflicting versions of performative technological use. Rather than analyzing science and technology policy from the top by focusing on statutes and regulations, I suggest that solutions may come more effectively from the bottom by taking into account the co-construction of identities and moral commitments when people actually use technology on a daily basis. In my final concluding chapter, I expand on this notion of policy analysis at the site of performative use. Namely, I argue that the impasse between organic advocates and mainstream agriculturalists may resolve more effectively through the evolution of a new rural discourse identity bundle than by statutes or other formal policy “solutions.” I contend that the organic reformism and rural capitalistic modernity and ultramodernity present outdated rural identities and discourses and that a new rural sense of self, combining elements of each, must form among those who actually use material objects in the Corn Belt for any real or lasting “policy solution” to emerge.



## Chapter 9

### Conclusion: Does it Still Run?

*The most worthy calling was to till the soil, and it was the natural order ordained by God that the farm would pass from father to son. My brother and I grew up in the fierce shadow of those beliefs, knowing that our father had failed, that our Uncle Jim had failed, and that maintaining the family farm was that duty-at-which-we-were-all-failing. And we were very, very sorry for it all.*

Barbara J. Scot, *Prairie Reunion*, 1995<sup>668</sup>

In 2015, while conducting research for this book, my uncle traveled from his farm in Iowa to visit me in Virginia and to meet my young daughter. Walking through my house, he immediately noticed a bound copy of old farm journals from the 1920s sitting on my desk. The thick book had a leather cover, and the pages of the journals had discolored over many years, giving the volume an impressive appearance that made the reader feel as if he or she discovered a rare and ancient document. The content of the journals also contained many different points of possible interest, making them fun to read. One could find advertisements for old medicinal remedies, classic automobiles, and fashions, along with editorials about historical events and jokes and folk stories that have fallen out of popular taste. The journals even contained recipes showing what people on Midwest farms ate in the 1920s. But my uncle gleefully flipped through the pages trying to answer just one question: what corn yield did farmers obtain in 1925? For me, the journal provided a window into a way of life in 1920s America. For my uncle, on the other hand, it spoke chiefly to production. Predictably, the farmers in the journal reported much lower corn yields in 1925 compared to 2015 standards. As such, my uncle saw the farm journals

---

<sup>668</sup> Scot, *Prairie Reunion*, 57-58.

as evidence of the progress achieved by current farmers. In other words, the STS scholar (me) and the farmer (my uncle) literally “saw” two completely different documents.

The farm journal’s testament to the advancements achieved by the contemporary farmer reminded my uncle to show me a YouTube video that one of his neighbors, Jared Schrage, had recently posted. The video features Schrage’s 2014 corn harvest filmed from above with the latest drone technology. One sees, set to music, an impressive combine shooting corn into a grain bin pulled by an equally imposing John Deere tractor. Next, the camera runs along Schrage’s newest semi-truck such that the lights of the adjacent tractor illuminate the metallic side of the huge vehicle. The video highlights the majesty of Schrage’s farm equipment both during the day and at night. The drone makes the technology appear fast and efficient. For example, the tractor and corn bin race across the landscape more rapidly than they would in real time with freshly harvested corn. Immediately afterwards, the tractor pulls the empty bin adjacent to the moving combine for the next round of bushels. The whole process of the combine, bin, and tractor working together presents a carefully choreographed and efficient circle with little wasted movement. The viewer sees the farmer himself only briefly, holding a remote control device and directing the drone, the last technology to appear on the farm. Later, the camera features the farmer driving the tractor, which appears to almost fly down the harvested portion of the cornfield. One also notices how remarkably clean all of the farm equipment appears and how ordered Schrage’s corn rows look. The viewer cannot find a single weed in the five-minute video or cite an instance in which dirt or dust appears on Schrage’s machinery. The yellow corn falls into the pristine trailer bed so evenly that it almost looks like

yellow water. The video concludes with the farmer standing triumphantly on top of the semi-truck bin watching hundreds of bushels of corn cascade into the spotless metallic surface.<sup>669</sup>

My uncle proudly held up an iPad so I could see this video in its entirety, giving me a look as if to ask, “Well, are you impressed?” I then realized that Schrage did not stand alone in his drone filming of his harvest. The side bar of YouTube recommends a multitude of similar videos loaded by Midwest farmers showing their harvesting and planting operations and many have well over one thousand views. Several of these videos show the latest farming equipment accompanied by either inspiring music or country songs celebrating the virtues of farm work or hardships heroically overcome by generations of Corn Belt farmers.<sup>670</sup>

---

<sup>669</sup> Jared Schrage, *Schrage Corn Harvest (11-9-2014)*.

<https://www.youtube.com/watch?v=J3yZzlpRGFM> (accessed 6/20/16).

<sup>670</sup> See for example T K Farms, *T K FARMS DARKE CO. OHIO ,2014 corn harvest ,job of the grain cart operator* (November 1, 2014). <https://www.youtube.com/watch?v=8c6bng93j2U> (accessed 6/20/16); Devon Murray, 2015 *Iowa Farming-Murray Farms, Inc.* (January 29, 2016). <https://www.youtube.com/watch?v=lxJAUhfn3Ew> (accessed 6/20/16); The Burbank Blues, *Final Corn Harvest Aerials* (November 15, 2014). <https://www.youtube.com/watch?v=givo2lUxBaw> (accessed 6/20/16); Schrage, *Jensen Grain Farms Harvesting Corn in early Nov. Snow* (November 16, 2014). <https://www.youtube.com/watch?v=-PN5E9zygEM> (accessed 6/20/16); Agrimap Services, *Boyd Grain Farms Fall 2014* (October 2, 2014). <https://www.youtube.com/watch?v=0pXG3jfXy0U> (accessed 6/20/16).

A non-farmer, like me, closes YouTube wondering why so many videos of the harvest exist and why they have thousands of views. How many times, after all, can one watch combines and tractors driving in a cornfield without becoming bored? Does a drone actually make a monotonous Iowa landscape appear more exciting? Of course, the answer to these questions speaks to the heart of this book's main argument. The filming and viewing of these videos represents instances of performative use. Each video posted by farmers on YouTube serves the same function as the family farm photos (with members posing with technology) discussed at the beginning of this book: to perform an ultramodern identity through showing the use of the latest technologies. The drones in these cases do nothing to enhance farming profits and, in fact, impose an added cost. The videos exist solely to enhance the virtuous view farmers have of themselves and to present their ultramodernity to outside urban observers and to each other. Indeed, the farmers in making and watching these videos engage in performative use. Just as my uncle did not realize he read the 1920s farm journals in a culturally specific way, the farmers making and watching the drone movies do not consciously conceive of their actions as forming and reinforcing a complex bundle of ultramodern discourses and identities. As I have argued throughout this study, people use technologies to perform their embodied identities in ways determined by historical and social contexts. By showing the drone video on the iPad, my uncle acted out an ultramodern identity because he sought to display modernity greater than an outsider, like me, had achieved. Additionally, the farmers filming the drone videos perform their identities as ultramodern users. None of the videos feature morose music or songs with lyrics that disparage the globalized food system because the farmers used the drones and their farm equipment to reinforce their virtuous sense of self and to dispel yokel stereotypes. As I have shown in this book, the lyrics in the songs extoling the morality of work or celebrating the

success of farmers in the face of environmental and financial obstacles exist as part of a long genealogy of rural discourses and identities that proffer an agrarian hero myth.

Further, I have argued that people perform their identities not only in the case of blatantly theatrical uses of technology, such as filming YouTube videos, but through the everyday mundane employment of artifacts. As with the drone, the farmer does not use the equipment he films simply for rational economic reasons, but because it helps him to form and reinforce his unspoken sense of self, which he regards as moral. Nor have I contended that farmers exhibit unique performativity. Rather, all people use technology performatively in unarticulated ways determined by a socially determined practice or *habitus* resulting from historical factors. As a result, the relationship we have with material objects is not entirely rational or voluntary, but historically and culturally contingent. This notion that people do not use technologies for only articulated rational reasons but for the unarticulated purpose of performing identity has formed my primary argument in this book. This identity-forming relationship we all have with material objects plays itself out as a process of embodiment on a daily or even hourly basis. For example, when I recently talked to my uncle on the phone after many months of not speaking, I had prepared to talk about my daughter or wife or my music or academic careers but he opened the conversation with “I hear you got a spanking new mower?!” I had indeed recently purchased a new Husqvarna riding lawn mower, but he wanted to discuss it more than I did. In fact, I did not want to talk about it at all, which prompted me to turn the notion of performative use on myself. I felt great pride when I first purchased the machine because I had earned the funds playing music, but this feeling had subsided in the ensuing months when I moved on to other thoughts and concerns (including writing this book). I realized that I had embedded my identity in my saxophone and manuscripts I had written, not in the lawn mower. Since my childhood working

on the farm, my sense of self had derived from bundles of discourses and identities found among musicians and academics, not ultramodern farmers. Thus, while I felt pride in my ability to buy the lawn mower, I did not perform my identity by using it. Rather, I used other material objects such as my saxophone or laptop to reinforce my sense of self. In the end, I thoroughly dislike mowing my lawn. I cannot enjoy it more by rationally deciding to perform my identity while sitting on a mower because, as with the farmers in this book, my process of performative use occurs on an unspoken level of forming embodied tastes. I like the mower I bought, but I regard using it as a boring distraction from other tasks I would rather do, such as playing my saxophone. In addition, I cannot associate the mower with my identity because I cannot change my social context on a daily basis. I also have no control over my historical situatedness. My everyday mundane experience with material objects involves performing on a stage with R&B and jazz musicians or writing about STS, not farming among other Iowa agrarians. In other words, even with all of my years of schooling in an education system that seeks to create “objective” and “reasoned” thinkers, I do not use technology for purely “rational” or economic reasons either. As a result I quickly changed the subject by asking my uncle about the weather in Iowa (a favorite topic of conversation among farmers). My uncle likely could not understand why I did not show greater interest in discussing my new mower.

To summarize more generally, I have argued that users of technology perform their identities every day on a micro-level through interacting with material objects. One can gain an understanding of these identities by examining discourses surrounding technology while accounting for the social context in which people speak and act. Such an analysis may reveal both people’s explicit and unarticulated conceptions of self, motivating technology use. Further, identities change over time and, as such, have genealogies that depend on the historical

experiences of the users of artifacts. Users of technology fail to articulate the performance of identities not only because they want to appear rational, but also because the process is deeply embedded. I have chosen to name this historically formed conception people have of themselves as “discourse identity bundling.” My treatment of “performative use” does not adhere to a particular causal direction; rather, it views identity, technology, and social factors as co-constructing one another. Nor have I assumed monolithic identities among particular users of technologies but multiple and, often, contested discourse identity bundles. My analysis has also avoided conceiving of the process of discourse identity formation in terms of “eras” as such an approach would employ an overly simplistic notion of periodization. Rather, I argued that prior discourses and identities may exist alongside newly formed conceptions and technical users may adopt these multiple conceptions of self. One must recognize, however, that people are not free to choose among an infinite number of identities and discourses when using technology. A limited number of distinct and recognizable discourse identity bundles exist among a group of technological users, and use of material objects and other social factors limit the range of identities and discourses available. In turn, adopting a certain discourse identity bundle limits how people may act in the world including how they use technology.

As with Pierre Bordeaux’s notion of *habitus*, people normally engage in performative use strategically to construct a moral image of themselves. While exceptions certainly exist, people generally desire to think that the way they live in the world, the way they make a living or interact with nature, is “good” or “right.” In the case of the American Corn Belt farmer, I identified six distinct bundles of discourses and identities that have formed around the use of agricultural technology since the late eighteenth century: ***traditional German agrarianism, Jeffersonian agrarianism, urban industrialism, rural capitalistic modernity, rural globalized***

*ultramodernity, and organic reformist discourse.* *Traditional German agrarianism* preferred a strong production ethos that tended to view material objects, personal property, and an ordered/productive nature as moral, and it understood farming methods in terms of religion and tradition. In addition, German agrarianism saw gender roles as amorphous because work and land ownership constituted virtues transcending sex. A virtuous marriage involved both men and women bringing land and a work ethic to a shared production process. Importantly, German agrarianism also included a strong practice of performativity through material objects. While not necessarily displaying “modernity” in either its eighteenth or twentieth century forms, German agrarianism at least performs success and morality through the use of artifacts. Under this discourse-identity bundle, the family and successful production practices also imbue the German farmer’s way of life with virtue.

*Jeffersonian agrarianism* arose out of traditional English notions that saw the small yeoman farmer as a frontier hero braving obstacles to fulfill a divine mission. The farmer’s occupation of a mythical pastoral space, which supports and upholds both American democracy and urban industry, also grants him the highest moral standing. As a result, the farmer must preserve the pastoral not in a contemporary environmentalist sense, but so as to prevent urban industrial encroachment, including the introduction of what would later be called “technology.” Importantly, urban notions of rural America following the rural-urban conflict have assumed the persistence of anti-modern Jeffersonianism as dominating rural identities. As a small yeoman preserving democracy against external danger, Jeffersonian agrarianism encourages the farmer to think and act communally with other agrarians but take an “independent” or “individualist” posture when threatened by an “other.” Both Jeffersonian and German agrarianism view personal land ownership and family-based production practices as virtues, although Jeffersonian notions



maintain stricter gender roles which see male dominance over land and family as more important than work and production. Unlike traditional German agrarians, land and capacity for production for the English Jeffersonian still passes through the oldest son.

*Rural capitalistic modernity* builds on German and Jeffersonian agrarianism with some important differences arising out of the rural-urban conflict in the 1920s and accentuated later by the importance of agriculture in the Cold War. First, this identity embraced what Anthony Giddens calls a “modern sensibility” including a faith in science and technology, an emphasis on the new as inherently “good,” an acceptance of a reductionist approach to nature not found in notions of the “pastoral,” and a desire to think rationally and economically about business practices. Second, rural capitalistic modernity changed the farmer from seeing himself or herself as a communal preserver of democracy to an individual competitor who maintained true free enterprise capitalism. As a result of the Cold War, this competitor function of the farmer took a nationalistic form that intertwined technology, capitalism, and patriotism. Third, rural capitalistic modernity sought to draw a thin and precarious line between a modern sensibility and complete urban industrialization of the pastoral and the independent, family-based, German/Jeffersonian agrarian. The farmer must maintain his or her role as resisting encroachment by an urban “other” by contesting urban versions of modernity and promoting rural ones in a world where the line between these two modern identities sometimes blurs. Fourth, as with German agrarianism, which sees both genders as occupying the realm of production and family, rural capitalistic modernity applies to both men and women with certain technologies becoming gendered in the Jeffersonian tradition. Men and women view themselves as modern producers with certain technologies viewed as masculine (although, as I explained in Chapter 8, not necessarily an exclusively male domain). Sixth, rural capitalistic modernity

concerns itself most of all with combating urban stereotypes of the farmer as an anti-modern “yokel.”

In contrast, *urban industrialism* sees production and technology as exclusively male domains and consumption and family as female spheres. Importantly, urban industrialism views rationality, reductionism, and efficiency as virtues that trump any of the moral values maintained by rural identities. As a result of the rural-urban conflict in the 1920s and the continuing rural to urban demographic shift in American society, urban industrialism sees the farmer as a backwards “other” stubbornly resisting change and modernity. Rather than a hero, the farmer becomes the “rube,” “bumpkin,” and “yokel.” As such, modern urban actors such as academics, bankers, government agencies, and corporations must modernize agriculture by making every farm a factory. Rural capitalistic modernity views urban industrialism as threatening the farmer’s control over property and work in a family-based production processes.

*Rural globalized ultramodernity* builds on prior rural identities. It incorporates elements of rural capitalistic modernity arising out of the conflict between rural and urban conceptions of “modern” with a few significant differences. First, rural globalized ultramodernity sees the farmer as not simply equal to urban actors, but as more modern, or as the ultimate technical expert. The farmer not only uses technology that urban denizens use, but designs and employs artifacts practically to produce an abundance of food. In many ways, this feature of ultramodernity represents an extreme version of the embattled Jeffersonian frontier hero because the farmer sees himself as victorious in meeting the challenge of feeding a growing world population through use of the latest technologies. Second, the farmer still suspects that urban dwellers see him or her as a backwards yokel even though his or her use of technology far exceeds that of his unappreciative urban cousins. Third, rural ultramodernity abandons the

nationalistic notions of rural modernity and embraces the farmer's role in a global food network. The global nature of the farmer's business accentuates his view of himself as ultramodern. His challenges no longer come exclusively from the untamed frontier of Jeffersonian myth but from a menacing global food shortage. Fourth, the farmer frames her identity in biological rather than religious terms. Namely, rather than seeing herself as an agent of God, the farmer sees herself in biological terms as an "inborn innovator" who inherited modernity from her modern grandmother or grandfather. Fifth, both genders still see themselves as ultramodern and technology and ordered nature as benign means of preserving "the family farm." As such, rural globalized ultramodernity retains German agrarian conceptions of production, nature, and work as non-gendered.

