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## Methodological Considerations for Amish-Focused Opinion Research: Lessons from a Study of Beliefs and Practices about Agriculture and the Environment

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# Methodological Considerations for Amish-Focused Opinion Research: Lessons from a Study of Beliefs and Practices about Agriculture and the Environment

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**Abstract:** Certain aspects of Amish agriculture have been studied extensively but much is still unknown about Amish environmental attitudes and beliefs. This is due, in part, to the difficulty of directly soliciting responses from adherents. This article—part of a larger study of the Kishacoquillas Valley Amish settlement in Mifflin County, Pennsylvania—reflects on methodological challenges that arose during a study on Amish environmental attitudes and behaviors. Farmers from two Amish groups, as well as two non-Amish groups used for comparison, were interviewed about their environmental attitudes. Recruiting Amish participants for interviews was difficult due to the limited use of modern telecommunications technology, what can be perceived as a general suspicion of non-members, and concerns about possible publicity. Further, the use of standard academic research method protocols and survey instruments proved challenging with the Amish. Administering an academic-level survey to the Amish, a group whose formal schooling generally ends at eighth grade and whose first language is Pennsylvania Dutch, posed challenges for the interviewees' understanding of certain technical terms and for the interviewer's interpretation of responses. As the study unfolded, methodological flexibility was necessary to adapt the research to the people. Namely, open-ended questions were added to the formal survey in order to learn more about Amish attitudes about stewardship. These study reflections suggest that researchers should take time to learn about the local context and culture and be flexible in selecting and adapting methodological instruments. [Abstract by author.]

**Keywords:** Renno Church Amish; Nebraska Church Amish; Big Valley, PA; culturally relevant methods; stewardship

**Acknowledgement:** Sincere thanks to the farmers of Kish Valley, especially the Amish, who allowed me to learn more about the trials and triumphs of their vocation.

**Note:** The author completed field research while a graduate student at the University of Oregon.

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## INTRODUCTION

More than two decades ago, I was in a Master's program in Environmental Studies, studying the intersection of cultural/religious beliefs and environmental sustainability. As the time came to focus on my thesis, I struggled to choose a topic, until a colleague suggested I look at my own religious tradition, Anabaptism. This proved fruitful, and I ended up exploring the intersection between religious beliefs, environmental attitudes, and conservation behaviors in an Amish farming community. While this topic worked well for me, as a Mennonite with deep family connections to a number of different Amish geographical communities, it also made sense in the context of my academic program. As interest in ecological sustainability has grown over the past 50 years, since the first Earth Day in 1970, the Amish have attracted considerable attention from environmental thinkers and researchers, who see in Amish culture the possibility of an ecologically sustainable community (Foster 1981; Berry 1986; Moore, et al. 1999). While Amish generally use simpler farming technologies requiring less energy and inputs (Johnson, Stoltzfus, and Craumer 1977; Craumer 1979), the connection between these practices and the beliefs and attitudes that support them is not as well studied (a notable exception is the work of Brock and Barham 2008; 2013; 2015).

The research methods I had planned to use were developed in an urban university context and proved to be somewhat challenging to apply to the reality of a rural, religious, farming community. In particular, I was planning to use the New Environmental Paradigm, a 12-statement survey developed by Dunlap and Van Liere (1978), to measure general environmental attitudes and beliefs among the Amish and other rural farmers. I was quite naïve, assuming that I could simply walk in and expect people, some of whom do not speak English as their first language, to respond quickly and easily to an academic style survey.

Though my field research took place in 1998, my methodological reflections represent important insights that remain relevant for agricultural research today. This article presents a case study of plain and non-plain farmers in rural Pennsylvania that highlights, among other insights, some of the challenges involved in applying standard aca-

demical research approaches to a non-typical North American cultural context.

## STUDY SETTING: THE KISHACOQUILLAS VALLEY FARMING COMMUNITY OF CENTRAL PENNSYLVANIA

The location for the case study was the Amish and Mennonite settlement in Kishacoquillas Valley (Kish, for short), Mifflin County, PA. Kish Valley was first settled by Amish migrants in 1791, making it one of the oldest, continuous Amish settlements in the United States (Kauffman 1991). The valley is physically isolated by mountain ranges, but its namesake creek, Kishacoquillas Creek, is hydrologically linked to the Chesapeake Bay, by way of the Juniata and Susquehanna Rivers.

