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New Institutional Theory and a Culture of Safety in Agriculture

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Abstract

Health and safety professionals often call for an improved safety culture in agriculture. Such a shift would result in agricultural practices that prioritize safe work habits and see safety as both an effective means to improve production and a goal worth pursuing in its own right. This article takes an anthropological approach and demonstrates the potential for new institutional theory to conceptualize broader cultural change in agriculture. New institutional theory examines the roles of organizations and the ways that they inform and support broad social institutions. Using preliminary data from the agricultural lending industry in Iowa and integrated poultry production in Texas, this article considers the ability of these organizations to contribute to systemic change and an improved culture of safety in agriculture.

Keywords

Agricultural anthropology; agricultural health and; safety; new institutional; theory

Introduction

It is well known among health and safety practitioners that agriculture remains one of the most dangerous occupations for farm owners and workers. Because most US farms employ fewer than 11 nonrelated workers per year, exempting them from federal safety regulation, it has been challenging to develop a “culture of safety” in the agricultural industry. Although public health researchers have consistently identified on-farm hazards and have developed interventions aimed at mediating those hazards or changing worker behaviors to improve outcomes, rates of occupational fatalities and injuries in agriculture remain higher than most other industries. Engaging other social science disciplines, such as anthropology, which has long examined social systems and agricultural practices, could result in new approaches to systemic cultural change for public health researchers.

Anthropological approaches to culture

The discipline of anthropology is arguably best known for its in-depth studies of small-scale societies outside of Europe and the United States. Early anthropologists such as Franz Boas and Bronislaw Malinowski closely examined the cultural practices of tribal societies across

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the globe, developing the foundational principles of anthropology, including the premise that by understanding the "other" we can better understand our own societies.

No matter the field site or population being studied, anthropologists are interested in holistically understanding the organization of social life. This perspective has led to the development of specific anthropological methods, most notably participant observation, where the investigator immerses him or herself into a setting and aims to learn cultural practices much as local people have learned them: by engaging in everyday life, making social mistakes, and asking questions.[1] In addition, the anthropological toolkit includes a wide range of both qualitative and quantitative instruments, including formal and informal interviews, surveys, mapping exercises, and cognitive methods such as free lists and pile sorts.[2] Taken together, the product of cultural anthropology is ethnography, the scientific and systematic description of cultural beliefs and practices.

For anthropologists, the multimethod approach is critical to producing an effective ethnographic product. The results from one survey or set of semistructured interviews would not result in an ethnographic presentation of data. Instead, cultural anthropologists typically use a variety of methods, combining, for example, semistructured interviews with participant observation and spatial mapping. These multiple data sets are then analyzed and compared or triangulated to produce a holistic representation of the field site or population under study. Likewise, even within one particular method such as a semistructured interview, the data collected will include more than just the text of responses to questions. An informant's body language,[3] uncomfortable laughter,[4] or use of formal versus informal speech may also shed light on the context, emotion, or experience of the informant.[5] Regardless of the population being studied, anthropologists recognize that informal interactions, as found in social networks and everyday conversations, are as important as formal activities (such as trainings, legal proceedings, or policy directives).

The anthropological literature on the organization of work and the development of knowledge particularly emphasizes the attention to informal learning processes, in addition to western science. In some cases, this results in a challenge to widely held beliefs about the superiority of scientific agriculture. Anthropologists have long been involved in advocating for local knowledge, particularly in the context of rural economic development.[6–9] For example, research in Bali showed that local, traditional methods of irrigated rice production, in which religious practices and rural social structure were integral to production, resulted in higher yields than green revolution varieties[10]. Thus, the attention to formal and informal in anthropology is significant both methodologically (as in recording body language or laughter in interviews) and theoretically (as a holistic way to understand human society).