*Organic reformist identity*, from the perspective of many farmers, views the Jeffersonian pastoral as an environment untouched by technology and regards this version of nature and work as more virtuous than production. Organic reformist identities often view the pre-technological Jeffersonian yeoman as an idealized hero and rejects rural identities that see complex technologies as preserving the family. As such, many organic reformists still use technology performatively, but they do so by employing less advanced material objects that they view as more moral. Rural organic identity frequently regards complex technologies as male and immoral rather than as non-gendered and modern. In addition, it often views nature as female. Most importantly, organic reformist discourses tend to draw a clear dichotomy between industrial and family farms based on the level of production, land ownership, and technology use in ways that other rural identities and discourses do not. For many Corn Belt denizens, organic reformist discourses update urban industrialism's view of the rural farmer as backwards, but rather than viewing the farmer as anti-modern, it sees him or her as anti-contemporary and

unable to grasp environmental or health concerns. For agrarians who have experienced a pattern of audience involving yokel stereotypes, the organic reformer sees the farmer is both too ignorant to understand the impact of industrial agriculture and too wedded to an outdated modernity characterized by a blind faith in science and technology. Under both organic and industrial identities, an “othered” farmer needs reforming. For rural denizens, both of these discourse identity bundles constitute threats from an “other” outside of the farm who fails to truly appreciate the life or the virtues of the “real” American farmer.

If cultural context influences performative use, I intend to utilize this conclusion to offer some parting thoughts on how the social landscape currently may impact the future use of agricultural technology. I want to leave the reader with the argument that a new bundle of rural discourses and identities must emerge in the Midwest. In doing so, I do not intend to present an extensive or infallible argument; I only hope to propose a tentative hypothesis for the purposes of starting debate and discussion about what performative use may mean for non-historians. In short, I seek to render the notion of performative use more relevant by starting a broader policy debate. Namely, I contend that the reformers of “industrial” agriculture and large grain farmers in the rural Midwest have established identities that make room for compromise that can lead to a new rural identity that incorporates elements of both. I suggest that by viewing each other as having common ground rather than as diametrically opposed, holders of these two identities can develop an updated rural identity. The history of how urban industrialists and rural German/Jeffersonian traditionalists worked together, in part through farm journals, to develop a rural capitalistic modernity in the 1920s and 1930s can serve as a model for forming a new rural identity. I argue that my historical insights of performative use and discourse identity bundling as conceptual vehicles creates a strong justification for moving the policy debate away from

“organic vs. industrial.” Rural denizens do not have to choose between an organic and an industrial existence because historically new identities that no one expected or predicted at the time have emerged. However, a new rural identity can only form if organic advocates accept the way farmers use technology performatively (rather than seeing farmers as “ignorant” or framing technology as immoral). Farmers also need to understand that it may be time for a rural identity beyond ultramodernity. This rural sense of self has led to environmental problems, such as an over-reliance on petroleum-based agriculture, and ethical dilemmas, the altering of plant and animal organisms through hormones or genetic modification for instance, without keeping young people on the farm. Both sides have to cooperate to save what is important to them - much like Jeffersonian agrarians had to incorporate elements of urban industrialism to preserve their identities during the rural-urban conflict of 1920s. The remainder of this conclusion will further develop my argument that a new rural sense of self, still based in historically formed identities, will, and should, emerge in the coming years. The most effective solution, I contend, to the policy debate between organic reformists and mainstream Corn Belt farmers must occur at the site of performative use of technologies, not in the halls of a distant legislature or agency, through a reconciled rural identity.

### **Rationale for Altering Rural Globalized Ultramodernity**

As I begin to think about what the concept of performative use may mean for the future of agriculture, I cannot help but remember my grandfather in the last years of his life. On a frigid, windy December day, he sat on an old Farmall tractor next to his remodeled, but nonfunctional dairy barn, doing odd jobs in an attempt to hold onto something dearly important to him that he could not articulate. After several years of studying STS and then writing this book, I have now come to understand this unexpressed “something” as his identity as a moral

ultramodern farmer, which he reinforced using the old tractor. He would move mounds of dirt or gravel, plow small pieces of land, haul parts from one end of the farm to another, or simply tinker with tractor parts. The question remains, “Does it still run?” Or is the American farmer trying to keep an empty barn going? Of course, when my grandfather used the phrase “To make sure it still runs” he meant much more than the tractor itself. By starting the tractor and using it, he reassured himself that the ultramodern identity he had constructed through his life would continue. He watched the community around him age and feared the dawning of the ultramodern family farm. But as an ultramodern farmer, he could only reassert his identity by using the machine and giving a “rational” productive reason for running it (i.e. to see if “it still runs”). As with the drone videos, my grandfather’s starting of the old tractor represented the ultimate act of unexpressed performative use because it had little to do with the actual work he claimed to do. Nor did the refurbished barn still function as a working dairy. The tractor and barn made him feel like an ultramodern farmer who had achieved progress even though, ironically, neither still accrued any rational economic benefits. His whole sense of self, his sense of morality, and all his life’s memories were wrapped up in using those artifacts. Yet, the empty barn serves as an ironic symbol that, perhaps, the ultramodern identity itself has grown out of date and just as non-functional. Maybe farmers in the Midwest need to ask if keeping ultramodern rural identities going is just as futile as maintaining an empty barn. Or can farmers preserve elements of Jeffersonian/German agrarianism and rural modernity embedded in the barn and the tractor while constructing new rural discourses and identities? Can performative use on the part of farmers better ensure that my father’s stories of children helping their fathers milk cows in now empty dairy barns across the Midwest do not simply become distant narratives in American history?

As with my grandfather sitting on his tractor in his later years, many memoirs of men and women who grew up in the Corn Belt exhibit a strange mixture of celebration of progress and a sense of melancholy. These experienced agrarians understand that an unarticulated sense of self and way of life even more valuable than grain profit has been lost. They show acute awareness of the negative environmental consequences of ultramodernity that threaten to undermine their faith in progress and ability to maintain their ultramodern identities. After all, the ultramodern farmer is a smart and educated observer of the world around him. Many farmers operating large farms now have obtained degrees from some of the top agricultural colleges in the world. The USDA reported that “30 percent of the operators of million-dollar farms had college degrees in 2007, the same share as for all U.S. householders,” as well as an increase in college education rates among all farmers.<sup>671</sup> Even my grandfather, who did not experience a day of college, worried that modern methods had depleted the soil. Similarly, author Barbara J. Scot in her return to her family’s farm in Scotch Grove, Iowa in 1983 recalled her aunt’s favorite tirade about how farmers used too many chemicals in raising chickens and corn, recalling that a few chickens she recently raised “grew so fast the bones in their legs didn’t even hold up their bodies. They just rolled around on the floor.”<sup>672</sup> Rural denizens, therefore, realize that ultramodern farming methods place a strain on nature in ways that may endanger the future of the “sacred” family farm.

---

<sup>671</sup> U.S. Department of Agriculture, Economic Research Service, *Share of Principal Farm Operators with College Degrees has Increased* (October 18, 2012), <http://www.ers.usda.gov/data-products/chart-gallery/detail.aspx?chartId=32868> (accessed 4/25/16).

<sup>672</sup> Scot, *Prairie Reunion*, 48-49.

In addition, farmers know that farmwife Emma Gary Wallace's 1923 plan to keep young people on the farm through modernization has had little success.<sup>673</sup> Driving through much of rural Iowa, for example, one quickly realizes that much of the population is simply old. The most recent agricultural census in 2012 showed that the largest age group of "principal operators" of farms in the U.S., with "farm" defined as "any place from which \$1,000 of agricultural products were produced and sold," during the census year was the 55 to 64-year old age group. In addition, 701,255 of U.S. farmers reported an age of 65 or over while only 334,000 reported an age of 44 or younger.<sup>674</sup> The USDA webpage *Start2Farm.gov* recently reported that, "The average age of a farmer today in America is 57 years of age. Five years ago it was 55. We have had an increase of 30% of the farmers over the age of 75 and a decrease in the number of farmers under the age of 25 by 20%."<sup>675</sup> Although presenting slightly different numbers, the National Sustainable Agricultural Coalition (the Coalition) reported in 2014:

The new Census data continues to show the aging of the American farm population, with the average age of the American farmer increasing from 57.1 in 2007 to 58.3 in 2012. What's more concerning however, is the slow

---

<sup>673</sup> Wallace, "Making the Young People Contented," 4.

<sup>674</sup> U.S. Department of Agriculture, *2012 Census of Agriculture Preliminary Report Highlights: U.S. Farms and Farmers* (February, 2014), 1-4, [https://www.agcensus.usda.gov/Publications/2012/Online\\_Resources/Highlights/Farm\\_Demographics](https://www.agcensus.usda.gov/Publications/2012/Online_Resources/Highlights/Farm_Demographics) (accessed 3/2/16).

<sup>675</sup> U.S. Department of Agriculture for Beginning Farmers and Ranchers, *Farm Demographics: Introduction to Farm Demographics*, <http://www.start2farm.gov/usda/knowledge> (accessed 3/2/16).



rate at which new farmers are entering agriculture, and the much faster rate at which older farmers are retiring from farming. On the whole, the U.S. farm population shrunk by roughly 4 percent in the last five years.

The Coalition also reported “20 percent fewer beginning farmers (those farmers who have been farming for ten years or less) in 2012 than there were five years earlier.” While the 2012 agricultural Census revealed that the Corn Belt had younger farmers than the South or West, the “youngest” state, Nebraska, still reported an average age of 55.7 years. In addition, the Corn Belt states of Iowa, Minnesota, Wisconsin, Illinois, Missouri, Indiana, and Ohio all reported a loss of new farmers, farmers with less than ten years of experience, from 2007 to 2012 with all states reporting a loss of more than 14 percent. Missouri and Indiana reported losses of over 25 percent of recently beginning farmers from 2007 to 2012.<sup>676</sup> The USDA and the AFBF, acutely aware of this aging of the American farmer, have launched a concerted effort through *Start2Farm.gov* to provide resources that make it easier for younger people to start farming. In addition, the USDA administers the Beginning Farmer and Rancher Development Program providing grants “to provide U.S. beginning farmer and rancher producers and their families, as appropriate, with the knowledge, skills and tools needed to make informed decisions for their

---

<sup>676</sup> National Sustainable Agriculture Coalition, *2012 Census Drilldown: Beginning Farmers and Ranchers* (May 28, 2014), <http://sustainableagriculture.net/blog/2012census-bfr-drilldown/> (accessed 3/2/16); see also U.S. Department of Agriculture, *2012 Census of Agriculture: State Level 1*, Ch. 1 (February, 2014), [http://agcensus.usda.gov/Publications/2012/Full\\_Report/Volume\\_1,\\_Chapter\\_1\\_State\\_Level/](http://agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_1_State_Level/) (accessed 3/2/16).

operations, with the goal of enhancing success of beginning farmers and ranchers.”<sup>677</sup> This aging of farmers also accompanies the continued decrease in the number of farms. The 2012 Census counted 2.1 million farms in the U.S. in 2012, which was down 4.3 percent from the last agricultural census in 2007 continuing “a long-term trend of fewer farms.” However, the land in farms only fell by 0.8% between 2007 and 2012 due to a 3.8% increase in farm size.”<sup>678</sup>

Thus, the American Corn Belt farmer, and the USDA, realizes that modernity has not necessarily kept young people on the farm in recent years nor has it attracted young people back to farming. While the ultramodern farmer may see himself or herself as passing on an inborn capacity for innovation to his or her children, he or she also sees many farm children taking this ability to employers in the cities and not returning to the farm. One must ask if there are limits on how effective the use of new technologies can establish an ultramodern identity when only older users engage in the performance.

### **Rationale for Altering Organic Reformist Discourses and Identities**

As I have argued, farmers are not oblivious to the negative economic and environmental impacts of monoculture, dependence on gas powered machinery, pesticides, or inorganic fertilizers. As shown in Chapter 8, organic reformist discourses have failed to acknowledge this rural environmental awareness and have alienated rural denizens. A recent piece by historian

---

<sup>677</sup> U.S. Department of Agriculture for Beginning Farmers and Ranchers, *What is the Beginning Farmers and Ranchers Development Program?*, <http://www.start2farm.gov/about-beginning-farmers-and-ranchers-development-program> (accessed 4/25/16).

<sup>678</sup> U.S. Department of Agriculture, *2012 Census of Agriculture Preliminary Report Highlights: U.S. Farms and Farmers*.

Frank Uekotter, for example, attributing the adoption of monocultured corn by German farmers to “ignorance” is not only insulting to the capacities of the ultramodern farmer, but it is too “easy” because it implies that the reform of Western agriculture simply requires more enlightened farmers. Uekotter’s analysis may satisfy a policy analyst in a world of uneducated dirt farmers, but not in a reality of highly educated ultramodern farmers. As the STS scholar Sheila Jasanoff has stated many times in her work on science and the law, science and technology do not exist in a vacuum in which people pick and choose knowledge claims and artifacts as if shopping for groceries but within complex historical and cultural contexts. As this book has shown, farmers use technologies to perform an ultramodern identity through a process that is deeply embedded historically. The ultramodern discourse identity bundle regards science as a means to progress, not as something to be ignored. Certainly, the ultramodern farmer knows much more about plant genetics or soil mechanics than I do. As such, Uekotter’s analysis misses the point. Even ignoring Jasanoff’s insight, the position that farmers prefer ignorance of environmental conditions on their farms is problematic due to the tacit knowledge and their daily experiences with soil and climate on which their business depends. In addition, where does arguing that farmers ignore evidence from environmental science get us from a policy perspective? The use of “ignorance” to describe how farmers have not listened to more “enlightened” environmentalists strikes me as a tired and uncreative form of analysis that has been made with no effect ad nauseam by those of us in academia since at least the 1970s. The potentially more productive question is not how to make “ignorant” farmers pay attention to scientific evidence, but how to incorporate environmental science into a production ethos. In other words, how can legitimate concerns for sustainability fit into a cultural practice of performance that sees the farmer, technology, and the family as preserving morality? Regardless

of one's beliefs about the proper relationship between humans and nature, one must concede that the organic discourse has failed to establish itself as a dominant discourse in rural America and the farming communities of other developed nations. Uekotter's "agnotology" makes the same mistake as many organic and sustainable food advocates discussed in Chapter 8 by framing science within a pejorative discourse that alienates the very people who *do* agriculture.<sup>679</sup>

### **The Next Rural Identity Must Blend Organic Reformist Identity with Rural Ultramodernity through Performative Use**

Thus, any agricultural policy that seeks to reform the relationship with food or nature (broadly defined) can only succeed within the context of a new rural discourse-identity bundle. This new agrarian sense of self must incorporate past rural discourses and identities and it must come, in part, from the farmers themselves. The farmers, male and female, and their technologies, their families, and their control over work processes must play a significant role in developing the next wave of dominant discourses and identities. Even when farmers, such as Frederick L. Kirschenmann, take up reform, they do so within the alienating discourse of the organic movement incorporating condescending philosophy that causes many farmers to "other" even an "inside" messenger.<sup>680</sup> As this book has shown, farm journal editors and advertisers, even in the 1920s, realized they needed to appeal better to their farmer audiences to create mutual interests for the accomplishment of their goals. However, more "sophisticated" scholars

---

<sup>679</sup> Frank Uekotter, "Farming and Not Knowing: Agnotology Meets Environmental History," in *New Natures: Joining Environmental History with Science and Technology Studies*, ed. By Dolly Jørgensen et al. (Pittsburg, PA: University of Pittsburg Press, 2013), 37-50.