Kish Valley features a unique religio-cultural landscape, with a high concentration of Amish and Mennonite residents. In the late 1990s, the Mifflin County Mennonite Historical Society reported that nearly every farm between the villages of Allensville and Belleville, seven miles apart, was being farmed by an Amish or Mennonite family.

Three distinct Old Order Amish groups, conspicuously distinguished by the different colors of their buggies, live in Kish Valley: the Renno Church Amish (black), the Byler Church Amish (yellow), and the Nebraska Church Amish (white). These and other outward practices signal varying religious beliefs among the three groups (Enninger and Scott 1985). Each group has a somewhat different *Ordnung* (code of rules), which guides the behavior of its members, especially in regards to acceptable technologies and dress codes.

A variety of Mennonite groups reside in the Kish Valley as well, on a spectrum from the plain (e.g. Beachy Amish Mennonites and Church of God in Christ, Mennonite) to the non-plain (e.g. MC-USA's Allegheny Mennonite Conference and the Conservative Mennonite Conference). While the beliefs of each group vary, as a general rule, the non-Plain Mennonites are not visually distinct from "mainstream" Protestant Christians in Kish Valley.

## RESEARCH METHODS: SURVEYING A DIVERSITY OF PLAIN AND NON-PLAIN ANABAPTIST GROUPS

This research entailed surveys and interviews with Amish, Mennonite, and non-Amish/non-Mennonite farmers in Kish Valley about their agricultural practices (representing environmental behaviors) and their general beliefs about human-nature relations (representing environmental attitudes). Sixteen members of the Nebraska Church Amish and 20 members of the Renno Church Amish were interviewed to examine whether different *Ordnungs* might have noticeable effects on environmental attitudes and behaviors. While the *Ordnung* is not focused on environmental attitudes and behaviors, its restrictions on the use of tractors and cars, for example, are what lead to transportation-based carbon footprints two to four times smaller than their non-Amish neighbors (McConnell and Loveless 2018). Different *Ordnungs* and church standards across plain Anabaptist churches can lead to different agricultural practices which may result in unintended but significantly different environmental outcomes. If the more typical Old Order Amish group (Renno Church Amish), with its non-modern, low-technology lifestyle, proves to practice a more sustainable type of agriculture than their non-Amish neighbors, would the higher level of isolation and technological rejection that exists within the Nebraska Church Amish—the most conservative Amish in Kish Valley—lead to an even more sustainable type of agriculture?

Given my hypothesis that Old Order Amish practice a more sustainable type of agriculture than their neighbors, it seemed important to survey non-plain Mennonite farmers as well, i.e., those attending MC-USA or CMC congregations. This allowed for comparisons of the environmental attitudes and behaviors of a group that shares a common history and similar theology with the Amish but does not have a powerful social mechanism (the *Ordnung*) that prescribes and enforces individual behavior. The hypothesis here is that, given a similar theology and set of religious beliefs, the presence of a code of rules like the *Ordnung* leads to more consistent practice of those beliefs than in a social group without such a code. In addition, non-Amish/non-Mennonite farmers in Kish Valley were also surveyed in order to provide a “control”

group of sorts that shares the same geography and local history but does not share the same religion. (Going forward, and for the sake of brevity, non-Amish/non-Mennonite farmers will be referred to as the “English,” the term Amish use for English-speaking Americans.)

## INTERVIEW PROCESS: METHODOLOGICAL APPROACH AND RECRUITMENT

Coming from a culture of easy and rapid electronic communication, I found it surprisingly difficult to set up interviews when I turned my attention to the Amish. Flexibility and creativity, along with a good deal of initiative, were required. One of my first significant choices was whether I should meet with local Amish bishops in order to get their approval for my research before I started interviewing members of their districts. Researchers often consult with local bishops before interviewing their members (e.g. Adkins 2011; Jepsen and Donnermeyer 2012; Brock, Ulrich-Schad, and Prokopy 2018). I decided not to do this, since it seemed daunting to find and visit all the relevant bishops and, more significantly, a rejection by an Amish leader would be a virtual death knell for any further research in that area (Hoorman and Spencer 2001/2002). Going directly to individual Amish farmers seemed to be easier and have a reasonable chance of success, but, looking back, perhaps the “official approval” of local bishops would have simplified the process of setting up appointments with amenable interviewees.