Beginning in the 1970s and 1980s, anthropologists began to examine cultural life in developed countries, often their own. Although classic anthropology emphasized learning about "the other," increasingly anthropologists found their holistic methods quite applicable to their own societies.[11–13] Likewise, over the past decades, more anthropologists have taken work outside of academia, often with nongovernmental organizations (NGOs) or businesses. This has resulted in anthropological attention to social interactions within business settings, now referred to as "organizational anthropology." The specialty encompasses the study of

people within all kinds of formal organizations, including the work place, schools, government agencies, religious organizations, or advocacy groups. Further, the increased significance of globalization has also contributed to organizational anthropology, as people's social groups expand beyond their home villages or communities and into, for example, a multinational corporation.[14] This paper examines one focus area, new institutional theory in organizational anthropology, and its applicability to agricultural safety and health initiatives.

New institutional theory and agriculture

Building on the work of Scott[15] and Baba et al[16]., this paper considers a “new institutional” approach to studying the agricultural industry, with the goal of providing health and safety practitioners an anthropologically informed theoretical framework. Although the industry of agriculture consists of diverse and sometimes contradictory interests, organizational anthropology and new institutional theory provide some tools to consider how organizations and actors within an institution interact. This perspective, we argue, may also benefit agricultural safety and health practitioners who are concerned with how agricultural lenders, equipment dealers, agribusinesses, or producers' associations may be engaged in developing a broader safety culture within the agricultural industry. This approach views agriculture not as a disconnected set of practices, but as a cohesive social institution with “regulatory, normative, and cultural-cognitive elements that, together with associated activities and resources, provide stability and meaning to social life.”[15](p56)

Here we outline the theoretical framework of new institutionalism and its relevance in the field of anthropology. Using preliminary data from two studies, including interviews with agricultural lenders in Iowa and poultry producers in Texas, we discuss how new institutionalism can be applied to multiple enterprises in agriculture. Most importantly, this approach can illuminate areas where farm safety initiatives may lack legitimacy within the institution of agriculture, which can inform more effective public health interventions. A secondary goal of this paper is to show how the anthropological perspective on data collection, analysis, and presentation, including the use of first person when appropriate, can be applied to agricultural safety and health. The examples presented here are based on both formal and informal interviews, group discussions, and observations of interactions between informants and investigators as well as among informants.

Institutional theory defines “institutions” as social phenomena that, because of the interplay of civic or public engagement, business enterprise, social norms, and tradition, become shared foundations of social life. These systems are created out of subjective human interaction but are perceived by participants as objective and stable.[15] Further, institutions are “foundational elements of the social contexts in which formal organizations are embedded.” [16](p76) The recognition of organizations as important contributors to institutions is a key component of new institutional theory, as proposed by W. Richard Scott; previous conceptions were focused on systems of belief or behavior and how individual participants interacted with those larger structures (i.e., “structure versus agency”). For example, the institution of marriage ultimately combines public policy and legal structures, religious beliefs and organizations, and the practices of individuals, among other things, to form a cohesive, if ever changing, social foundation. New institutional theory pays particular

attention to the actions of the formal organizations within the institution and so would examine the contributions of religions, courts and legal systems, and activist groups or nongovernment organizations (NGOs).

New institutional theory ties together disciplinary perspectives from economics, political science, managerial theory, and others. It encompasses both static elements, in that ideas, practices, or organizations are fundamental "institutions" with long held beliefs and practices, as well as processes of change, recognizing that over time new ideas, processes, and organizations "are instituted." Thus, "'institution' may be conceptualized both as action that enables change and as constraints on action that facilitate stability."[16](p76) Although this concept may appear contradictory, it recognizes that processes of change and stability are interconnected. Understanding institutional change has long been of interest to social scientists. To do so effectively, researchers must examine the elements within an institution that enforce stability in combination with those that encourage change. To further the example of marriage above, new institutional theory would examine organizations that promote change in the institution of marriage (say, NGOs promoting same-sex marriage or women's organizations in the past promoting access to divorce) as well as those that encourage stability (such as religious groups or legal organizations that are slow to recognize new practices).