<sup>680</sup> Kirschenmann, "Food as Relationship," 106-121; *Leopold Center for Sustainable Agriculture*.

and scientists over a century later have failed to grasp this realization. Namely, the organic and sustainable foods movement has failed to make progress among farmers in the Midwest not because organic advocates are informed and farmers ignorant about science, but because the organic movement has not framed its discourse in a way that treats aspects of rural identities as moral and legitimate. The result is a rehashed rural-urban conflict that would have looked very familiar to the farmers writing into *Wallaces' Farmer* in the 1920s. As a result, the organic and sustainable foods movement will fail for the same reason farmers rejected urban industrialism advocated by progressive reformers and urban businessmen in the past. As discussed in Chapter 4, farmers in the 1920s regarded the “factory farms,” established by urban actors such as Samuel Insull on Hawthorn Farm in the 1920s, as an idea of an outside “other” that threatened to undermine rural Jeffersonian and German agrarianism. Similarly, many farmers have rejected organic discourse as a threat to elements of Jeffersonian and German agrarianism still residing within rural modern identities. Thus, while both the progressive reformers in 1920 and organic advocates in 2015 sought to make rural life better by reforming agriculture, both have instead fostered rural resentment.

Perhaps much of the writing on reforming agriculture by authors such as Barbara Kingsolver and Michael Pollan or by authors critiquing contemporary practices, such as Frank Uekotter, aims to form and reinforce organic discourses and identities rather than lead to real and meaningful change. A more thoughtful approach to agriculture and the globalized food system that takes rural relationships with technology more seriously, however, may reveal shared interests between organic food advocates and ultramodern farmers. As I demonstrated in Chapter 4, urban equipment manufacturers and Jeffersonian agrarians in the beginning of the twentieth century worked together through farm journals to develop a modern rural identity.

Yet, at that time, many could only conceive of a world in which urban industrialism opposed rural yeomanism and could not imagine the development of rural capitalistic modernity. Similarly, today's sustainable advocates and Corn Belt agrarians share many values. First, neither desire to eliminate the farmer and both grant the farm family a privileged moral position within society. Second, neither side truly desires to render agrarian environments unsustainable. Both the organic advocate and the ultramodern farmer imbue land with deep, albeit different, cultural meanings. As Wyoming farmer and rancher Linda M. Hasselstrom explains, "country people generally realize that our families are not divisible from our land; our beliefs about both family and land grow out of everyday practice, rather than theory... The crustiest, most conservative, most antienvironment [*sic*] ranchers will say, with an oddly gentle note, 'I love this country.' Others say, 'If you take care of the land, it will take care of you.' Or 'We don't really own the land; we're just taking care of it for the next generation.'" While Hasselstrom lives in the plains rather than the Corn Belt, farmers in the Midwest often express similar sentiments while associating family legacy with the land's productivity. As liberal studies professor and environmentalist William Vitek has noted, for farm families across rural regions, "land is not merely scenery and hiking trail, or resources in need of extraction." Rather, land "becomes part of people's lives, intermingled with buying and selling, working and playing, living and dying." Advocates such as Vitek, Berry, and Kingsolver adopting organic reformist identities approve of this rural relationship to land found within rural discourse identity bundles discussed in this book (Jeffersonian and German agrarianism, modern capitalistic modernity, and ultramodernity).<sup>681</sup> Third, as Hasselstrom recognizes, both organic advocates and ultramodern farmers see work as a virtue. In other words, both bundles of discourses and identities practice conspicuous

---

<sup>681</sup> William Vitek, "Rediscovering the Landscape," in *Rooted in the Land*, 3.

production, although they do so through different performances that attach different meanings to nature and material objects.<sup>682</sup> Therefore, *both* farmers and organic advocates must devise a way of incorporating a sustainable or environmental ethos into rural ultramodernity. The farmer's need for an agrarian identity that maintains rural values while attracting young people back to the farm must incorporate sustainability. Farmers need more than Emma Gary Wallace's new furniture to avoid a landscape where aging agrarians preserve empty barns. Rural Americans must realize that updated farmers require new identities that go beyond modern tendencies to blindly associate technology with progress. Organic and sustainable food advocates must acknowledge that change will only occur through updating identities and discourses in a way that respects deeply embedded cultural ideas about morality, the family, and technology in rural America.

While even I cannot predict the outlines of this new discourse identity bundle, the welcoming acceptance of wind turbines (so called PIMBY attitudes discussed in Chapter 7) in the Corn Belt provides one case study of how rural performative use may align with the goals of sustainability. Importantly, the case of PIMBY attitudes among farmers suggests that rural modern identity and discourse does not necessarily exclude the type of environmental reform, in the form of renewable energy production, central to organic identity. As Chapter 7 details, farmers in the case of wind turbines often incorporate the environmental benefits of the machines into ultramodern discourses extoling progress, technology, and innovation. However ignoring the historical process of performative use of technologies to form rural identities has already led

---

<sup>682</sup> Hasselstrom, "Addicted to Work," 68.

to a system of what Michael Pollan calls “big organic.”<sup>683</sup> Such large-scale farms technically meet organic regulations while resembling “industrialized farms” in too many ways to satisfy most organic advocates.<sup>684</sup> Simply passing organic regulations without reconciling organic and ultramodern identities affecting the way people use material objects on a daily basis has not led to meaningful change in systems.<sup>685</sup> Only with an updated bundle of discourses and identities can “it still run.” As with the final scene of the DeKalb Farm Bureau’s 1923 pageant “Forward!

---

<sup>683</sup> By “big organic,” Pollan means large farms that technically meet organic regulations but resemble a “factory farm” rather than the “organic ideals set forth by Albert Howard” of “many small organic farms” practicing “a sustainable system modeled on nature that requires not only no synthetic chemicals but also no purchased inputs of any kind, and that returns as much to the soil as it removes.” Instead, these large organic farms use synthetic chemicals as well as technology as a “purchased input.” Pollan also objects to the fact that these large organic farms sell their products globally rather than locally. Thus, Pollan sees “big organic” as both the large organic farms themselves and the “organic empire” created by the network of these farms that allow them to distribute on a global scale identical to “industrialized” agriculture. As such, Pollan views these large organic farms as creating a false “supermarket pastoral” in which the Jeffersonian pastoral is pictured on packaging to sell an organic image that does not reflect what these “big organic” farms actually look like. See for example, Pollan, *The Omnivore’s Dilemma*, Ch. 9.

<sup>684</sup> Ibid.

<sup>685</sup> For organic regulations, see U.S. Department of Agriculture, National Organic Program, <https://www.ams.usda.gov/about-ams/programs-offices/national-organic-program>.



Farm Bureau,” “the future of an idea” must build on previous acts, and its success depends on the actors giving a competent, if not stellar, performance.<sup>686</sup>

---

My last name, Brinkman (or its original spelling Brinkmann), is a German name meaning a person who lives on the “brink” of a field, i.e. a farmer. This knowledge makes me think again about my family and their farm photos, which I generally do not enjoy looking at for reasons I never fully understood. Maybe, I thought, there is something about the passage of time between then and now that makes me feel uncomfortable. Or perhaps they just make me feel old. Nevertheless, I promised myself that when I finished this book I would take time to go back to look at some of my family’s farm photos, almost all of which show me or my relatives posing with technology. I wanted to find out if I would look at these pictures differently than I had before embarking on this study. Surely, a deep analysis of the history of farmers’ relationship with technology utilizing complex theories developed in graduate school would give me fresh perspective on my own life as a first generation city dweller. I thought that perhaps my thoughts when viewing pictures of old tractors and combines would change now that I am a serious academic. I have trained my mind after all, to conduct the type of “critical analysis” that eschews emotional ways of thinking such as nostalgia and idealism. I encourage my students, and myself, to challenge “deeply held assumptions.”

Much to my surprise, my reaction to my old family farm photos has changed very little. I cannot help but romanticize a photo of my late grandfather proudly posing in front of his giant

---

<sup>686</sup> Wood, “A Pioneer Farm Bureau Celebrates,” 3.

grain elevators or perched on a new combine with my uncle about to harvest corn. In spite of my skills of critical analysis, I cannot bring myself to view these objects as cold or impersonal units of production. Instead, the photos make me remember looking out over a field with my grandfather with a cool Midwest breeze gently waving the corn in front of a beautiful sunset. The corn bin makes me think of how the grain smelled as I shoveled it into an auger and how my grandfather would crack a joke when we finished, displaying a wonderfully dry Midwest sense of humor. I remember feelings of pride and optimism watching my family “feed the world.” The material objects make me think about the little human details of life that one can only really know by using those objects.

One photo that I took made me particularly nostalgic. It shows my dad in the 1990s sitting on the Farmall tractor he drove as a child (Figure 9.1). In the photo, he is only slightly older than I am now, but he sits on the machine as he did when he was a teenager before leaving the farm, going to college, and working as a successful engineer in Washington, D.C. I think what strikes me is that he must have sat on the tractor to reconnect with memories and events that I will never know about. I cannot recapture the smells, sounds, and feelings of those days, but maybe he can. After writing this book, I now understand that my dad once used the machine to perform an identity of his rural self. By grasping the wheel later in his life, he reconnected with that sense of self. The tractor was part of what it meant to be him.

While looking at the photo, I was reminded of David Hamilton’s quote early in the book, “To farm is to hold onto something, and a farm is land to grasp.” When I first read this passage, I thought it overly sentimental. After all, I often found the farm in Iowa isolated and boring. Where I grew up on the East Coast (also my current home) offers much more in terms of culture and excitement than rural Iowa. In my adulthood in the east, I have done interesting things with

a more diverse group of people, particularly musically and academically, than I ever would have experienced had I grown up in “the middle of nowhere” in northeastern Iowa.

Yet, the longer I looked at this picture of my dad on the Farmall tractor, I started to understand why family photos have made me so uncomfortable all these years. It is the sense that even though my dad physically grips the wheel in the photo, he and his family have not “held onto something.”<sup>687</sup> Indeed, maybe we have lost grasp of “something,” an identity that can never be replaced.

My dad and I never did start the old tractor that day. After taking the photo, I naturally sat in the seat, but I eventually had to let go of the wheel and leave the Farmall sitting unused in the shed. It is difficult to walk away from material objects containing so much meaning without noting a sense of loss. Or perhaps my father and I have simply replaced a rural identity with other senses of self and other technologies. In one of the last conversations I had with my grandfather, I asked about his life. He had started out with a team of oxen, farming just a few acres and ended up with a vast expanse of land tilled with the latest tractors and harvested with the newest combines. To my surprise, he simply gazed in to the distance, sighed, and replied, “It was a lot of work.” His response calls the scholar to ask what causes people to romanticize farming and the use of agricultural technologies. In fact, my grandfather more often spoke sentimentally of his brother’s experience of flying fighter planes in World War II rather than his own years of plowing with a tractor.

It is difficult—even as a scholar—not to romanticize farming. But why does farming evoke such sentimentalism? In other words, the question remains whether one form of

---

<sup>687</sup> Hamilton, *Deep River: A Memoir of a Missouri Farm*, 155-156.

performative use is really more moral or worthy of preserving than others. If some uses of material objects for the purpose of forming identities are more valuable, what criteria does one use to establish such a hierarchy of use? Perhaps those of us from farm families have too strongly embraced Jeffersonian agrarianism and, as a result, are we quite full of ourselves. Alternatively, maybe there is something inherently valuable about performative use on an American farm that is worth preserving. I do not pretend to offer an answer to these questions. I only hope to pose them for the reader to decide.



**Figure 9.1:** The author's father, Doug Brinkman, sitting on a 1930s Farmall M tractor in 1995.

## Bibliography

“100 Photos: Farming in Iowa since 1930, the *Des Moines Register*.

<http://www.desmoinesregister.com/picture-gallery/money/agriculture/2014/09/12/100-photos-farming-in-iowa-since-1930/15519849/ext> (accessed 3/29/16).

“255 Acres: 4 Horses; A Tractor; A Truck,” *Better Farming* 46, no. 11 (November 1923): All Around the Farm, 9.

“About Us.” *ZDNet*, <http://www.zdnet.com/about> (accessed 9/15/16).

Adams, Jane. *The Transformation of Rural Life*. Chapel Hill, NC: University of North Carolina Press, 1994.

\_\_\_\_\_. *All Anyone Ever Wanted Me to Do is Work: The Memoirs of Edith Bradley Rendleman* (Carbondale, IL: Southern Illinois University Press, 1996).

Adams, Val. “Eddie Albert Due in Comedy Series.” *New York Times*, August 17, 1965, 67.

“Ag 101-Drainage,” U.S. Environmental Protection Agency, <http://www.epa.gov/agriculture/ag101/cropdrainage.html> (accessed 5/8/15).

“Aged Farmer Makes Over Eight Thousand.” *Better Farming* 43, no. 8 (March 1920): 10.

“Agriclick.com advertisement.” *Successful Farming* (April 2000).

“Agriculture: Notices for a Young Farmer, From the Memoirs of the Philadelphia Agricultural Society,” *The American Farmer, Containing Original Essays and Selections on Rural Economy and Internal Improvement* (June 25, 1819).

Agrimap Services. *Boyd Grain Farms Fall 2014* (October 2, 2014).

<https://www.youtube.com/watch?v=0pXG3jfXy0U> (accessed 6/20/16).

Albertone, Manuela. "The American Agricultural Societies and the Making of the New Republic, 1785-1830." In *The Rise of Economic Societies in the Eighteenth Century*, edited by Koen Stapelbroek and Jani Marjanen. New York: Pelgrave Macmillan, 2012: 339-369.

Alsop, Joseph. "Khrushchev Gambles on Farms." *Cedar Rapids Gazette*, 28 January 1958, Editorial Page.

Alston Lee J. and Morton Own Schapiro. "Inheritance Laws Across Colonies: Causes and Consequences." *The Journal of Economic History* 44, no. 2 (1984): 277-287.

"American Telephone and Telegraph Co. advertisement." *Farm Journal*, 52, no. 1 (January 1928): 53.

Anderson, Clifford B. "The Metamorphosis of American Agrarian Idealism in the 1920's and 1930's." *Agricultural History* 35, no. 4 (1961): 182-88.

Anderson, J.L. *Industrializing the Corn Belt*. DeKalb, IL: Northern Illinois University Press, 2009.

"Angus: the Business Breed." *American Angus Association* advertisement. *Successful Farming* (January 1992): page unknown.

"Are we Ready for This?" *Wallaces' Farmer* 53, no. 10 (March 9, 1928): 376 (6).

Arney, Louis W. "The Tractor Belt." *Better Farming* 46, no. 11 (November 1923): 4.

*Arnold Ziffel Tests his Civil Rights - Green Acres - 1967 & 1968.* September 2, 2014: Shatner Method, MGM. <https://www.youtube.com/watch?v=fTEcL7bw6U4> (accessed 5/26/16).

*Atlanta Constitution.* "CBS Kills Comedies." *March 18, 1971, 8B.*

Auslander, Philip. "The Performativity of Performance Documentation." *PAJ: A Journal of Performance and Art* 28, no. 3 (2006): 1-10.

"Autonomous Concept Tractor Shows a Vision Into the Future of Ag." *Farmersadvance.com*, September 6, 2016, <http://www.farmersadvance.com/story/news/2016/09/06/autonomous-concept-tractor-shows-vision-into-future-ag/89916340> (accessed 9/15/16).

"Aventis Crops advertisement." *Successful Farming* (April 2000).

Balabanian, Norman. "On the Presumed Neutrality of Technology." *IEEE Technology and Society Magazine* (2006): 15-25.

Barker-Devine, Jenny. "'Mightier than Missiles': The Rhetoric of Civil Defense for Rural American Families, 1950-1970." *Agricultural History* 80, no.4 (2006): 415-35.

Barnes, Anna. "Harnessing the Wind." *Prairie Farmer* (April 2007): Front Page, 8-9.

Barnhouse, Dave. "New Tractor For Show," painting on canvas (2008).  
<http://www.galleryone.com/fineart/BARNE5.html>. (accessed 1/28/16).

Barron, Hal S. *Mixed Harvest: The Second Great Transformation in the Rural North, 1870-1930*. Chapel Hill, NC: University of North Carolina Press, 1997.

Bechman, Tom J. "Rural Revival in Wind." *Indiana Prairie Farmer* (February 2008): Front Page.

Bechman, Tom. "Stand Up for Agriculture in the GMO Foods Debate." *Wallaces' Farmer and Prairie Farmer* (August 15, 2016), Hoosier Perspectives, <http://farmprogress.com/blogs-stand-agriculture-gmo-foods-debate-11225#authorBio> (accessed 9/19/16).

\_\_\_\_\_. "Have Marketing Techniques Fueled the Fire for Those Who Oppose Agriculture?," *Wallaces' Farmer and Prairie Farmer* (April 7, 2016), Hoosier Perspectives, <http://farmprogress.com/blogs-marketing-techniques-fueled-fire-those-oppose-agriculture-10793#authorBio> (accessed 9/19/16).