Amish restrictions on communication technology proved to be the first major challenge in making contacts. Amish individuals in Kish Valley, as a rule, did not have telephones in their homes, although a few were beginning to use cell phones by the late 1990s. Therefore, once I had developed a list of farmers to interview, I drove to each potential interviewee’s house, hoping to find the farmer at home and preferably not out in their fields baling hay. If the farmer was home, I introduced myself, stated my purpose, and requested an interview. At times the farmer would agree to be interviewed immediately. Other times the farmer agreed to set up an appointment. Most commonly, however, I received a rather vague response, such as, he might be willing to be interviewed later on if he was not too busy. In the most extreme ex-

ample of this, I visited one farmer seven different times to try to set up an interview. I never received a direct “no,” but neither was he willing to set up an appointment or talk with me when I was there. Thirty-one of 67 (46%) Amish farmers declined to participate in the study; this was not surprising to me. I approached the Amish expecting them to have an attitude of suspicion towards outsiders and also to have a negative attitude towards higher education.

In all, 59% percent of Renno Church Amish farmers and 48% of Nebraska Church Amish farmers that I approached agreed to be interviewed. The difference was not unexpected since the Nebraska group holds a stricter practice of separation from the world.

The process of interviewing the Mennonite and English subjects, who own telephones, was considerably easier. I called a potential subject, explained my research, and set up an interview – held at the subject’s home – for a later date. While some non-Amish farmers were so busy that finding them in the house was a challenge, using telephones definitely eased the process of contacting and interviewing these people. Ease of contact, combined with the subjects’ greater openness to outsiders, led to response rates of 91% for both the mainstream Mennonites and English.

To me, formal, official, public interview processes seemed off-putting to the Amish. Members of both Amish groups were often friendly and willing to talk informally about the farming life, but a number of farmers balked when the prospect of a more official-seeming interview was proposed. One Renno Church Amish farmer, who was perfectly willing to share about his farming practices to an interested individual, declined when he realized that the information was being gathered for a project that might lead to publicity for his people. Another farmer, this one from the Nebraska Church Amish, expressed annoyance at the idea of giving information to one more researcher without receiving any benefits for his time.

Sometimes the broader social landscape can impact attempts to interview Amish members. In my case study, some of the hesitancy to participate in interviews may have come from an event that had recently brought widespread and unpleasant attention to Amish people all across the United States. In June 1998, two young Amish men in Lancaster County (who were not yet church mem-

bers) were arrested for dealing cocaine to other Amish youth. This event had occurred only a few weeks before my arrival in Pennsylvania; articles, editorials, and cartoons were still appearing in many newspapers in the region. The general sense of uneasiness this brought to the Amish may have helped make them even more reticent and suspicious of outsiders.

Given this suspicion of outsiders, I tried to find ways to break through this barrier and persuade potential subjects to trust me and agree to an interview. One method I used when introducing myself was to mention my own Mennonite heritage and connections to the local Kish Valley community, such as grandparents and local landlords (Zimmerman Umble 2002). Not surprisingly, this tack was somewhat successful with the Renno Church Amish and very successful with the Mennonite participants. However, it did not appear to have an effect with the Nebraska Church Amish. Another method that had mixed results involved appearing in the local media. My research and photo were featured in an article on the front page of the local weekly newspaper that also included regular columns about happenings among the local Amish. This prepared some local farmers to anticipate being contacted for an interview. For the Amish, it appeared to have had a slight net positive effect, with a number of them noting with interest that I was the “man with the picture in the paper.” However, for at least one Amish farmer, the article raised the possibility of further publicity, which led him to reject a scheduled interview.