Central to Scott's new institutionalism are three "pillars" that support the overall structure of the institution: regulatory, normative, and cultural-cognitive. The first pillar—regulatory—provides institutions with the formal authority to promote, sanction, and develop rules for appropriate behaviors and activities. This authority can be both punitive, in the obvious form of sanctions, as well as promotive, in cases of structured incentives for particular behaviors. The normative pillar encompasses both norms and values. Scott[15] states, "normative systems define goals or objectives (e.g., winning the game, making a profit) but also designate appropriate ways to pursue them (e.g., rules specifying how the game is to be played, conceptions of fair business practices)."(p64) Finally, the cultural-cognitive pillar is the realm familiar to most anthropologists and includes the symbolic and cognitive dimensions of human existence. This is where we make meaning of our experiences, applying our perceptions in relation to the other pillars of our social institutions, both reinforcing as well as, at times, undermining those external structures.

Although a visual representation of the three pillars may imply that each is a discrete entity with no bearing on the others, in fact there are considerable overlap and movement between the three. In particular, the normative pillar shares features with the regulatory pillar, in that the means to a goal are defined (rules of the game, in the example above). This requires some attention to formal rules and regulations. The normative pillar also defines the end goal, which is closely tied to the cultural-cognitive pillar. Collective values around sports and games support the social benefits of "winning," whether the competition is a super bowl or a spelling bee.

Agriculture as institution

Agriculture contains all of the elements of a social institution, as outlined by theorists. It is a historic and, in many ways, static set of practices; the process of dropping a seed in the ground in the spring and harvesting in the fall has not fundamentally changed. But, new innovations are constantly instituted—from soil conservation measures such as no-till to genetic modification. Some have become widely adopted and foundational; others remain on the periphery. Within the realm of agriculture are a number of interacting social and organizational actors, including individual farmers, support organizations such as the Farm Bureau or the Pork Producers, equipment and chemical dealers, and lenders. These organizations interact and overlap. At times they are of one mind, and on some issues they diverge. In addition, much of the practice of US agriculture, from the organic community-supported agriculture to the hog confinement, is based on a shared cultural-cognitive framework, informed by historic ideas of agrarianism, independence, thrift, and hard work.

Despite the agrarian myth of the independent farmer, agricultural producers in the United States are deeply embedded in a complex system. Further, organizations within the institution of agriculture have enormous power to change productive activities. As part of the institutional structure of agriculture, the activities of any of these organizations are linked with all three pillars. The examples provided in this paper attempt to show how agricultural lenders and poultry integrators are tied to each pillar in agriculture and, further, how those ties have implications for agricultural safety and health interventions.

New institutional theory and public health interventions

Like institutional theorists, agricultural safety and health practitioners are interested in institutional change, although it may not always be obvious. The call for an improved “safety culture” in agriculture suggests that institutional change is needed. And, although there are numerous examples of interventions designed to change individual behavior or implement an improvement within an organization, there has been less attention to the broader agricultural industry and how organizations may or may not contribute to more systemic change.

Baba et al.[16] point out the importance of new institutional theories to anthropologists, given the discipline's holistic and comparative approach. This perspective encourages us to recognize that any organization or actor within an institution is affected by each of the three institutional pillars. An agricultural lending institution, for example, which appears to be primarily driven by profit outcomes and its ability to ensure a good return on investment by making loans only to economically qualified farmers, is also culturally tied to the discourse of agrarianism and agricultural independence. And, for an anthropologist engaged in farm safety work, the task becomes to identify how a safe and healthy farm environment may contribute not only to the lender as a culturally competent actor within the institution of agriculture, but also a financially successful organization.

If safety advocates can successfully make such linkages within agriculture, they increase the potential for sustainable social change. The final critical element is linking the formal and

informal components of an institution. As Preister[17] notes, “while research is an important component of effective social change initiatives, it is not sufficient to produce sustainable, empowered change in local communities … It is the discovery of informal community systems and the existing cultural mechanisms by which absorption and engagement are handled that establishes conditions for sustainable, facilitated action.” (p2) This requires attention to both the informal and formal sectors; they must be aligned, or at least complementary, to result in long-term changes in communities or institutions.