Beck, Russell H. "The Voice of the Farm: Inoculating Soybeans." *Wallaces' Farmer* 50, no. 9 (February 27, 1925): 298 (10).

Beck, Ulrich. *Risk Society: Towards a New Modernity*. Sage Publications: London, 1986.

\_\_\_\_\_. *Ecological Politics in the Age of Risk*. Cambridge: Polity Press, 1995.

\_\_\_\_\_. "World Risk Society as Cosmopolitan Society? Ecological Questions in a Framework of Manufactured Uncertainty." *Theory, Culture and Society* 13, no. 4 (1996): 1-32.

Belk, Russell W. and Richard W. Pollay. "Images of Ourselves: The Good Life in Twentieth Century Advertising." *Journal of Consumer Research* 11, no. 4 (1985): 887-97.

Benc at English Wikipedia. "Map of the USA Highlighting Corn Belt.png." *Wikimedia Commons*. The General Libraries, the University of Texas at Austin, August 13, 2004. [https://commons.wikimedia.org/wiki/File:Map\\_of\\_USA\\_highlighting\\_Corn\\_Belt.png](https://commons.wikimedia.org/wiki/File:Map_of_USA_highlighting_Corn_Belt.png) (accessed 1/24/17).

Bennett, Estelline. "Mandarin Corn, the Little Mother of the Great Crop." *Better Farming* 43, no. 8 (March 1920): 7, 13.



Berry, Wendell. *The Unsettling of America: Culture & Agriculture*. Sierra Club Books: 1977.

\_\_\_\_\_. *The Art of Common Place: The Agrarian Essays of Wendell Berry*. Berkley, CA: Counterpoint Press, 2002.

\_\_\_\_\_. "Twelve Paragraphs on Biotechnology." In *Citizenship Papers*. Edited by Wendell Berry. Berkeley, CA: Counterpoint Press, 2003, 53.

\_\_\_\_\_. *Collected Poems*. New York: North Point Press, 1995.

\_\_\_\_\_. "Conserving Communities." In *Rooted in the Land: Essays on Community and Place*, edited by William Vitek and Wes Jackson, 76-84. New Haven, CT: Yale University Press, 1996.

Beus, Curtis S. and Riley E. Dunlap. "Endorsement of Agrarian Ideology and Adherence to Agricultural Paradigms." *Rural Sociology* 59, no. 3 (1994): 462-84.

Bijker, Wiebe E., Thomas P. Hughes, and Trevor J. Pinch. *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology*. Cambridge, MA: MIT Press, 1987.

"Biographies: Nikita Khrushchev and Frol Kozlov." *Communist Affairs* 1, no. 1 (1962): 13-17.

Bix, Stephen. *Discourse and Genre*. New York: Palgrave Macmillan, 2011.

Block, Herbert. "It's the Same Thing Without Mechanical Problems." Cartoon. *Washington Post*, 26 January 1949, 21. <http://www.loc.gov/exhibits/herblocks-history/ticktock.html>.(accessed 6/16/15).

Booth, Jake. "Russia Faces Big Odds in Drive to Improve Farming." *Cedar Rapids Gazette*, 25 April 1955, 15.

Borgmann, Albert. *Technology and the Character of Contemporary Life*. Chicago, IL: University of Chicago Press, 1984.

Bourdieu, Pierre. *Distinction: A Social Critique of the Judgment of Taste*. Routledge: Cambridge, MA 1984.

Bradsher, Henry S. "Mismanagement, Weather Plague Russian Agriculture." *Cedar Rapids Gazette*, April 27, 1964, 13.

Breimyer, Harold F. *Over-Fulfilled Expectations: A Life and an Era in Rural America*. Ames, IA: Iowa State University Press, 1991.

Bressler, Leo. "Agriculture Among the Germans in Pennsylvania During the Eighteenth Century." *Pennsylvania History* 22, no. 2 (1955): 103-133.

Brinkman, Joshua. "Gender, Work Processes, and the Modernization of American Agriculture: Exploring Historical and Cultural Challenges Faced by the Organic Foods Movement." Paper presented at the Society for the History of Technology Annual Meeting, Albuquerque, New Mexico, October 9, 2015.

Brinkman, Joshua T. and Richard F. Hirsh, "Welcoming Wind Turbines and the PIMBY ('Please in my backyard') Phenomenon: The Culture of the Machine in the Rural American Midwest" (forthcoming 2017). Paper accepted for publication by *Technology and Culture* on September 25, 2015.

Brodsky, Alyn. *Benjamin Rush: Patriot and Physician*. New York: St. Martin's Press, 2004.

- Brown, Lester R. *Plan B 4.0: Mobilizing to Save Civilization*. New York: The Earth Policy Institute, W.W. Norton & Company, 2009.
- Brown, Peggy. "Diplomatic Farmers: Iowans and the 1955 Iowa Delegation to the Soviet Union." *The Annals of Iowa* 72, no. 1 (2013): 31-62.
- Browning, Norma Lee. "Eddie Albert Just Loves Green Acres on and Off the Screen." *Chicago Tribune*, May 24, 1970, S2.
- Bundy, John H. "Grain Marketing." *Wallaces' Farmer* 46, no. 2 (January 14, 1921): 54 (14).
- Bunge, Jacob. "Farmers Reap New Tools From Their Own High-Tech Tinkering." *The Wall Street Journal*, April 18, 2016, TECH. <http://www.wsj.com/articles/farmers-reap-new-tools-from-high-tech-tinkering-1461004688> (accessed 6/1/16).
- Burr, Walter. "Orderly Farm Business," *Farm Journal* 52, no. 1 (January 1928): 38-39.
- \_\_\_\_\_. "Rural Bunk: Favorite Indoor Sport is Slandering Agriculture: Why do American Farmers Continue to Stand for It?" *Farm Journal*, 52, no. 2 (February 1928): 9-10.
- Butler, Judith. *Gender Trouble: Feminism and the Subversion of Identity*. New York: Routledge: 1990.
- "Business Farmers Use Typewriter." *Better Farming* 48, no. 3 (February 1925): All Around the Farm, 10.
- Buffalo Center (Iowa) Tribune*. "The State of Soviet Agriculture." December 3, 1959.
- Byczynski, John. "My Father's Past, My Children's Future: Agrarian Identity and a Powerline in Minnesota, 1974-1980." *Agricultural History* 88, no. 3 (2014): 313-335.

Casey, M.V. "What Kind and Size Truck Shall I Buy?: Some Practical Ideas for the Prospective Truck Buyer." *Better Farming* 43, no. 2 (February 1920): 5.

Cazenove, Théophile. *Cazenove Journal, 1794*, ed. Rayner Wickersham Kelsey. Haverford, PA: The Pennsylvania History Press, 1922.

*Cedar Rapids Gazette*. "U.S., Soviet Agriculture Compared." July 20, 1965, 18.

\_\_\_\_\_. "Russia Beset by Problems in Agriculture." January 10, 1964, 17.

Centanni, Rebecca. "Advertising in Life Magazine and the Encouragement of Suburban Ideals." *Advertising & Society Review* 12, no. 3 (2011).

Cerulo, Karen A. "Identity Construction: New Issues, New Directions." *Annual Review of Sociology* 23 (1997): 385-409.

Chapman, Fred L. "The Real Rube." *Better Farming* 46, no. 12 (December 1923): 2.

\_\_\_\_\_. "An Interesting Letter, March 5, 1921" *Better Farming* 44, no. 4 (April 1921): The Daily Mail, 4.

\_\_\_\_\_. "Answer," *Better Farming* 44, no. 4 (April 1921): The Daily Mail, 4.

*Chicago Daily Tribune*. "What Makes Communists Tick?," September 8, 1950, 20.

\_\_\_\_\_. "The Family Farm." September 20, 1952, 10.

\_\_\_\_\_. "Pilgrim's Progress." August 11, 1950, 14.

\_\_\_\_\_. "The Two Faces," August 30, 1959, 24.

\_\_\_\_\_. "Khrushchev, Heretic." December 19, 1958, 12.

\_\_\_\_\_. "The Two Faces." August 30, 1959, 24.

\_\_\_\_\_. "Red China's Communes." December 27, 1958, 8.

\_\_\_\_\_. "Why the Slavs Hunger." November 20, 1950, 18.

\_\_\_\_\_. "Production for Use." April 13, 1950, 16.

\_\_\_\_\_. "Red China's Flop." August 29, 1959, 12.

\_\_\_\_\_. "Chinese Seminar by Prof. Khrushchev," October 3, 1959, 12.

Cho, Bongjin, Up Kwon, James W. Gentry, Sunkyu Jun, and Frederic Kropp. "Cultural Values Reflected in Theme and Execution: A Comparative Study of U.S. and Korean Television Commercials." *Journal of Advertising* 27, no. 4 (1999): 59-73.

Christensen, Harper. "Electricity on Our Farm." *Farmer's Wife* 33, no. 8 (January 1922): 677.

Clarke, Adele E., Laura Mamo, Jennifer Ruth Fosket, and Jennifer Fishman. "Biomedicalization: Technoscientific Transformations of Health, Illness, and U.S. Biomedicine." In *Biomedicalization: Technoscience, Health, and Illness in the U.S.*, edited by Clarke, Mamo, Fosket, Fishman and Janet K. Shim. Durham, NC: Duke University Press, 2010, 47-87.

Cline, Harry. "Anti-Biotech Crowd Convinced GMO Food is Road to Extinction." *Western Farm Press* (September 27, 2011): 1-3.

"CNH Industrial Brands Reveal Concept Autonomous Tractor." *Nebraska Rural Radio Association-KTIC Radio*, August 30, 2016, News-Agricultural News, <http://kticradio.com/agricultural/cnh-industrial-brands-reveal-concept-autonomous-tractor> (accessed 9/15/16).

Coates, Peter. *Nature: Western Attitudes since Ancient Times*. Berkeley, CA: University of California Press, 1998.

Cohen, Benjamin R. *Notes from the Ground*. New Haven, CT: Yale University Press 2009.

Cohen, Jean L. "Strategy or Identity: New Theoretical Paradigms and Contemporary Social Movements." *Social Research* 52 (1985): 663-667.

*Collins English Dictionary*. <http://www.collinsdictionary.com/dictionary/english/trunnel> (accessed 5/3/16).

Collins, H.M. *Changing Order: Replication and Induction in Scientific Practice*. Chicago, IL: Chicago University Press, 1992.

Conklin, Paul K. *A Revolution Down on the Farm: The Transformation of American Agriculture Since 1929*. Lexington, KY: University Press of Kentucky, 2008.

Conn, Rex. "Soviet Agriculture Still Lags, Says Minn. Farmer." *Cedar Rapids Gazette*, July 29, 1958, 15.

Cook, Harold J. *Matters of Exchange: Commerce, Medicine, and Science in the Dutch Golden Age*. New Haven, CT: Yale University Press, 2007.

"Co-Operative Legislation for Iowa," *Wallaces' Farmer* 46, no. 1 (January 7, 1921), 8.

"Council for Biotechnology advertisement," *Successful Farming* (May-June 2000): page unknown.

Cowan, Ruth Schwartz. *More Work for Mother: The Ironies of Household Technology from the Open Hearth to the Microwave*. New York: Basic Books, 1983.

- Cowan, Ruth Schwartz and Francesca Bray, Organizers. "Presidential Roundtable: Diversity as Method in the History of Technology." Presentation, Society for the History of Technology Annual Meeting, Albuquerque, NM, October 9, 2015.
- Cramer, Katherine J. *The Politics of Resentment: Rural Consciousness in Wisconsin and the Rise of Scott Walker*. University of Chicago Press: Chicago, 2016.
- "Cultivation that Kills Weeds." *Wallaces' Farmer* 50, no. 19 (May 8, 1925): 676(6).
- Dales, Joe. "Farm Progress Show 2016 Highlights and New Products." *Farms.com*, September 4, 2016, News, <http://www.farms.com/ag-industry-news/farm-progress-show-2016-highlights-and-new-products-375.aspx> (accessed 9/15/16).
- Danbom, David B. "Romantic Agrarianism in Twentieth-Century America." *Agricultural History* 65, no. 4 (1991): 1-12.
- \_\_\_\_\_. *Born in the Country: A History of Rural America*. Baltimore, MD: The Johns Hopkins University Press, 1995.
- Danielson, Dar. "Iowa Moves Up to Second in Electricity Created by Wind Power." *Radio Iowa*, January 28, 2016, <http://www.radioiowa.com/2016/01/28/iowa-moves-up-to-second-in-wind-power-energy/> (accessed 5/13/16).
- Daston, Lorraine and Peter Galison. *Objectivity*. New York: Zone Books, 2010.
- Dear, Michael. "Understanding and Overcoming the NIMBY Syndrome." *Journal of the American Planning Association* 58 (1992): 288-300.
- "De Laval advertisement." *Farm Journal* 52, no. 9 (September 1928): 32.

\_\_\_\_\_. *The Alabama Farmer Newsletter* 6, no. 9 (December 1925): 32.

Delco-Light Company, *The Delco-Light Story* (Dayton, OH: 1923).

\_\_\_\_\_. "Make your farm pay Bigger Profits with DELCO-LIGHT." Advertisement. *Farm Journal* 52, no. 6 (June 1928): 25.

\_\_\_\_\_. "Delco-Light: Keeps the Young Folks on the Farm." *Indiana Farmer's Guide* (June 22, 1918): 21, American Periodicals database.

\_\_\_\_\_. "Delco-Light works for you... for nothing." *Farm Journal* 53, no. 1 (January 1929): 37.

\_\_\_\_\_. "Let there be light." *Farm Journal* 55, no. 3 (March 1931): 19.

Delohery, Thomas J. "Teaching Practical Farming in Funk Grade School: Junior Agricultural High School Recognized as Best by State Authorities." *Better Farming* 43, no. 1 (January 1920): 5, 10.

de Tocqueville, Alexis. "What Causes Almost All Americans to Follow Industrial Callings." In *Democracy in America*, edited by Richard D. Heffner. New York: Penguin Books, 1984, 213-216.

Devine-Wright, Patrick. "Beyond NIMBYism: Towards an Integrated Framework for Understanding Public Perceptions of Wind Energy." *Wind Energy* 8, no. 2 (2005): 125-39.

\_\_\_\_\_. "Place Attachment and Public Acceptance of Renewable Energy: A Tidal Energy Case Study." *Journal of Environmental Psychology* 31 (2011): 336-43.

De Zoysa, Richard. "America's Foreign Policy: Manifest Destiny or Great Satan?." *Contemporary Politics*, 11, no. 2-3 (2005): 133-56.



- “Dignifying the Work of Farm Women,” *Farmer’s Wife* 23, no. 8 (January 1921): 1.
- Dimitri, Carolyn, Anne Effland, and Neilson Conklin. “Economic Research Services/USDA.”  
*The 20th Century Transformation of U.S. Agriculture/EIB3*. Washington, D.C.: GPO, 2005.
- Dobson, Amy Shields. “Performative Shamelessness on Young Women's Social Network Sites: Shielding the Self and Resisting Gender Melancholia.” *Feminism & Psychology* 24 (2014): 97-114.
- Dobson, Andrew. *Green Political Thought*. New York: Routledge, 1990.
- “Dodge advertisement.” *Farm Journal* 52, no. 3 (March 1928): 29.
- Douglas, Mary. *Risk and Blame: Essays in Cultural Theory*. London: Routledge, 1992.
- Douglas, Mary and Aaron Wildavsky. *Risk and Culture: An Essay on the Selection of Technological and Environmental Dangers*. Berkley: University of California Press, 1982.
- Downey, Gary. “What is Engineering Studies For? Dominant Practices and Scalable Scholarship.” *Engineering Studies* 1, no. 1 (2009): 55-76.
- Dribe, Martin, Mats Olsson, and Patrick Svensson. “Was the Manorial System an Efficient Insurance Institution? Economic Stress and Demographic Response in Sweden, 1749–1859.” *European Review of Economic History*, 16 (2012): 292–310.
- “Driverless Tractors Unveiled at Farm Progress Show.” *Farm and Dairy*, August 30, 2016, Other News, <http://www.farmanddairy.com/news/driverless-tractors-unveiled-at-farm-progress-show/359165.html> (accessed 9/15/16).