Another issue that could have affected availability of Amish for interviews is their need to generate off-farm income. An increasing number of Amish men work in construction, factories, and other non-farm employment. In my case study, a considerable number of Nebraska Church Amish families were living on small farms but not actively farming them. A growing trend at the time among the Nebraska Church Amish was for the men to work at small lumber mills and/or pallet shops that had sprung up all over Kish Valley. Since the Nebraska group limited farming technology quite severely, its members sometimes found it increasingly difficult to make a sufficient income from farming alone. The men realized that they could make more money working full time at lumber mills, which caused a major occupational shift within the Nebraska Church Amish. Of the

48 Nebraska Church Amish farmsteads I visited, 14 of them were being farmed on the side by men who worked full-time off the farm. A few of these sold milk or other farm products. Many church members and outsiders that I spoke to were concerned that major changes in their economy and lifestyle were in store for the Nebraska Church Amish.

### INTERVIEW PROCESS: ASKING THE QUESTIONS

Once I successfully lined up the interview participants, I was able to administer the two surveys. Administering the agricultural practices survey proved to be fairly straightforward, if somewhat tedious, for the interviewees. A number of Amish farmers mentioned having to respond to similar surveys recently, which seemed to slightly annoy them. But since it dealt with topics with which they are thoroughly familiar, completing these surveys took very little time.

In contrast, the environmental attitude survey I used was unfamiliar to the interviewees and proved to be challenging to administer. The New Environmental Paradigm scale is a 12-statement survey that asks respondents to agree or disagree with each statement using a four-point Likert scale (Strongly Disagree, Mildly Disagree, Mildly Agree, Strongly Agree). I used the scale, which assesses general beliefs regarding the human-nature relationship rather than awareness of specific contemporary environmental issues, to measure general environmental attitudes and beliefs. Through the latter part of the twentieth century, the NEP scale was reputedly the “most frequently used measure of public environmental concern” (Stern, Dietz, and Guagnano 1995, 724). The New Environmental Paradigm is contrasted to society’s Dominant Social Paradigm (DSP), which contends that growth and progress are good and inevitable, that private property rights are supreme, and that humans are more important than other creatures (Dunlap and Van Liere 1978). The NEP scale has been used to show whether and how much the public’s sentiments about the environment are changing from the old DSP.

The statements in the original NEP featured broad sentiments such as, “The balance of nature is very delicate and easily upset”; “We are approaching the limit of the number of people the

earth can support”; and “Mankind was created to rule over the rest of nature.” Subsequent research efforts identified three distinct “dimensions,” or attitudes, of the NEP scale (represented in the examples given above): Balance of Nature, Limits to Growth, and Man Over Nature (Albrecht, et al. 1982).<sup>1</sup>

Scoring the surveys worked as follows. Each subject’s response to each statement on the scale was given a score from one to four, a higher score indicating a more pro-environmental response. The individual statement scores were summed and averaged to produce an overall mean score for each individual subject. Group mean scores were calculated by averaging all individual mean scores by group.

While the NEP scale purports to measure general environmental beliefs, a former anthropology professor privately pointed out to me the scale’s cultural foundations in U.S. academia and wondered whether it would validly measure general environmental beliefs in non- or non-typical U.S. cultures. Specifically in terms of the Amish, I was concerned that the NEP scale’s assumption of “worldly” knowledge and a certain level of education would leave it unable to fully assess the ecological beliefs of the Amish. Therefore, I included some open-ended questions that focused on stewardship of the land. Since some researchers assert that the Amish believe the maintenance of soil fertility has religious implications (e.g., Schwieder and Schwieder 1975; Place 1993), I wanted to test this hypothesis with these Amish. After realizing that many Amish farmers, for whom English is a second language, did not know the term “stewardship,” I framed the question to ask about the concept of stewardship without using the term itself: “Did they think they had a responsibility to take care of the land?” If they agreed, I asked them *why* they felt that responsibility, i.e., where they thought the responsibility came from, and *how* they carried out that responsibility, i.e., what were some ways they tried to take care of the land.

Also, many non-Amish people have a general understanding of Amish as living and farming differently from the rest of American society, but sociological writings that paint a broad picture of everyone’s attitudes are unsatisfying. I wanted to know why Amish and Mennonite individuals *themselves* think they live and farm the way they do, so I asked them this as well.

At this point, a caveat should be noted. The focus of the study on religion and sustainability was made clear to all subjects. Thus, any mention of religion in relation to stewardship or agriculture practices may have been at least partially influenced by a given participant's desire to effect a certain outcome in the results or respond in a way that fit with the focus of the study.