This paper explores two sectors of the modern agricultural system—the financial and lending services critical to any farm operation, and large-scale poultry production—and their relationships to the field of agricultural safety and health viewed through the lens of new institutional theory. The examples provided here are exploratory and represent conversations that, although only introductory, have been illuminating. For agricultural lenders, we suggest that although farm safety is salient in the normative and cultural-cognitive realms of the institution of agriculture, it is not fully legitimized because of its absence from the regulatory pillar, or to use Preister's terminology,[17] it is not “formalized.” In particular, there is a disconnect in the “normative pillar” of agriculture as it relates to farm safety. The goal is consistent: safe farms, but the mechanism to get there is not. Conversely, among poultry producers there is consistency between pillars related to agricultural safety and health research. Unfortunately, the result of this consistency is that on-farm health and safety research is discouraged by companies, causing farmers to restrict research access on their farms.

Lenders and farm safety

In January of 2016, I sat down with an agricultural lender to interview him about the programs his organization has for farmers.* As part of a state agency, his division offers loans for farmers whose net worth and farm size are within a certain threshold, and these are marketed heavily to “beginning” farmers in Iowa. I asked him how he considers farm safety in the course of his work as a lender. He exclaimed, “it gives me goose bumps” to think about all the hazards present on a farm. He referenced several hazards, including power-takeoff shafts, and talked about his own experience growing up on a farm. For beginning farmers, he noted, farm safety is even more critical because they tend to have fewer resources to hire help or serve as a financial pad in the event of an injury.

He further went on to explain how a safe farm environment might be linked to a good loan candidate. He referenced the “little stuff,” such as equipment left outside or an untidy workspace, pointing out that in some cases these could be safety hazards. Then, he explained that when a farmer neglects the “little stuff,” he might also neglect the “big stuff,” such as paying back his loan. Good housekeeping practices, he asserted, ensure that you “don't damage yourself or the equipment.” That farmer is the safer, better loan candidate.

I pushed him a bit more, asking if his organization would go so far as to require an audit or documentation of safe practices on the farm. He straightened in his chair, leaning away from

*All data relating to farm lenders were collected by one author, Brandi Janssen.

me, and held up his hands to stop the line of inquiry. He explained that it is already difficult to get applicants to fill out the paperwork associated with a loan. If his organization were to make more requirements of applicants, they might go elsewhere.

I recently gave a presentation about the work of a state-funded agricultural safety and health center to a local chamber of commerce committee focused on agriculture. The group is a mix of farmers, real estate agents, representatives from chemical and equipment dealers, and agricultural lenders. The presentation sparked a lengthy conversation around the table—much of it devoted to telling stories of family members and neighbors who had been injured, sometimes fatally, on their farms. The lenders, all in suits and ties, had plenty of stories to contribute. As with the previously referenced conversation, I asked the lenders around the table how their banks approached safety— are there measures in place to ensure that a farmer is a good risk from that perspective? Those around the table were silent; they looked at each other, shrugging and shaking their heads.

There was, however, enormous gratitude expressed for the work that the center does. One retired farmer who works for the Farm Credit Services Agency, another financial support entity, said repeatedly that “raising awareness” is critical to improving the abysmal farm safety statistics in Iowa. Several others suggested that the solution is to make the “stories” of agricultural injury more prominent to encourage farmers to adopt specific behaviors. None, however, suggested that their own organizations or industries could contribute to the effort.

Safety research in integrated poultry production

In 2011, researchers at the University of Iowa began a 5-year project titled “An Educational Approach to Increase Respirator Use among Broiler Chicken Workers” in Texas. The study population was primarily broiler chicken producers who contract with large corporations (such as Tyson or Perdue) to grow chickens for meat. In this “integrated” system, growers invest in a production barn, and the company, or “integrator,” provides the chicks. The grower oversees the production and labor until the birds are ready for processing, at which point they are sold back to the integrator at a predetermined price. This research and intervention project included a baseline survey to quantify respirator use prior to the intervention, a task analysis to identify the work tasks with the highest exposures, and targeted educational meetings to encourage respirator use. Although the initial survey response rate was encouraging (just over 300 responses, about 20% of the study population), participation in the educational meetings was very low. In spring of 2015, the research team developed a qualitative open-ended interview to better understand the barriers to conducting health and safety research with this population.