- Drummond, Roscoe. "Communism's Many Ailments Add Up to One Big Flop." *Cedar Rapids Gazette*, October 21, 1963, Editorial Page.
- \_\_\_\_\_. "Look at World Through K's Eyes; He's Got Troubles." *Cedar Rapids Gazette*, July 27, 1962, Editorial Page.
- \_\_\_\_\_. "Why can't Communist Countries Feed Their People?" *Cedar Rapids Gazette*, March 12, 1962, Editorial Page.
- Duffee, F.W. "Modern Lights Save Farmers Work Hours." *Better Farming* 47, no. 6 (June 1924): 8.
- Edgerton, David. *Shock of the Old: Technology and Global History Since 1900*. Oxford: Oxford University Press, 2007.
- Edwards, W.R. "Beautiful and Useful Farm Homes and Buildings." *Better Farming* 47, no. 10 (October 1924): 5, 10.
- Eftink, Bill. "Missouri Family Bets on Irrigation: Irrigation Boosts Corn Yields by 30 to 40 Bushels an Acre." *Successful Farming* (May-June 2000): 60-64.
- Elliott, Carl. *Better than Well: American Medicine Meets the American Dream*. New York: W.W. Norton & Co.: 2003.
- Ellsworth, Lucius F. "The Philadelphia Society for the Promotion of Agriculture and Agricultural Reform, 1785-1793." *Agricultural History* 42, no. 3 (1968): 189-200.
- Espinoza, Mauricio. "Wind Blows Dollars Into Northwest Ohio." *Ohio Farmer* (May 2012): 26.

Essig, Mark. *Lesser Beasts: The Snout to Tail History of the Humble Pig*. New York: Basic Books, 2015.

“Farm Beautiful Contest,” *agriculture.com*, 2013.

<http://community.agriculture.com/t5/contests/v2/contestpage/blog-id/farmbeautiful/tab/entries%3Amost-kudoed>. (accessed 4/19/2015).

“Farm Bureau Holds Convention: Iowa Farmers Renew Demands for McNary-Haugen Bill-Hearst Re-Elected.” *Wallaces’ Farmer* 53, no. 3 (January 20, 1928): 90 (7, 14).

“Farmer and Family Posing with Thrashing Machine.” Author’s personal records. Greene, IA, 1940.

“Famer Posing with Farmall F-20 Tractor with a Wind-Powered Water Pump in Background.” Author’s personal records. Powersville, IA, 1940.

“Farmers Want to Own Their Land.” *Wallaces’ Farmer* (November 8, 1950): 6.

“Farmers Used 78,789 Trucks During 1918.” *Better Farming* 43, no. 2, (February 1920): Farm Mechanics, 16.

“Farm Federation’s Power: Life Topsy, Bureau ‘Jes’ Grew,’ and Now Numbers 100,000 Members.” *New York Times*, July 4, 1920, 70.

Featherlin, Erin (Chatterton) and Brett Chatterton. Interview by Holly Spangler. “Sudden Succession” in “Chatterton Family: A Corn Field Conversation.” *Wallaces’ Farmer and Prairie Farmer-Confessions of a Farm Wife Blogs, My Generation* (January 18, 2016), <http://farmprogress.com/blogs-chatterton-family-corn-field-conversation-10567> (accessed 9/12/16).

\_\_\_\_\_. *American Agriculturalist* (January 17, 2016),

[http://www.americanagriculturist.com/blogs-chatterton-family-corn-field-conversation-](http://www.americanagriculturist.com/blogs-chatterton-family-corn-field-conversation-10567)

[10567](#) (accessed 1/18/17).

Federico, Giovanni. "Not Guilty? Agriculture in the 1920s and the Great Depression." *The Journal of Economic History* 65, no. 4 (December 2005): 949-976.

Fee, Rich. "Long-Armed Sprayers: With a Little Ingenuity and a Lot of Built-In Strength, these Sprayers Reach Out and Touch a Bunch of Acres." *Successful Farming* (February 1992): 26-27.

Fee, Rodney J. "Successful Family Farm." *Successful Farming* (February 1992): 42.

\_\_\_\_\_. "Production." *Successful Farming* (February 1992): 23.

Feenberg, Andrew. *Between Reason and Experience: Essays in Technology and Modernity*. The MIT Press: Cambridge, MA, 2010.

Fite, Gilbert C. *American Farmers, the New Minority*. Bloomington, IN: Indiana University Press, 1981.

Fitzgerald, Deborah. "Blinded by Technology: American Agriculture in the Soviet Union, 1928-1932," *Agricultural History* 70, no. 3 (1996): 459-86.

\_\_\_\_\_. *Every Farm a Factory: The Industrial Era in American Agriculture*. New Haven, CT: Yale University Press, 2003.

Foucault, Michel. *Discipline and Punish: The Birth of the Prison*. New York: Vintage Books, 1979.

\_\_\_\_\_. *Security, Territory, and Population: Lectures at the Collège de France 1977-1978*.  
New York: Pelgrave Macmillan, 2007.

Fouché, Rayvon. "Say it Loud, I'm Black and I'm Proud: African Americans, American  
Artifactual Culture, and Black Vernacular Technological Creativity." *American Quarterly* 58  
(2006): 639-61.

Fridlund, Mats. "Buckets, Bollards and Bombs: Towards Subjective Histories of Technologies  
and Terrors." *History and Technology* 27, no. 4 (2011): 391-416.

Friedel, Robert. "Why You Need to Understand Y2K." *Invention and Technology* (2000): 24-31.

Fry, John J. "'Good Farming-Clear Thinking-Right Living: Midwest Farm Newspapers, Social  
Reform, and Rural Readers in the Early Twentieth Century.'" *Agricultural History* 7, no. 1  
(2004): 34-49.

Gaiter, Dorothy J. "Roscoe Drummond, 81, is dead." *New York Times*, October 1, 1983,  
Obituaries. [http://www.nytimes.com/1983/10/01/obituaries/roscoe-drummond-81-is-dead-  
political-columnist-for-50-years.html](http://www.nytimes.com/1983/10/01/obituaries/roscoe-drummond-81-is-dead-political-columnist-for-50-years.html) (accessed 6/7/15).

Gamble, S.E. "Reaping Large Rewards From Good Roads." *Better Farming* 48, no. 1 (January  
1925): 12.

Garner, Bryan A. *Black's Law Dictionary*. St. Paul, MN: West Group, 1999.

"General Motors Delco Light advertisement," *Farm Journal* 52, no. 3 (March 1928): 67.

\_\_\_\_\_. *Farm Journal* 52, no. 10 (October 1928): 39.

- “German Americans-The Silent Minority.” *The Economist*, February 7, 2015, <http://www.economist.com/news/united-states/21642222-americas-largest-ethnic-group-has-assimilated-so-well-people-barely-notice-it> (accessed 3/31/16).
- Giddens, Anthony. *The Consequences of Modernity*. Stanford: Stanford University Press, 1990.
- Giebel, Ethan. “Teamwork Fuels Success at Dairy.” *Wisconsin Agriculturalist* (November 2013): 50.
- Gillhoff, Johannes. *Letters of a German American Farmer*. Translated by Richard Lorenz August Trost. Iowa City: University of Iowa Press, 2000.
- Gillray, James. *Germans Eating Sour-Krout*, 1803. Print, 258 mm x 360 mm. The British Museum. <http://www.britishmuseum.org>. (accessed 3/29/16).
- Goffman, Erving. *The Presentation of Self in Everyday Life*. New York: Anchor, 1959.
- \_\_\_\_\_. *Stigma: Notes on the Management of Spoiled Identity*. New York: Simon and Schuster, 1963.
- Golinski, Jan. *Making Natural Knowledge, Constructivism and the History of Science*. Chicago, IL: The University of Chicago Press, 1998.
- Goodwin, Gaylord P. “Study Compares American and Soviet Agriculture.” *Cedar Rapids Gazette*, September 29, 1962, 11B.
- Grassi, Matthew J. “New Case IH Autonomous Tractor Concept Leaves Farm Progress Show Crowd Buzzing.” *CropLife*, September 1, 2016, <http://www.croplife.com/equipment/new-case-ih-autonomous-tractor-concept-leaves-farm-progress-show-buzzing> (accessed 9/15/16).

- Gray, Grace Farrington. "What is Success?" *Farmer's Wife* 30, no. 1 (January 1927): 11.
- Green Acres-A Few Scenes with Mr. Haney* (3). December 25, 2013: MyyyClips.  
<https://www.youtube.com/watch?v=5KaAO56WTe8> (accessed 5/26/16).
- Gutman, Amy ed. *Multiculturalism: Examining the Politics of Identity*. Princeton, NJ: Princeton University Press, 1994.
- Haecker, A.L. "'Do I Need a Silo?' Half a Million Farmers in the U.S. Have Answered 'Yes,'" *Better Farming* 43 no. 6 (June 1920): 6.
- Hall, Stuart "Ethnicity: Identity and Difference." *Radical America* 23, no. 4 (1987): 9-20.
- Hamilton, David. *Deep River: A Memoir of a Missouri Farm*. Columbia, MO: University of Missouri Press, 2001.
- Hamilton, Shane. "Agribusiness, the Family Farm, and Politics of Technological Determinism in the Post-World War II United States." *Technology and Culture* 55, no. 3 (2014): 560-90.
- Haney, J.G. "Making Alfalfa and Clover Hay." *Better Farming* 46, no. 7 (July 1923): 3.
- Hansen, Ann Larkin. *The Organic Farming Manual*. North Adams, MA: Storey Publishing, 2010.
- Hanson, Dick. "State Farms are Becoming Dominant in Soviet Union." *Cedar Rapids Gazette*, December 13, 1959, 11.
- Haraway, Donna. "A Cyborg Manifesto: Science, Technology, and Social-Feminism in the Late Twentieth Century." In *Simians, Cyborgs and Women: The Reinvention of Nature*, edited by Donna Haraway. New York: Routledge, 1991.

Harding, Sandra. *Whose Science? Whose Knowledge?: Thinking from Women's Lives*. Ithaca, NY: Cornell University Press, 1991.

Harmon, E.M. "The Cow Testing Association: How it Works for the Herd Owner and the Community." *Better Farming* 47, no. 10 (October 1924): 7.

Hassebrock, Kenneth. *Rural Reminiscences: The Agony of Survival*. Ames, IA: Iowa State University Press, 1990.

Hasselstrom Linda M. "Addicted to Work." In *Rooted in the Land: Essays on Community and Place*, edited by William Vitek and Wes Jackson, 66-75. New Haven, CT: Yale University Press, 1996.

Hawthorn, Fred W. "More Efficient Tractor Farming." *Farm Journal* 54, no. 3, (March 1930): 41-42.

Hearst, James. "Young Poet on the Land," in *Growing up in Iowa*, ed. Clarence A. Andrews. Ames, IA: Iowa State University Press, 1978.

"Hearts and Homes: A Review of Spring Styles." *Wallaces' Farmer* 53, no. 15 (April 13, 1928): 604 (22).

Hemken, Melissa. "Wind Aids Local Economy." *Wallaces' Farmer* (February 2006): 42.

"Hermann July 4 Parade Winners Announced." *The Hermann Advertiser-Courier*, July 14, 2015, at <http://www.hermannadvertisercourier.com/hermann-july-4-parade-winners-announced/>. (accessed on January 23, 2016).



Henretta, James. "Families and Farms: Mentalité in Pre-Industrial America." *William and Mary Quarterly* (1978): 6-7.

Higbee, Edward. *American Agriculture: Geography, Resources, Conservation*. New York: John Wiley, 1958.

Hilgartner, Stephen. *Science on Stage: Expert Advice as Public Drama*. Stanford, CA: Stanford University Press, 2000.

Hirsh, Richard F. and Benjamin K. Sovacool. "Wind Turbines and Invisible Technology: Unarticulated Reasons for Local Opposition to Wind Energy." *Technology and Culture* 54, no. 4 (2013): 705-34.

Holmberg, Mike. "Sky-High Scouting: From Ultralights to Satellites, You Have More Opportunities to Get a Bird's Eye View of Your Crops." *Successful Farming* (May-June 2000): 34-38.

"Home Demonstration Agents: News of Important Results Being Accomplished in Various States." *Farmer's Wife* 23, no. 8 (January 1921): 290.

"How it Looks to the Editor." *Farm Journal* 52, no. 9 (September 1928): 8.

"How to Get More Eggs." *Wallaces' Farmer* 51, no. 1 (January 1, 1926): 22 (22).

"How Some Women Succeed." *Farmer's Wife* 29, no. 5 (May 1926): 270, 301.

"How Some Women Succeed: True Stories About Real Farm Women." *Farmer's Wife* 27, no. 5 (October 1924): 126-127.

Hughes, Thomas P. "Technological Momentum." In *Does Technology Drive History? The Dilemma of Technological Determinism*, edited by Merritt Roe Smith and Leo Marx, 101-113. Cambridge, MA: MIT Press, 1994.

\_\_\_\_\_. "The Evolution of Large Technological Systems," in *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology*, edited by Wiebe E. Bijker, Thomas P. Hughes, and Trevor J. Pinch, 51-82. Cambridge, MA: MIT Press, 1994.

Humohrey, Hal. "Hungary Meets Hillbilly, U.S.A." *Los Angeles Times*, August 9, 1965, C20.

Hunt, Lynn. "The American Parade: Representations of the Nineteenth-Century Social Order." In *The New Cultural History*, edited by Lynn Hunt, 131-153. Berkeley, CA: University of California Press, 1989.

"Individualism and Collectivism," *Wallaces' Farmer* 46, no. 1 (January 7, 1921): 5.

Iowa Farm Bureau. "Energy: Harnessing the Power in and Above Iowa Fields."

<http://www.iowafarmbureau.com/public/114/ag-in-your-life/energy> (accessed 6/1/15).

"Iowa Farm Bureau Convention." *Wallaces' Farmer* 50, no. 2 (January 9, 1925): 43 (11).

"Iowa Farm Businessmen." *Wallaces' Farmer* 53, no. 3 (January 20, 1928): 88 (4).

*Iowa Farms Use Drones and Data to Improve Crop Yields*, Nathan King. 2016; Des Moines, IA:

CCTV America's, 2016. <https://www.youtube.com/watch?v=F2LlKr96pF4> (accessed 4/6/16).

*Iowa.gov State Data Center*. "Iowa Quick Facts: Social Characteristics."

<http://www.iowadatacenter.org/quickfacts>. (accessed 3/31/16).

*Iowa Pork Producers Association*. "National Agriculture Week 2016: Thank a Farmer." March 14, 2016. <http://www.iowapork.org/national-agriculture-week-2016-thank-farmer/> (accessed 5/31/16).

*Iowa Soybean Association*. "Soybean Facts." <http://www.iasoybeans.com/about-isa/soybean-facts>. (accessed 4/10/16).

*Iowa Utilities Board*, "Wind-powered Electricity Generation in Iowa," <https://iub.iowa.gov/wind-powered-electricity-generation> (accessed 9/8/16).

Irwin, Bernice H. "A Modern Dairy Farm: Minnesota Woman Demonstrates the Profitableness of Milk Production." *Farmer's Wife* 23, no. 8 (January 1921): 312-313.

Isenberg, Nancy. *White Trash: The 400-Year Untold History of Class in America*. Viking: New York, 2016.

Isern, Thomas D. "The American Dream: the Family Farm in Kansas." *Midwest Quarterly* 26 (1985).

Jackson, Wes. *New Roots for Agriculture*. San Francisco, CA: Friends of the Earth, 1980.

\_\_\_\_\_. *Consulting the Genius of the Place: An Ecological Approach to a New Agriculture*. Berkley, CA: Counterpoint Press, 2010.

\_\_\_\_\_. "Matfield Green." In *Rooted in the Land: Essays on Community and Place*, edited by William Vitek and Wes Jackson, 95-103. New Haven, CT: Yale University Press, 1996.