### **BRIEF SUMMARY OF NEW ENVIRONMENTAL PARADIGM FINDINGS**

The results of the New Environmental Paradigm survey used in this case study showed that none of the groups demonstrated strong pro-environmental tendencies (i.e., none of the average scores were close to four); all groups had rather weak pro-environmental scores ( $>2.5$  of 4). The English had the highest, or most pro-environment, average score (2.88), followed in succession by the increasingly more conservative religious groups; (i.e., Mennonite (2.69), Renno Church Amish (2.66), Nebraska Church Amish (2.64)). The most conservative group, the Nebraska Amish, had the lowest group score, but the differences between the lowest three scores were not statistically significant. A statistical reliability measure also indicated that the internal consistency of the Nebraska group's sample was poor. Thus, we must be cautious about drawing any major conclusions from NEP results that include the Nebraska or combined Amish samples.

The order of group mean scores, with the least educated group having the lowest score and the most educated group having the highest score, is not particularly surprising. Prior studies have shown that one's level of education can influence one's pro-environmental attitudes, most likely because those with more schooling are more likely to have access to information about the wider world and its range of ecological problems (Dunlap, et al. 1992; Scott and Willits 1994). This factor appears to be at work in this case as well. The Amish end their formal schooling with the eighth grade and are exposed to less information about the wider world compared to non-plain individuals. In this study, all of the Mennonites graduated from high school, but only 15% had attended college; none had graduated. The English were the most educated as a group; 45% had attended or graduated from college.

### **CHALLENGES OF USING A SOCIOLOGICAL SURVEY WITH A NON-TYPICAL U.S. CULTURAL GROUP**

Although the NEP scores appear to follow an expected trend from least to most education and connection to the world, we must be cautious in putting too much weight on the results. Presenting a formal academic survey to Amish farmers often proved challenging, if not extremely troubling. Nearly all Amish speak English, but their primary language is Pennsylvania Dutch, a German dialect. Thus, I was often asked what a particular word in a statement meant. This situation posed a dilemma for me in terms of potentially influencing their responses, since it was difficult to simply define a word without somewhat interpreting the question. It also demonstrated the difficulty of achieving accurate results for the Amish, if they could not fully understand the words, much less the concepts, contained in the survey. At times, Amish subjects asked me what *I* thought regarding a statement about which I was asking them. I declined to answer, saying that I did not want to bias their response. Still, the sense among some Amish participants that there was a "correct" answer or a particular response that I wanted them to give was problematic from a research perspective.

Besides the dilemma of potentially influencing Amish responses, I was also often left with the responsibility of interpreting the responses they did make. Unused to the formal survey process, many Amish did not respond in the prescribed fashion (i.e., Mildly or Strongly Agree), instead opting for nodded assent or phrases such as "I would think so," "pretty much," or "I guess that's about the way, isn't it?" In these cases, I sometimes repeated my request for one of the desired responses, but at other times I tried to interpret whether the response appeared to be mild or strong in relation to the subject's other responses. This is not a preferred approach, but at times the cultural gaps seemed too broad to bridge. Instead of pushing incessantly for a "proper" response, I opted for a lower-key approach. This interpretive approach may have reduced the number of extreme responses, since in most cases my interpretations were of *mild* agreement or disagreement. However, it is unlikely that I assumed a completely opposite response, e.g., recording Mildly Disagree when the subject actually agreed with the statement.

The option of “Undecided” was not included in the list of possible responses, assuming that the Amish, somewhat reticent people, might overwhelmingly choose that option. However, they still refused to either agree or disagree often enough to cause some difficulty in analyzing the results. The non-Amish interviewees were also not given the option of an “Undecided” response and, in keeping with their greater cultural understanding of this type of survey, rarely refused to use one of the survey responses. Thus, we are left with the non-Amish responding to a four-point Likert scale, while the Amish in effect responded to a five-point Likert scale. Either way the results were analyzed, there would be difficulties in comparing the results.