Phone interviews were conducted by trained student interviewers at the University of Iowa Social Science Research Center using computerized assisted telephone interview software. The interview script asked informants broad, open-ended questions that would elicit narrative responses, taking up to 40 minutes per interview. Interviewers were provided potential follow-up questions to encourage more discussion as needed. The 14-question script included questions asking respondents to speak to their own perceptions (e.g., “Is there anything that may prevent you from participating in research on your farm?”) as well

as to speak more broadly about their peers in the poultry industry (e.g., “What suggestions do you have for encouraging growers to talk with researchers about health and safety topics?”). Other questions asked about respiratory protection and publicly funded research, such as:

- Do you think growers are interested in respiratory protection?
- What are your thoughts when I ask about university researchers doing federally funded (or government based) research on your farm?
- What do you think some of the challenges would be for performing safety and health research in the broiler chicken industry?

Interviewers transcribed the responses as they were given and then provided the written transcriptions to the research team for analysis.

Data analysis was conducted using a grounded theory approach, in which narrative data are read and reread to identify emerging themes and ideas. Rather than approaching the data with a hypothesis or other preconceived notion of the content, this iterative approach allows for researchers to better understand a topic from the perspective of the informants.[18–20] The 30 interviews resulted in 219 discrete responses, each of which was analyzed as a unit of text. Responses were analyzed both in the context of the question asked and in isolation of the question for consistency and to ensure research team members were not biased based on the question associated with the response. Through close readings of the text, the interview team identified seven themes, each divided into subthemes that provide more details as to how participants conceptualized each theme.[1,2] These were assigned numeric codes to aid sorting and comparison.

Informants were asked about barriers and concerns related to on-farm research (e.g., “Is there anything that may prevent you from participating in research on your farm?”). Eighteen coded responses suggested that they would hesitate to let research occur on their farm because of pressure from the company. Respondent 5 stated, “our company often doesn't want outsiders coming on the farm. They're afraid of negative light from the media and bad publicity.” Similarly, respondent 111 said, “I'm limited on what I can allow, the company itself prohibits [having outsiders come on the farm].” Respondent 126 stated, “I think the company is going to prohibit people coming on the farm due to the disease.”

These statements are instructive in that they relate both to formal and informal practices by poultry companies. Respondent 5's statement that the company “doesn't want” outsiders because they fear “bad publicity” suggests there is an informal norm that discourages visitors to the farm and in the barns. However, respondent 111 states that the company “prohibits” having people in his barn. This statement indicates a more formal policy that restricts access to outsiders. The third comment indicates biosecurity as a reason for the prohibition; the topic of disease was referenced by many informants. Regardless of the reason, the result is the same: these farmers hesitate to have researchers come to their farms because of repercussions from the company. But the existence of both informal and formal mechanisms suggests that the fear of outsiders is consistent across the “pillars”; it is both part of the norms and values as well as the regulatory pillar.

In addition to the restrictions on farm visitors, informants indicated that the companies were also not in favor of having growers meet, which may have affected attendance at the educational meetings planned during the original study:

- The integrators themselves don't encourage us to meet because of the possibility of the spread of disease. We are discouraged to go places other growers would meet. (Respondent 117)
- I think if our contractor had a grower meeting, we would be willing to do surveys there. Pilgrims does not do that, but I know Tyson does. It depends on the integrator. Pilgrims' growers used to get together, seven or eight years ago. They did not like us meeting. They thought of us as rebels. We just wanted to learn from each other, but they did not like it. (Respondent 117)
- Well, they might think that the integrator might not want them to and we've had meetings in the past where we get everybody together and everyone just gripes about the integrator. (Respondent 300)

As in the previous comments, these statements reveal a range of reasons that result in the same outcome. These comments are also notable in that they suggest the poultry companies, whether in the form of formal regulations or informal norms, affect producers' behaviors both on and off the farm. Discouraging farmers from interacting with each other effectively inhibits the spread of both zoonotic disease and information between farmers. As a result, the goal of peer-to-peer dissemination of health and safety information or participatory engagement with interventions is difficult to achieve.