- Jefferson, Thomas. *Notes on the State of Virginia* 1787. Chapel Hill, N.C., 1995.
- Jehl, Douglas. "Curse of the Wind Turns to Farmers' Blessing." *New York Times*, November 26, 2000, 1-2.
- Jenney, Grace. "Learning too Fast?" *Farm Journal* 54, no. 3 (March 1930): 71.
- Johnson, Hank, Enrique Larana, and Joseph R. Gusfield. "Identities, Grievances and New Social Movements." In *New Social Movements: From Ideology to Identity*, edited by Larana, Johnston, and Gusfield. Philadelphia: Temple University Press, 1994, 3-35.
- Johnson, Jerilyn. "Wind Energy is Now a Reality in Rock Port." *Missouri Ruralist* (March 2008): 7.
- \_\_\_\_\_. "Wind Power Takes Off." *Missouri Ruralist* (March 2008): 6.
- Jones, Amelia. "The 'Eternal Return:' Self-Portrait Photography as a Technology of Embodiment." *Signs* 27, no. 4 (2002): 947-978.
- Jones, Andrew. "The Rise and Fall of the Manorial System: A Critical Comment." *The Journal of Economic History* 32 no. 4 (December 1972): 938-944.
- Jones, M.M. "Farm Shop will Save Money." *Better Farming* 48, no. 1 (January 1925): 14.
- Jones Robert A. to "The Editor." National Association of Farm Manufacturers. Farm Press Release #76, January 2, 1930, Box 24, Record Group Number 503, Accession Number 79-001. Ag Engineering Records, Auburn University Archives.

\_\_\_\_\_. National Association of Farm Manufacturers, Farm Press Release #76, "Increasing the Farm Business," January 2, 1930, Box 24, Record Group Number 503, Accession Number 79-001, Ag Engineering Records, Auburn University Archives, 2.

\_\_\_\_\_. National Association of Farm Manufacturers, Farm Press Release #76, "Care Lengthens Sprayer's Life," January 2, 1930, Box 24, Record Group Number 503, Accession Number 79-001, Ag Engineering Records, Auburn University Archives, 5.

Jones, Rodney H. "Creativity and Discourse." *World Englishes* 29, no. 4 (2010): 467-80.

Jones-Imhotep, Edward. "Malleability and Machines: Glenn Gould and the Technological Self." *Technology and Culture* 57, no. 2 (2016): 287-321.

Jørgensen, Finn Arne. "The Backbone of Everyday Environmentalism: Cultural Scripting and Technological Systems." In *New Natures: Joining Environmental History with Science and Technology Studies*, edited by Dolly Jørgensen et al. Pittsburg, PA: University of Pittsburg Press, 2013, 72-73.

Jørgensen, Marianne and Louis Phillips. *Discourse Analysis as Theory and Method*. London: Sage, 2002.

"June Meeting of Farm Bureau Federations." *Indiana Farmer's Guide* (July 10, 1920): 32.

Kalish, Mildred Armstrong. *Little Heathens: Hard Times and High Spirits on an Iowa Farm During the Great Depression*. New York: Random House, 2007.

"Keeping Up With Father and the Boys." *Wallaces' Farmer* 46, no. 3 (January 21, 1921): 114 (22).

- Kelley, Darwin N. "The McNary-Haugen Bills, 1924-1928: An Attempt to Make the Tariff Effective for Farm Products." *Agricultural History* 14, no. 4 (October 1940): 170-180.
- Kingsolver, Barbara. *Animal, Vegetable, Miracle*. New York: HarperCollins Publishers, 2007.
- Kirk, E.J. "Barley for Hogs Next Summer." *Wallaces' Farmer* 50, no. 7 (February 13, 1925): 222 (18).
- Kirkpatrick, Charles K. "Using Rock Phosphate." How the Walden Farm Has Profited by it." *Wallaces' Farmer* 53, no. 14 (April 6, 1928): 551 (9).
- Kirschenmann, Frederick. "Food as Relationship." *Journal of Hunger & Environmental Nutrition*, 3, no. 2 (2008): 106-121.
- Kline, David. "An Amish Perspective." In *Rooted in the Land: Essays on Community and Place*, edited by William Vitek and Wes Jackson, 35-39. New Haven, CT: Yale University Press, 1996.
- Kline, Ronald R. *Consumers in the Country: Technology and Social Change in Rural America*. Baltimore: Johns Hopkins University Press, 2000.
- \_\_\_\_\_. "Resisting Development, Reinventing Modernity: Rural Electrification in the United States before World War II," *Environmental Values* 11, no. 3 (August 2002): 327-344.
- \_\_\_\_\_. "Ideology and Social Surveys: Reinterpreting the Effect of 'Labsaving' Technology on American Farm Women," *Technology and Culture* 38, no. 2 (Apr. 1997): 355-385.
- "Know-Nothing Anti-Immigrant Cartoon." Artist unknown, c. 1850. The Granger Collection. <http://www.socialstudies.com>. (accessed 3/29/16).

Kolb, John H. and Edmund S. de Brunner. *Rural Social Trends*. New York, 1933, 65-66. Quoted in Ronald R. Kline, "Ideology and Social Surveys: Reinterpreting the Effect of 'Laborsaving' Technology on American Farm Women," *Technology and Culture* 38, no. 2 (Apr. 1997): 379.

Krimmel, Lewis. *Country Wedding*, 1820. Oil, 16 3/16 in. x 22 1/8 in.

<http://www.artexpertswebsite.com/pages/artists/krimmel.php>. (accessed 3/26/16).

Lablanc, Matthew. "Change in the Wind." *Columbia Daily Tribune*, November 12, 2006, 1-4.

Lakoff, George and Mark Johnson. *Metaphors We Live By*. Chicago: University Chicago Press, 1980.

Larsen, Jonas. "Families Seen Sightseeing: Performativity of Tourist Photography." *Space and Culture* 8 (2005): 416-434.

Lash, Scott. "Reflexive Modernization: the Aesthetic Dimension." *Theory, Culture, and Society* 10, no. 1 (1993): 1-23.

Lash, Scott, Ulrich Beck, and Anthony Giddens. *Reflexive Modernization. Politics, Tradition and Aesthetics in Modern Social Order*. Cambridge: Polity Press, 1994.

Latour, Bruno. *Science in Action*. Harvard University Press: Cambridge, MA, 1987.

Lentz, Grace Gibbard. "The Evolution of a Real Farmer's Wife." *Better Farming* 47, no. 6 (June 1924): 4.

*Leopold Center for Sustainable Agriculture*, Iowa State University.

<http://www.leopold.iastate.edu/about/staff> (accessed 1/27/16).

- Lerman, Nina E. "Categories of Difference, Categories of Power Bringing Gender and Race to the History of Technology." *Technology and Culture* 51, no. 4 (October 2010): 893-918.
- Lienesch, Michael. *In the Beginning: Fundamentalism, the Scopes Trial, and the Making of the Antievolution Movement*. Chapel Hill, NC: The University of North Carolina Press, 2007.
- Lin, Carolyn A. "Cultural Values Reflected in Chinese and American Television Advertising." *Journal of Advertising* 30, no. 4 (2001): 83-94.
- Lipsitz, George. *Time Passages: Collective Memory and American Popular Culture*. Minneapolis: University of Minnesota Press, 1990.
- Livingston, John A. "Other Selves." In *Rooted in the Land: Essays on Community and Place*, edited by William Vitek and Wes Jackson, 134-139. New Haven, CT: Yale University Press, 1996.
- Lockeretz, William, ed. *Organic Farming: An International History*. Cambridge, MA: CABI Publishing, 2007.
- Looker, Dan. "Click and Contract: Online Marketing gets Serious." *Agriculture.com* (Fall 2000): 10-11.
- Lozada, Carlos. Review of *White Trash: The 400-Year Untold History of Class in America*, by Nancy Isenberg. *Washington Post*, June 23, 2016, Book Party.
- Lucas, Rich. "Radioize the Farm Home." *Better Farming* 48, no. 3 (February, 1925): All Around the Farm, 10.



- Ludwig, Arnold. *How Do We Know Who We Are? A Biography of the Self*. Oxford: Oxford University Press, 1997.
- Lunz, Henry. "Better Farmers See Need of Fanning Mills." *Better Farming* 43, no. 8 (March 1920): 28.
- Lupton, Deborah. *Risk*. New York: Routledge, 1999.
- MacLeod, Douglas. "The Corn Belt: An Exercise to Define the Limits of a Region." *Journal of Geography* 110, no. 1 (2011): 32-46.
- Marchand, Roland. *Advertising the American Dream: Making Way for Modernity, 1920-1940*. Berkeley: University of California Press, 1985.
- Marlin, D.F. "Pulling Back to Prosperity." *Wallaces' Farmer* 50, no. 1 (January 2, 1925): 1 (1), 12 (12).
- Marrs, L.R. "Shipping Eggs." *Wallaces' Farmer* 46, no. 3 (January 21, 1921): 113 (21).
- Martin, Ovid A. "Russia Pins Ag Hopes on Work of Peasant Women." *The Cedar Rapids Gazette*, October 20, 1959, 24.
- "Master Farmers of 1927 Honored: Presented to Corn Belt Over WHO and to Iowa Notables at Banquet." *Wallaces' Farmer* 53, no. 3 (January 20, 1928): 91 (7).
- McClelland, Peter D. *Sowing Modernity: America's First Agricultural Revolution*. Ithaca, NY: Cornell University Press, 1997.
- McCormick-Deering advertisement." *Farm Journal* 52, no. 1 (January 1928): 25.

\_\_\_\_\_. *Farm Journal* 52, no. 2 (February 1928): 21.

\_\_\_\_\_. "McCormick-Deering advertisement." *Farm Journal* 52, no. 9 (September 1928): 35.

\_\_\_\_\_. "McCormick-Deering advertisement." *Farm Journal* 52, no. 12 (December 1928): page unknown.

McDonald, Julie "Growing Up in Western Iowa." In *Growing up in Iowa*, edited by Clarence A. Andrews. Ames, IA: Iowa State University Press, 1978, 114-123.

McDowell, D.W. "State Agriculture Alert to Responsibilities." *Waukesha Daily Freeman*, July 29, 1955, Editorial Page.

McKay, Grif. "Good Cows, Well Fed." *Farm Journal* 54, no. 2 (February 1930): 68.

McLaughlin, Abraham. "Reaping the Wind." *Christian Science Monitor* (March 9, 1999): 2.

McSweeney, Kelly "Autonomous tractors could turn farming into a desk job: CNH Industrial revealed its concept for a self-driving tractor that farmers control via tablet or computer. Naturally, we had to ask whether this robotic farmer would steal jobs from human workers." *ZDNet*, September 2, 2016, Robotics, <http://www.zdnet.com/article/autonomous-tractors-could-turn-farming-into-a-desk-job> (accessed 9/14/16).

Mencken, Henry L. "The Husbandman." *A Mencken Chrestomathy*. New York: Knopf, 1924, 360-364.

Merchant, Carolyn. *The Death of Nature*. New York: HarperCollins Publishers, 1980.

Meredith, E.T. *The Opportunities and Responsibilities of the Farm Paper Editor*. Des Moines, IA: Successful Farming Publishing, 1921.

- Meyer, Douglas K. *Making the Heartland Quilt: A Geographical History of Settlement and Migration in Early-Nineteenth Century Illinois*. Carbondale, IL, 2000.
- Mightier than Missiles*. Chicago: American Feed Manufacturer Association, 1961.
- Milks, Harold. "Khrushchev Rips Malenkov Group on Farm Issue." *Cedar Rapids Gazette*, December 16, 1958, 16.
- Minutes of the Philadelphia Society for the Promotion of Agriculture, from its Institution in February, 1785, to March, 1810*. Philadelphia: John C. Clark & Son Printers, 1854.
- Millard, F.A. "My Poultry Figures." *Farmer's Wife* 23, no. 8 (January 1921): 312.
- Mills, Frederick C. *Economic Tendencies in the United States: Aspects of Pre-War and Post-War Changes*. Washington, D.C.: National Bureau of Economic Research, 1932.
- MNB Farms, Ltd. Webpage, <http://bormannag.com/history> (accessed 12/1/2014).
- Morgan, Mona. "Small Town's Radio Receivers Will Emancipate It, Actress Predicts." *Louisville Courier Journal* (March 1923).
- Morrison-Marsden, Ethel. "Mother and the Radio." *Farm Journal* 52, no. 3 (March 1928): 32, 65.
- "Motor Skill in Demand: Many Farmers Seek Instruction in Gas Engine Management." *Better Farming* 46, no. 11 (November 1923): All Around the Farm, 9.
- Mowitz, Dave. "Ageless Iron: Reunions that Revive the Past." *Successful Farming* (February 1992): 23-37.

\_\_\_\_\_. "Production." *Successful Farming* (January 1992): 27.

\_\_\_\_\_. "Super Drills: Farmer ingenuity creates new generation of high yield planters."  
*Successful Farming* (January 1992): 42.

Mrs. C.A.B. "Letters From our Farm Women: Not Sorry I Stuck." *Farmer's Wife* 31, no. 6 (June 1928): 8.

Murphy, E.S. "Government Crop Reports." *Wallaces' Farmer* 53, no. 16 (April 20, 1928): Voice of the Farm 638 (6).

Murphy, J.F. "Eight Hour Day for the Farmer." *Wallaces' Farmer* 49, no. 46 (November 14, 1924): Voice of the Farm, 1479 (11).

Murray, Devon. 2015 *Iowa Farming-Murray Farms, Inc.* (January 29, 2016).

<https://www.youtube.com/watch?v=lxJAUhn3Ew> (accessed 6/20/16)

Mythen, Gabe. "Mapping the Risk Society." In *Ulrich Beck: A Critical Introduction to the Risk Society*, edited by Gabe Mythen. 11-29. Sterling, Va.: Pluto Press, 2004.

\_\_\_\_\_. "Risk, Reflexivity and Trust." In *Ulrich Beck: a critical introduction to the risk society*, edited by Gabe Mythen. 137-156. Sterling, Va.: Pluto Press, 2004.

Nachmanovitch, Stephen *Free Play: Improvisation in Life and Art*. New York: Jeremy P. Tarcher/Putnam, 1990.

"National Electric Light Association advertisement." *Farm Journal* 52, no. 1 (January 1928): 29.

\_\_\_\_\_. *Farm Journal* 52, no. 10 (October 1928): 45.

\_\_\_\_\_. *Farm Journal* 52, no. 8 (August 1928): 37.

National Farmer's Union. "History," <http://nfu.org/about> (accessed 9/6/16).

National Sustainable Agriculture Coalition. *2012 Census Drilldown: Beginning Farmers and Ranchers* (May 28, 2014), <http://sustainableagriculture.net/blog/2012census-bfr-drilldown/> (accessed 3/2/16).

Newsom, Phil. "Agriculture is Soviets' Big Problem." *Cedar Rapids Gazette*, January 27, 1961, 14.

"Nikita Khrushchev's Visit to Iowa." Film, 1959. A Special Pool Telecast on WHO-TV (available at Iowa State University Library University Archives, Film K-3056), <https://www.youtube.com/watch?v=LZ8WZB0sWwU> (accessed 5/27/15).

Noble, David F. "Social Choice in Machine Design: The Case of Automatically Controlled Machine Tools." In *The Social Shaping of Technology*, edited by Donald MacKenzie and Judy Wajcman. Buckingham: Open University Press, 1999.

Nordin, Dennis S. and Roy V. Scott. *From Prairie Farmer to Entrepreneur: The Transformation of Midwestern Agriculture*. Bloomington, IN: Indiana University Press, 2005.

North, Douglass C. and Robert Paul Thomas. "The Rise and Fall of the Manorial System: A Theoretical Model." *The Journal of Economic History* 31, no. 4 (December 1971): 777-803.

Nye David E. *Electrifying America: Social Meaning of a New Technology*. Cambridge, MA: MIT Press, 1992.

“Of Interest to Dairy Women: The Cow Keeps Her Place as Man’s Best Friend, Nutritionally.”

*Farmer’s Wife* 33, no. 8 (January 1922): 696.

Ohlinger, Gustavus. *The German Conspiracy in American Education*. New York: George H. Doran Co., 1919.

Oldenziel, Ruth. *Making Technology Masculine*. Amsterdam: Amsterdam University Press, 1999.

O’Leary, Fran. “Taking ‘a Chance’ on Wind.” *Wisconsin Agriculturalist* (August 2009): 8.

“Our Page: Should Farm Women Make Money?” *Farmer’s Wife* 31, no. 6 (June 1928): 10.

Paakspuu, Kalli. “‘Writing the Body’: The Hypertext of Photography,” *International Journal of Media and Cultural Politics* 5, no. 3 (2009): 183-197.

Pacey, Arnold. *Meaning in Technology*. Cambridge, MA: MIT Press, 1999.

Paek, Hye-Jin Michelle R. Nelson, and Alexandra M. Vilela. “Examination of Gender-role Portrayals in Television Advertising across Seven Countries.” *Sex Roles* 64 (2001): 192-207.

Parker, Charlie. *The Official Site of Charlie “Yardbird” Parker*. “Quotes.”