Overall, the most frequently selected response by the Amish groups was Mildly Agree. In keeping with their reserved, humble nature, the Amish would be expected to respond in the least prideful or least controversial manner. While many Amish people hold strong opinions, they do not seem prone to share opinions with outsiders, especially academic outsiders who are new to the area. Thus, either strongly agreeing or disagreeing is less likely. As one Renno Church Amish man put it, “I disagree. I won’t say strongly because I’m human and I may be wrong.” Also, when some subjects were unsure of the exact meaning of a statement, they often chose Mildly Agree since they didn’t know enough to disagree with it. “Sometimes I don’t quite understand the statements, so I just pick one,” admitted another Renno Church Amish farmer.

It may have helped if I had understood the Pennsylvania Dutch language, but even so, some of the concepts may be too culturally bound to translate effectively. While the difficulties discussed above do not totally discount the study’s results, they do indicate the need for a good deal of caution in interpreting them. The challenges experienced in this research call into question the assumption that all such social surveys are valid across all cultures. Incorporating anthropological research methods may have improved the overall study.

## DISCUSSION

Taking an academic research project to a non-typical U.S. culture without adapting it to the

particular culture is likely to lead to a variety of methodological challenges as well as questionable findings. Flexibility in approach and openness to methodological changes are useful and often necessary. With these adjustments and a focus on listening to the community and learning the culture’s ways of being, however, valuable insights can be gained.

Opting to mail the surveys ahead of time and then a follow up a few weeks later may have proved more successful in terms of response rate; and participants may have provided more independent responses (rather than being influenced by me during administration of the survey on the spot). However, a mailed survey may also have been more easily ignored than a visitor arriving in person.

While my university required me to have the interviewees sign a “Human Subjects” statement prior to interviewing them, it would have helped if I had been able to come up with a creative, culturally relevant way to explain the purpose of this document. I also could have used this opportunity to make it clear that I was not with the news media or the government, and that the information the interviewees shared with me would not be connected publicly to them as individuals. Prior to a field visit to a particular location, it would be useful to know what the local issues or controversies are, so the researcher can avoid them and/or clarify that the research project will not lead to unwanted attention or publicity.

If I were to repeat this research, even with the challenges of administering the NEP to the Amish, I would still choose to use some kind of quantitative survey, albeit more agriculture-related. As it so happened, after I completed the field interviews and was writing my thesis, I discovered a different environmental attitude survey developed by one of the creators of the NEP. The Alternative-Conventional Agricultural Paradigm (ACAP) scale asked questions specifically tuned to farmers and those in agricultural communities (Beus and Dunlap 1991). (This is a cautionary tale about doing due diligence prior to field work, seeking out all literature and research methods that could be relevant to, and possibly used in, one’s research.) If I had known about the ACAP scale ahead of time, I would have used it, as it would have been much more appropriate for the groups I interviewed and likely better understood. It would



also have improved my ability to link attitudes and behaviors, since researchers indicate that environmental attitudes can best predict environmental behaviors when they share a similar level of specificity (Beus and Dunlap 1994). Thus, a study that directly compared agricultural practices with agricultural paradigms (using the ACAP scale), rather than with general ecological beliefs, would likely have uncovered more nuances in the environmental attitudes of the Amish. As far as I am aware, no research has yet been done among the Amish using the ACAP scale. In my case, though, it was helpful to add a few open-ended interview questions that allowed Amish individuals to speak more for themselves rather than merely agree or disagree with broad, global statements about the environment.

In conclusion, while this study provided some useful insights into Amish beliefs and attitudes about conservation and stewardship, some unexpected but perhaps more valuable findings were the methodological considerations that could be useful for future research. Readers interested in a more detailed account of findings from this project can access the thesis at <https://hwamishthesis.blogspot.com/>

### ENDNOTE

<sup>1</sup> I used the original NEP from 1978, which was updated by the original authors in 2000—shortly after my field research—to the “New Ecological Paradigm.” The newer NEP includes 15 statements, many of which came from the original 12, with some updates in wording.