Discussion: Legitimizing agricultural safety across the three pillars

The perspective outlined here can be applied to multiple areas of agriculture. Rather than identifying a single population for an intervention, new institutional theory allows safety and health researchers to take a step back and model large-scale, systemic processes. It provides a mechanism to understand both formal and informal processes and, ideally, how the interactions between the formal and informal may result in behavioral norms among agricultural lenders (expressing support for farm safety initiatives, but not engaging in them) or producers (not allowing on-farm research).

The safety of agricultural producers is part of the informal structure of agricultural finance. Lenders speak eloquently and at length about their experiences and those of their friends and neighbors. However, they express discomfort and sometimes surprise when asked about formalizing those concerns. They recognize and agree that a loan applicant who uses the bank's money to purchase equipment that leads to an injury or fatality is not a good risk. However, their formal conception of “risk” does not include personal harm to the producer, except to the extent that the applicant shows proof of a risk management strategy in the form of health, life, or death and dismemberment insurance.

However, herein lies a fundamental conflict within the institution, an opportunity for anthropologists well suited to identifying points of divergence and convergence within a complex institution. Scholars agree that consistency between pillars ensures legitimacy of

organizations within the institution. Scott[15] writes, “Legitimacy is not a commodity to be possessed or exchanged but a condition reflecting perceived consonance with relevant rules and laws or normative values, or alignment with cultural-cognitive frameworks.”(p72) It is difficult, therefore, to legitimize a practice when there is tension between or within pillars about either the goal or the mechanism to reach it.

The gap here is in the normative institutional pillar, in which both the goals (the what) and the values (the how) are established. All agree on the goal—to reduce injuries and illnesses among farmers. And, lenders can articulate how that goal is important to their own self-interest: farmers who are safer are a better financial risk. However, their suggestions about the values—the “how”—absolve their industries of any formal responsibility to meet the goal. They do not see their organizations as responsible for legitimizing farm safety, even though they have the power to do so. Lenders have the ability to apply the components of the regulatory pillar by requiring safety documentation, training, or some other formal process for a producer to receive services.

In contrast, the example of the poultry industry shows the power of regularity across the three pillars. In this case, according to producers, companies consistently discourage on-farm research. The wide range of reasons given by producers as to why their companies would not want to engage in research include fears of disease, loss of profitability, lack of ownership of the birds, and general statements about the company “not wanting that.” These suggest in some cases a policy stance (that farmers are “prohibited” from inviting outsiders on farms), as well as a violation of the agreed upon norms of production (protecting against the spread of disease) by having researchers on farms. The consistency between the formal and informal components of the pillars results in multiple rationales behind reducing on-farm visitors and, by association, making on-farm health and safety research more challenging.

The responses of the poultry producers also show the power that organizations have within an institution to drive individual behavior. This is relevant to health and safety professionals who hope that producers will adopt safer work practices. Further, the responses of the farmers indicate that change is not as simple as developing an intervention to change their behavior. Instead, the companies will have to adjust their perception of health and safety research by encouraging educational meetings and on-farm research as valuable and relevant to the industry, by supporting formal mechanisms to reach the “goal” (safer work practices), and by implementing policies that either reward safe behaviors or discourage unsafe work practices.

Although it will not surprise anyone working in agriculture that agricultural lenders and poultry companies have significant power over farmer behaviors, new institutional theory provides a potentially fresh approach to promoting change. First, by recognizing that legitimizing a particular practice, in this case workplace safety, requires an organization to support it consistently in all three pillars. Organizational actors have to not only talk about the importance of safety, they also must incorporate safety into their regulatory policies to ensure legitimacy. Additionally, and perhaps most importantly, by emphasizing informal interactions in addition to formal rules and regulations, such as farmers feeling like the

company “wouldn't like that,” new institutional theory provides an effective cultural model that captures the diversity of influences and pressures an individual experiences in the context of the social institution. Meaningful engagement by these organizations in farm safety could lead to the improved safety culture so desired by the health and safety community. However, until safe work is legitimized and equally supported by all three institutional pillars, there will be no systemic change.

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