<http://www.cmgww.com/music/parker/about/quotes.html> (accessed 5/23/16).

Parker, Mario. “Tractor for Modern Farm Features Everything But the Farmer.” *Bloomberg*, September 1, 2016, Technology, <http://www.bloomberg.com/news/articles/2016-09-01/robot-tractor-draws-crowds-on-debut-at-iowa-farm-industry-show> (accessed 9/14/16).

Pasqualetti, Martin J. “Opposing Wind Energy Landscapes: A Search for Common Cause.” *Annals of the Association of American Geographers* 101, no. 4 (2011): 907-17.

- \_\_\_\_\_. "Wind Power: Obstacles and Opportunities." *Environment: Science and Policy for Sustainable Development* 46, no. 7 (2004): 22–38.
- Pasqualetti, Martin J., Robert Righter, and Paul Gipe, ed. Cleveland J. Cutler. *History of Wind Energy*, "Rejuvenated North America." Vol. 6, *The Encyclopedia of Energy*. Amsterdam: Elsevier, 2004.
- Patnode, Randall. "What these People Need is Radio." *Technology and Culture* 44, no. 2 (2003): 285-305.
- Peek, George N. "The McNary-Haugen Plan for Relief." *Current History* 29, no. 2 (November 1, 1928): 273.
- Pernick, Ron and Clint Wilder. *The Clean Tech Revolution: Winning and Profiting from Clean Energy*. New York: Harper Collins, 2009.
- Peterson, Jr., Chester. "Cats in Corn: The Crane Brothers Tapped the Advantages of Cat Tractors by Converting One to Run Between Rows." *Successful Farming* (January 1992).
- \_\_\_\_\_. "Milking the Net: Dairy Producer Bases Business Decisions on Internet Info," *Agriculture.com* (Fall 2000): 36.
- Peterson, Tarla Rai. "Jefferson's Yeoman Farmer as Frontier Hero: A Self Defeating Mythic Structure." *Agriculture and Human Values* 7, no. 1 (1999): 9-19.
- Phillips, Ronald L. *Norman E. Borlaug 1914-2009, A Biographical Memoir*. National Academy of Sciences, 2013. <http://www.nasonline.org/publications/biographical-memoirs/memoir-pdfs/borlaug-norman.pdf> (accessed 8/8/16).

Pingali, Prabhu L. "Green Revolution: Impacts, Limits, and the Path Ahead." *Proceedings of the National Academy of Sciences of the United States of America* 109, no. 31 (July 2012): 12302-12308.

Pioneer advertisement. *Successful Farming* (January 1992).

"Planting a Straight Corn Row." *Wallaces' Farmer*, 50, no. 17 (April 24, 1925): 605 (3), 612 (10).

Pollan, Michael. *The Omnivore's Dilemma*. New York: Penguin Press, 2006.

\_\_\_\_\_. *In Defense of Food*. New York, Penguin Press, 2008.

Pollay, Richard and Katherine Gallagher. "Advertising and Cultural Values: Reflections in the Distorted Mirror." *International Journal of Advertising* 9 (1990): 359-72.

Porter, Theodore M. *Trust in Numbers*. Princeton, NJ: Princeton University Press, 1995.

Prater, Lisa Foust. "Pioneers Blaze Trail Through Digital Divide: South Dakotans go on-line to learn, do business, keep in touch." *Agriculture.com* (Fall 2000): 18-21.

Price, George. "College on the Farm: 4-H Clubs Provide Opportunity to 'Learn by Doing' at Home." *Farm Journal* 52, no. 4 (April 1928): 24.

*Progressive Farmer* (October 2009): Front Cover.

"Putting Wind in the Rotation." *Wallaces' Farmer* (April 13, 2012),

<http://farmprogress.com/story-putting-wind-rotation-9-58874> (accessed June 1, 2015).



Purcelli, Marion. "Green Acres, an Electronic Shangri-La." *Chicago Tribune*, December 5, 1965, N10.

Pursell, Carroll. "The Rise and Fall of the Appropriate Technology Movement in the United States, 1965-1985." *Technology and Culture* 34, no. 3 (1993): 629-637.

\_\_\_\_\_. "The Construction of Masculinity and Technology." *Polhem* 11 (1993): 206-219.

Purvis, Miller. "New Ideas in Feeding Poultry." *Wallaces' Farmer* 53, no. 11 (March 16, 1928): 431 (7).

*Quad City Herald*. "Food is Stronger Weapon Not Generally Recognized." November 2, 1961, 6.

Ramsey, Jr., Guthrie. *Race Music: Black Cultures from Bebop to Hip Hop*. University of California Press, Berkeley, CA: 2003.

Ramsey, Paul J. "The War against German-American Culture: The Removal of German-Language Instruction from the Indianapolis Schools, 1917-1919." *Indiana Magazine of History* 98, no. 4 (2002): 285-303.

Reader, O'Brien County, Iowa. "Truck and Tractors." *Wallaces' Farmer* 53, no. 12 (March 23, 1928): 480 (10), *The Voice of the Farm*.

Reader, O'Brien County, Iowa. "Truck and Tractors." *Wallaces' Farmer* 53, no. 12 (March 23, 1928): 480 (10), *The Voice of the Farm*.

Redeker, Bill. "Blow Back from Neighbors Over Wind Farms." *ABC News*, May 6, 2007, <http://abcnews.go.com/WNT/story?id=3065474&page=1> (accessed 5/15/16).

Rehm, Harry. "What Farmer Can Kick Now." *Wallaces' Farmer* 53, no. 3 (January 20, 1928):  
The Voice of the Farm, 94 (10).

Reichenberger, Larry. "Precision pastures: GPS-Equipped Cattle Map Grazing Patterns."  
*Successful Farming* (May-June 2000): Special Bonus page.

\_\_\_\_\_. "Technology is Trickling Down Into Every Aspect of Agriculture." *Successful Farming*  
(September 2000): 39.

*Report of the Commission on Country Life*. Washington, D.C.: GPO, 1909.

Rhodes, Richard. *Farm: A Year in the Life of an American Farmer*. New York: Simon &  
Schuster, 1989.

Ridout Jr., W.J. "A Defeat for Communism." *Electricity on the Farm Magazine*, May 1953,  
Editor's Note, [http://www.papergreat.com/2014/09/checking-out-1953-issue-of-  
electricity.html](http://www.papergreat.com/2014/09/checking-out-1953-issue-of-electricity.html) (accessed 9/16/16).

Ringer, Benjamin B. and Elinor R. Lawless. *Race-Ethnicity and Society*. New York: Routledge,  
1989.

Riskin, Jessica. *Science in the Age of Sensibility: The Sentimental Empiricists of the French  
Enlightenment*. Chicago, IL: University of Chicago Press, 2002.

Rohwer, Harold. "Helping the Farmer." *Wallaces' Farmer* 53, no. 3 (January 20, 1928): The  
Voice of the Farm, 94 (10).

Rollins, Sonny. *WikiQuotesX*. [http://www.wikiquotesx.com/quote/sonny-rollins-364159/  
\(accessed 5/23/16\).](http://www.wikiquotesx.com/quote/sonny-rollins-364159/)

- Rowe, Bess M. "American Farm Bureau Convenes." *Farmer's Wife* 23, no. 8 (January 1921): 289.
- \_\_\_\_\_. "What Are Farm Women Thinking About?" *Farmer's Wife* 29, no. 5 (May 1926): 268-269.
- Rowley, Scott. "Do We Need Corporation Farming? An Argument for Putting Corporate Methods into Agricultural Production." *Wallaces' Farmer* 53, no. 10 (March 9, 1928): 376 (6)
- Rubin, Avi. *Ottoman Nizamiye Courts: Law and Modernity*. New York: Palgrave Macmillan, 2011.
- Rudicil, Mr. and Mrs. "Colt Light advertisement." *Farmers' Wife* 26, no. 12 (December 1926): 611.
- Rudwick, Martin. *Bursting the Limits of Time: The Reconstruction of Geohistory in the Age of Revolution*. Chicago: University of Chicago Press, 2005.
- Rush, Benjamin. *An Account of the Manners of the German Inhabitants of Pennsylvania, Written 1789*, edited by Israel Daniel Rupp. Philadelphia, PA: Samuel P. Town, 1875.
- Rushing, R.B. "Buying Farm Implements: Good Tools and Implements Pay for Themselves." *Better Farming* 48, no. 1 (January 1925): 13.
- Ryan, William L. "Early Farm Plan Almost Spelled Nikita's Downfall." *Cedar Rapids Gazette*, April 1, 1959, 4A.

\_\_\_\_\_. "Khrushchev Risks Heresy to Solve Food Troubles." *Cedar Rapids Gazette*, April 13, 1962, 22.

\_\_\_\_\_. "Nikita Khrushchev: Bold Gambler, He Has More Potential for Mischief than Hitler Before Munich." *Cedar Rapids Gazette*, November 24, 1957, 16.

Sage, Leland L. *A History of Iowa*. Ames, IA: Iowa State University Press, 1974.

Salamon, Sonya. *Prairie Patrimony: Family, Farming and Community in the Midwest*. Chapel Hill: University of North Carolina Press, 1992.

Saloutos, Theodore and John D. Hicks. *Agricultural Discontent in the Middle West: 1900-1939*. Madison, WI: University of Wisconsin Press, 1951.

Sarewitz, Daniel. "How Science Makes Environmental Controversies Worse." *Environmental Science & Policy* 7 (2004): 385-403.

Sarris, Peter. "The Origins of the Manorial Economy: New Insights from Late Antiquity." *The English Historical Review* 119, no. 481 (April 2004): pp. 279-311.

Sawtelle, Emily Hoag. "The Advantages of Farm Life: A Study by Correspondence and Interviews with Eight Thousand Farm Women." Unpublished manuscript, U.S. Department of Agriculture, March 1924, 1. <https://archive.org/stream/CAT31046460#page/n4/mode/1up> (accessed 9/29/16).

Schatzberg, Eric. "Ideology and Technical Choice: The Decline of the Wooden Airplane in the United States, 1920-1945." *Technology and Culture* 35, no. 1 (1994): 34-69.

\_\_\_\_\_. "Technik Comes to America." *Technology and Culture* 47 (2006): 486-512.

Schiebinger, Londa. "Why Mammals are Called Mammals." *American Historical Review* 98, no. 2 (1993): 382-411.

Schrage, Jared. *Schrage Corn Harvest (11-9-2014)*.

<https://www.youtube.com/watch?v=J3yZzlpRGFM> (accessed 6/20/16).

\_\_\_\_\_. *Jensen Grain Farms Harvesting Corn in early Nov. Snow* (November 16, 2014).

<https://www.youtube.com/watch?v=-PN5E9zygEM> (accessed 6/20/16).

Schroeder, Paul. "Simply Incredible!: Cows Accept the Challenge, Milk Goes Up 8,000 pounds." *Successful Farming* (April 2000): 26-27.

Schwarz, Michael and Michael Thompson, 1990. *Divided We Stand: Redefining Politics, Technology and Social Order*. Philadelphia: University of Pennsylvania Press, 1990.

Scot, Barbara J. *Prairie Reunion*. New York: Farrar, Straus and Giroux, 1995.

Segell, Michael. *The Devil's Horn: The Story of the Saxophone from Noisy Novelty to King of Cool*. New York: Picador, 2005.

"Senate Approves McNary Bill: Vote of 53 to 23 Passes Measure by Margin Big Enough to Beat Veto," *Wallaces' Farmer* 53, no. 16 (April 20, 1928): 3.

"Sensor on Center Pivots Offer Site Specific Irrigation." *Successful Farming* (December 2000): Production.

Seymour, John. *The Complete Book of Self-Sufficiency*. London: Corgi Books, 1978.

\_\_\_\_\_. *The New Complete Book of Self-Sufficiency*. Illustration. London: Dorling Kindersley Publishers, Ltd, 2003, 52-56.

Seymour, John and Will Sutherland. *The Self-Sufficient Life and How to Live It*. New York: DK Publishing, Inc., 2009.

Shapin, Steven and Simon Schaffer. *Leviathan and the Air Pump*. Princeton, NJ: Princeton University Press, 1985.

Shapiro, Henry. "Malenkov Regime Acted to Stop Soviet Food Crisis." *Waukesha Daily Freeman*, January 21, 1954, 9.

Shaw, Ada Melville. "The Country Child's Schooling: An Answer to the Question, 'How Much Education Does the Rural Child Need?'" *Farmer's Wife* 23, no. 8 (January 1921): 288, 308.

Shideler, James H. "'Flappers and Philosophers,' and Farmers: Rural-Urban Tensions in the Twenties." *Agricultural History* 47, no. 4 (1973): 283-299.

Short, W.S. "The Banker and the Farmer." *Wallaces' Farmer* 46, no. 2 (January 14, 1921): 54 (14).

Shortridge, James R. "The Emergence of the 'Middle West' as an American Regional Label." *Annals of the Association of American Geographers* 74, no. 2 (1984): 209-220.

Shulman, Stuart W. "The Progressive Era Farm Press: A Primer on a Neglected Source of Journalism History." *Journalism History* 25, no. 1 (1999): 26-35.

"Sixteen Iowa Master Farmers: Leaders in 'Good Farming, Clear Thinking, Right Living' are Chosen." *Wallaces' Farmer* 53, no. 2 (January 13, 1928): 43 (3).

- Slattery, Michael C. and Becky L. Johnson, Jeffrey A. Swofford, and Martin J. Pasqualetti. "The Predominance of Economic Development in the Support for Large-Scale Wind Farms in the U.S. Great Plains." *Renewable and Sustainable Energy Reviews* 16, no. 6 (2012): 3690–701.
- Slingerland, Edward. *Trying Not to Try: Ancient China, Modern Science, and the Power of Spontaneity*. New York: Broadway Books, 2014.
- Smith-Howard, Kendra. *Pure and Modern Milk: An Environmental History since 1900*. New York: Oxford University Press, 2014.
- Sowers, Jacob. "Fields of Opportunity: Wind Machines Return to the Plains." *Great Plains Quarterly* 26, no. 2 (2006): 99–112.
- Spangler, Holly. "Confessions of a Farm Wife: Vol. 18." *Wallaces' Farmer and Prairie Farmer-Confessions of a Farm Wife Blogs, My Generation* (April 12, 2016), <http://farmprogress.com/blogs-confessions-farm-wife-vol-18-10824#authorBio> (accessed 9/20/16).
- Spencer, J.E. and Ronald J. Horvath. "How Does an Agricultural Region Originate?" *Annals of the Association of American Geographers* 53, no. 1 (1963): 74-92.
- St. Petersburg Times*. "Food Mightier than Missiles." February 8, 1962, 3-B. [news.google.com/newspapers](http://news.google.com/newspapers) (accessed 5/21/15).
- Stein, Blanche "Building a Rural Civilization: It Must be Based Upon the Highest American Ideals, Expressed in Terms of Christianity, Recognizing the Farmer's Right to Economic Welfare." *Better Farming* 45 No. 1 (January 1922): 4, 16, 19.

Stephan, Ed, Brian Washington, Jerry Roberts, Kenneth Chisholm. "Green Acres," *IMBd*.

<http://www.imdb.com/title/tt0058808/> (accessed 5/26/16).

Stephens, Louisa. "A Farm Girl's Poultry: How She Grew Up in the Business and Has Made it a Success." *Farmer's Wife* 33, no. 8 (January 1922): 693.

Stephenson, B.N. "A Community Checks up its Corn." *Wallaces' Farmer* 50, no. 1 (January 2, 1925): 8 (8).

Stern, J.K. "The Weapon Khrushchev Can't Match: American Agriculture." Speech delivered at Farmer's Night Program, Roaring Spring, Pennsylvania, March 30, 1961. In *Vital Speeches of the Day* 27, no. 15 (1961): 469-471.

Streeter, Carroll. "Building Markets by Cooperation." *Farmer's Wife* 31, no. 6 (June 1928): 9, 32.

Sugrue, Thomas J. Review of *White Trash: The 400-Year Untold History of Class in America*, by Nancy Isenberg. *New York Times*, June 24, 2016, Book Review.

Sutter, Clara M. "The Farm Woman's Poultry Business: These Chickens Buy a Farm." *Farmer's Wife* 31, no. 6 (June 1928): 36.

Swidler, Ann. "Culture in Action: Symbols and Strategies." *American Sociological Review* 51 (1986): 273-86.

Swoboda, Rod. "A Wind Energy Lesson at the Fair." *Wallaces' Farmer* (September 2007): 30.

\_\_\_\_\_. "The Great Debate on GMO Crops." *Wallaces' Farmer* (2013),

[http://farmprogress.com/blogs-great-debate-gmo-crops-7797-bpx\\_3](http://farmprogress.com/blogs-great-debate-gmo-crops-7797-bpx_3). (accessed 4/17/15).



- Swofford, Jeffrey and Michael Slattery. "Public Attitudes of Wind Energy in Texas: Local Communities in Close Proximity to Wind Farms and their Effect on Decision-Making." *Energy Policy* 38, no. 5 (2010): 2508-19.
- Tangel, Andrew. "Farm Show Visitors Marvel, Scoff at Self-Driving Tractor." *Wall Street Journal*, September 1, 2016, Business.
- Taylor, Charles. *The Ethics of Authenticity*. Cambridge, MA: Harvard University Press, 1991.
- "The American Way." Cartoon. *Farmer's Weekly Review* (October 24, 1956): 1.
- The Burbank Blues. *Final Corn Harvest Aerials* (November 15, 2014).  
<https://www.youtube.com/watch?v=givo2lUxBaw> (accessed 6/20/16).
- "The Midwest Corn Belt." *PBS-American Experience*.  
<http://www.pbs.org/wgbh/amex/trouble/maps/> (accessed 2/28/16)
- "The Farm Women's Poultry Business." *Farmers' Wife* 26, no. 12 (December 1926): 604-605.
- The Farmer's Wife* 29, no. 12 (December 1926): Front Cover.
- The Folklorist*,  
[http://www.folklorist.org/song/Wal\\_I\\_Swan\\_\(Giddyap\\_Napoleon,\\_Ebenezer\\_Frye\)](http://www.folklorist.org/song/Wal_I_Swan_(Giddyap_Napoleon,_Ebenezer_Frye)).  
(accessed 3/17/16).
- The Pennsylvania-German Society*, Vol. 29 (Philadelphia: Pennsylvania-German Society, 1922).
- "The Two-Row Cultivator: Readers Say it Saves Labor and Saves Time." *Wallaces' Farmer* 50, no. 35 (August 28, 1925): 1095 (9).

“The Voice of the Farm: How Much Progress Can We Stand?” *Wallaces’ Farmer* 10 (March 27, 1925): 461.

Thompson, Carl. “The Model T.” In *Plain Talk*, edited by Carol Burke. West Lafayette, IN: Purdue University Press, 1983, 35.

Thompson, Susan. “Iowa’s turn.” *Wallaces’ Farmer* (February 2008): Front Page.

T K Farms. *T K FARMS DARKE CO. OHIO ,2014 corn harvest ,job of the grain cart operator* (November 1, 2014). <https://www.youtube.com/watch?v=8c6bng93j2U> (accessed 6/20/16)

Tonneson, Lon. “GMO Forum in Fargo Draws a Crowd.” *Wallaces’ Farmer* (October 28, 2015), <http://farmprogress.com/blogs-gmo-forum-fargo-draws-crowd-10331> (accessed 9/16/16).

\_\_\_\_\_. “Sustainable Agriculture: It’s About Your Kids’ Kids’ Kids.” *Wallaces’ Farmer* (September 12, 2016), Inside Dakota Ag, <http://farmprogress.com/blogs-sustainable-agriculture-kids-kids-kids-11321#eAuthor> (accessed 9/19/16).

“Too Busy to Milk.” *Farm Journal* 54, no. 1 (January 1930): 40.

“Topics in Season.” *Farm Journal* 54, no. 2 (February 1930): 32.

\_\_\_\_\_. *Farm Journal* 54, no. 2 (February 1930): 36.

\_\_\_\_\_. *Farm Journal* 54, no. 2 (February 1930): 44.

\_\_\_\_\_. *Farm Journal* 54, no. 3 (March 1930): 28.

Uekotter, Frank. "Farming and Not Knowing: Agnotology Meets Environmental History." In *New Natures: Joining Environmental History with Science and Technology Studies*, edited by Dolly Jørgensen et al. Pittsburg, PA: University of Pittsburg Press, 2013, 37-50.

U.S. Census Bureau. "German Roots."

[https://www.census.gov/content/dam/Census/library/visualizations/2016/comm/german\\_roots.jpg](https://www.census.gov/content/dam/Census/library/visualizations/2016/comm/german_roots.jpg) (accessed 1/21/17).

U.S. Department of Agriculture. *2012 Census of Agriculture Preliminary Report Highlights:*

*U.S. Farms and Farmers* (February 2014), 1-4,

[https://www.agcensus.usda.gov/Publications/2012/Online\\_Resources/Highlights/Farm\\_Demographics](https://www.agcensus.usda.gov/Publications/2012/Online_Resources/Highlights/Farm_Demographics) (accessed 3/2/16).

\_\_\_\_\_. *2012 Census of Agriculture: State Level 1*, Ch. 1 (February 2014),

[http://agcensus.usda.gov/Publications/2012/Full\\_Report/Volume\\_1,\\_Chapter\\_1\\_State\\_Level/](http://agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_1_State_Level/) (accessed 3/2/16).

U.S. Department of Agriculture for Beginning Farmers and Ranchers. *Farm Demographics:*

*Introduction to Farm Demographics*, <http://www.start2farm.gov/usda/knowledge> (accessed 3/2/16).

\_\_\_\_\_. *What is the Beginning Farmers and Ranchers Development Program?*,

<http://www.start2farm.gov/about-beginning-farmers-and-ranchers-development-program> (accessed 4/25/16).

U.S. Department of Agriculture, Economic Research Service, *Share of Principal Farm*

*Operators with College Degrees has Increased* (October 18, 2012),

<http://www.ers.usda.gov/data-products/chart-gallery/detail.aspx?chartId=32868> (accessed 4/25/16).

U.S. Department of Agriculture, National Organic Program, <https://www.ams.usda.gov/about-ams/programs-offices/national-organic-program>.

U.S. Department of State. *Intelligence Report: U.S. and Soviet Gains from Agricultural Exchange* (Washington, D.C.: GPO, 1955), Office Memorandum, at <http://www.scribd.com/doc/138124499/1955-Report-on-US-USSR-Agricultural-Exchange-Visits>. (accessed 3/27/15).

Usselman, Steven W. Review of *Shock of the Old: Technology and Global History Since 1900*, by David Edgerton. *Reviews in American History* 35, no. 4 (2007): 580-589.

Van Etten, Winifred M. "Three Worlds." In *Growing up in Iowa*, edited by Clarence A. Andrews. Ames, IA: Iowa State University Press, 1978.

Van House, Nancy A. "Feminist HCI Meets Facebook: Performativity and Social Networking Sites." *Interacting with Computers* 23 (2011): 422-429.

Vance, J.D. *Hillbilly Elegy: A Memoir of a Family and Culture in Crisis*. HarperCollins, New York, 2016.

Veblen, Thorstein. *The Theory of the Leisure Class*. Mentor Books: New York 1953, originally published in 1899.

Vitek, William "Rediscovering the Landscape," In *Rooted in the Land: Essays on Community and Place*, edited by William Vitek and Wes Jackson, 1-14. New Haven, CT: Yale University Press, 1996.

- Vogel, John. "Anti-GMOers Aim To Kill Food Abundance With GMO Labeling." *Wallaces' Farmer* (September 20, 2013). <http://farmprogress.com/blogs-anti-gmoers-aim-kill-food-abundance-gmo-labeling-7637>. (accessed 4/17/15).
- Volin, Lazar. "Khrushchev and the Soviet Agricultural Scene." In *Soviet and East European Agriculture*, edited by Jerzy F. Karcz. Berkeley, CA: University of California Press, 1967, 9-10.
- Vos, Timothy. "Visions of the Middle Landscape: Organic Farming and the Politics of Nature." *Agriculture and Human Values* 17, no. 3 (2000): 246-47.
- Wagner, Jonathan. *A History of Migration from Germany to Canada, 1850-1939*. Vancouver, CN: UPC Press, 2006.
- Wall, Joseph Frazier. *Iowa: A Bicentennial History*. New York: W.W. Norton & Company, 1978.
- Wallace, Emma Gary. "Making the Young People Contented." *Better Farming* 46, no. 1 (January 1923): 4.
- Wallace, Henry A. "The Best Corn in Iowa," *Wallaces' Farmer* 46, no. 2 (January 7, 1921): 43 (1).
- \_\_\_\_\_. "Fifth Iowa Corn Yield Contest." *Wallaces' Farmer* 50, no. 7 (February 13, 1925): 1, 18.
- Walter, John. "People Pages: He Blends Computers and Cows." *Agriculture.com* (Fall 2000): 16.

Ward, Mindy. "How Do You Measure Perfect?" *Wallaces' Farmer* (September 9, 2016), Show-Me Life, <http://farmprogress.com/blogs-how-measure-perfect-11319#authorBio> (accessed 9/21/16).

Warner, H.W. "Getting More Mileage on the Manure-Spreader." *Farm Journal* 54, no. 2 (February 1930): 38.

Warntz, William. "An Historical Consideration of the Terms 'Corn' and 'Corn Belt' in the United States." *Agricultural History* 31, no. 1 (1957): 40-45.

*Washington Post*, "Edie Albert: A Green Thumb," November 15, 1970, 34.

*Waukesha Daily Freeman*. "Farm Bureau Opposes Socialized Agriculture." September 9, 1953, Editorials.

\_\_\_\_\_. "Malenkov Regime Acted to Stop Soviet Food Crisis." January 21, 1954, 9.

\_\_\_\_\_. "Russ Ag Men Eye Specialties." July 22, 1955, 4.

\_\_\_\_\_. "Seek to Boost Corn Output." February 25, 1955, 3.

\_\_\_\_\_. "Farmers End Russian Tour." August 22, 1955, 8.

W.C. "Sending the Poor Farmer to Town." *Wallaces' Farmer* 53, no. 11 (March 16, 1928): 436 (10).

Weaver, John C. "Crop-Combination Regions in the Middle West." *Geographical Review* 44, no. 2 (1954): 175-200.

Webel, Emily. "Sticks and Stones May Break My Bones, But Will GMOs Really Hurt Me?"

*Confessions of a Farm Wife*. April 25, 2013.

<http://webelfamilyfarm.blogspot.com/2013/04/sticks-and-stones-may-break-my-bones.html>.

(accessed 4/17/15).

Weinberg, Albert K. *Manifest Destiny: A Study of Nationalist Expansionism in American*

*History*. Gloucester, MA: Peter Smith, 1958.

Weiss, Gilbert and Ruth Wodak. "Introduction: Theory, Interdisciplinarity and Critical Discourse

Analysis." In *Critical Discourse Analysis*, edited by Gilbert Weiss and Ruth Wodak. New

York: Palgrave Macmillan, 2003.

Werner, Kenny. *Effortless Mastery: Liberating the Master Musician Within*. New Albany, IN:

Jamey Aebersold Jazz, 1996.

WGBH. "The Falmouth Experience," at <http://www.wgbh.org/wcai/turbine.cfm> (accessed

1/23/15).

"What is the Secret to Planting Straight?" *Successful Farming* 95, no. 12 (December 1997): 36L.

White, Richard. "Are You an Environmentalist or Do You Work for a Living?" In *Uncommon*

*Ground*, edited by William Cronon. New York: W.W. Norton & Co., 1995, 171-185.

Whitson, Jay. "Farmers Whom Agriculture Honors: The First of a Series of Articles on the Iowa

Master Farmers of 1927." *Wallaces' Farmer* 53, no. 14 (April 6, 1928): 545 (4).

Whittlesey, Derwent. "Major Agricultural Regions of the Earth." *Annals of the Association of*

*American Geographers* 26, no. 4 (1936): 211-212.

“Why Some Farms Pay.” *Wallaces’ Farmer* 50, no. 12 (March 20, 1925): 440 (28).

“Why We Made Our Home Modern.” *Farm Journal* 54, no. 2 (February 1930): 32, 89.

Wiebe, Robert H. *The Search for Order, 1877-1920*. New York: Hill and Wang, 1967.

Wiggins, E.R. “Comfort, Convenience, and Economy with Electric Power and Light Plants:

Thousands of Famers and Farmers’ Wives Point Out Many Advantages of Electricity Both in the Home and the General Farm Activities.” *Better Farming* 47, no. 5 (May 1924): 4.

\_\_\_\_\_. “Killing Weeds and Forming a Mulch by Cultivation,” *Better Farming* 47, no. 5 (May 1924): 7, 11.

\_\_\_\_\_. “Growing 1000 Acres of Corn on Hawthorn Farm.” *Better Farming* 47, no. 7 (July 1924): 3-4, 7.

\_\_\_\_\_. “How Tractors Make Farms Pay Profits: Many of the Best Farmers Have Found that Ample Power Provides the Means of Doing Their Work at the Right Time.” *Better Farming* 47, no. 3 (March 1924): 6-7, 11.

\_\_\_\_\_. “The Small Grain Thresher-a Profitable Farm Machine: Farmers Save Money Threshing Their Own Grain and Earn Extra Money Threshing,” *Better Farming* 47, no. 5 (May 1924): 3.

\_\_\_\_\_. “Making More Money with Practical Garden Tractor,” *Better Farming* 48, no. 3 (February 1925): 4, 8.

\_\_\_\_\_. “How to Make Poultry Produce Profits.” *Better Farming* 48, no. 1 (January 1925): 6, 19.



- Wilcox, JoAnn. "Every High-Tech Thing I Know I Learned in Farmer Kindergarten." *Successful Farming* (December 2000): 24.
- \_\_\_\_\_. "If There's a Rattle and a Sputter, Aren't You Going to Fix It?" *Successful Farming* (May-June 2000): 33.
- Wilkins, F.S. "Where Soybeans Replace Oats: Wapello County, Iowa, Community Finds Soy Yields More and Pays Better." *Wallaces' Farmer* 53, no. 12 (March 23, 1928): 477(7).
- Wilson, Ruth. *Buffalo Chips: The History of a Town*. unpublished book, Buffalo Center, IA, year unknown.
- Wilson, Thomas E. "Farmers are in a Fix." *Better Farming* 44, no. 1 (January 1921): 4.
- Williams, Rosalind. *The Triumph of Human Empire*. Chicago, IL: University of Chicago Press, 2013.
- Williams, Wendy, and Robert Whitcomb. *Cape Wind: Money, Celebrity, Class, Politics, and the Battle for Our Energy Future on Nantucket Sound*. New York: Public Affairs, 2007.
- Wind Energy Foundation, "Polls," at <http://www.windenergyfoundation.org/wind-at-work/wind-consumers/polls> (accessed 6/7/15).
- Wister, Owen. "Forward." In *Their True Faith and Allegiance*, edited by Gustavus Ohlinger, Forward, vii-xxix. New York: The Macmillan Co., 1917.
- Witcher Marcus M. and Joseph Horton. "From Prosperity to Poverty: The Story of American Economic Decline During the 1920s." *Journal of Applied Business and Economics* 14, no. 4 (2013): 79-87.

“With the Women of the Farm Bureau.” *Wallaces’ Farmer* 50, no. 4 (January 23, 1925): 113 (15).

Wittke, Carl. *German-Americans and the World War*. Columbus, OH: The Ohio State Archaeological and Historical Society, 1936.

Wolsink, Maarten. “Invalid Theory Impedes Our Understanding: A Critique on the Persistence of the Language of NIMBY.” *Transactions of the Institute of British Geographers* 31, no. 1 (2006): 85-91.

Wood, Mabel Travis. “A Pioneer Farm Bureau Celebrates.” *Better Farming* 46, no. 4 (August 1923): 3.

Woods, L.T. “I Use Big Machinery and a Little Pencil.” *Tractor Farming* (May-June 1926): page unknown.

Wooten, Victor. *The Music Lesson: A Spiritual Search for Growth Through Music*. New York: Berkley Books, 2006.

Wynne, Brian. “May the Sheep Safely Graze? A Reflexive View of the Expert-Lay Knowledge Divide.” In *Risk, Environment, and Modernity*, edited by Scott Lash et al., 44-81. London: Sage, 1996.

*X-Files*. “My Struggle.” Directed by Chris Carter. Written by Chris Carter. Season 10, episode 1. Fox Broadcasting, January 24, 2016.

Zelenin, Il’ia E. “N.S. Khrushchev’s Agrarian Policy and Agriculture in the USSR.” *Russian Studies in History* 50, no. 3 (2012): 44-70.