### REFERENCES

- Adkins, Tabettha. 2011. “Researching the ‘Un-Digital’ Amish Community: Methodological and Ethical Reconsiderations for Human Subjects Research.” *Community Literacy Journal* 6(1):39-53.
- Albrecht, Don, Gordon Bultena, Eric Hoiberg, and Peter Nowak. 1982. “Measuring Environmental Concern: The New Environmental Paradigm Scale.” *Journal of Environmental Education* 13(3):39-43.
- Berry, Wendell. 1986. *The Unsettling of America*. San Francisco, CA: Sierra Club Books.
- Beus, Curtis, and Riley Dunlap. 1991. “Measuring Adherence to Alternative vs. Conventional Agricultural Paradigms: A Proposed Scale.” *Rural Sociology* 56(3):432-60.
- Beus, Curtis, and Riley Dunlap. 1994. “Agricultural Paradigms and the Practice of Agriculture.” *Rural Sociology* 59(4):620-35.
- Brock, Caroline, and Bradford Barham. 2008. “Farm Structural Change of a Different Kind: Alternative Dairy Farms in Wisconsin—Graziers, Organic, and Amish.” *Renewable Agriculture and Food Systems* 24(1):25-37.
- Brock, Caroline, and Bradford Barham. 2013. “‘Milk is Milk’: Organic Dairy Adoption Decisions and Bounded Rationality.” *Sustainability* 5:5416-41.
- Brock, Caroline, and Bradford Barham. 2015. “Amish Dedication to Farming and Adoption of Organic Dairy Systems.” Pp. 233-55 in *Re-Thinking Organic Food and Farming in a Changing World* edited by Bernhard Freyer and Jim Bingen: Springer Netherlands.
- Brock, Caroline, Jessica Ulrich-Schad, and Linda Prokopy. 2018. “Bridging the Divide: Challenges and Opportunities for Public Sector Agricultural Professionals Working with Amish and Mennonite Producers on Conservation.” *Environmental Management* 61(5):756-71.
- Craumer, Peter. 1979. “Farm Productivity and Energy Efficiency in Amish and Modern Dairying.” *Agriculture and Environment* 4(4):281-99.
- Dunlap, Riley, and Kent Van Liere. 1978. “The ‘New Environmental Paradigm’.” *The Journal of Environmental Education* 9(4):10-19.
- Dunlap, Riley, Kent Van Liere, Angela Mertig, William Catton, Jr., and Robert Howell. 1992. “Measuring Endorsement of an Ecological Worldview: A Revised NEP Scale.” Presented at the 1992 Meeting of the Rural Sociological Society. State College, PA.
- Enninger, Werner, and Stephen Scott. 1985. “Kutschen Designs als Dinge und Zeichen.” *Zeitschrift für Semiotik* 7(4):367-82.
- Foster, Thomas. 1981. “Amish Society.” *The Futurist* 15(6):33-40.
- Hoorman, James, and Edith Spencer. 2001/2002. “Engagement and Outreach with Amish Audiences.” *Journal of Higher Education Outreach and Engagement* 7(1&2):157-68.
- Jepsen, S. Dee, and Joseph Donnermeyer. 2012. “Opportunities to Develop Programs and Engage

- Amish Youth in Safety Education.” *Journal of Youth Development* 7(2).
- Johnson, Warren, Victor Stoltzfus, and Peter Craumer. 1977. “Energy Conservation in Amish Agriculture.” *Science* 198(4315):373-78.
- Kauffman, Duane. 1991. *Mifflin County Amish and Mennonite Story, 1791-1991*. Belleville, PA: Mifflin County Mennonite Historical Society.
- McConnell, David, and Marilyn Loveless. 2018. *Nature and the Environment in Amish Life*. Baltimore, MD: Johns Hopkins University Press.
- Moore, Richard, Deborah Stinner, David Kline, and Elsie Kline. 1999. “Honoring Creation and Tending the Garden: Amish Views of Biodiversity.” Pp. 305-09 in *Human Values of Biodiversity* edited by D. Posey, Graham Dutfield, and Kristina Plenderleith. London, UK: Intermediate Technologies.
- Place, Elizabeth. 1993. “Land Use.” Pp. 191-210 in *The Amish and the State*, edited by Donald Kraybill. Baltimore, MD: Johns Hopkins University Press.
- Schwieder, Elmer, and Dorothy Schwieder. 1975. *A Peculiar People: Iowa’s Old Order Amish*. Ames, IA: Iowa State University Press.
- Scott, David, and Fern Willits. 1994. “Environmental Attitudes and Behavior: A Pennsylvania Survey.” *Environment and Behavior* 26(2):239-60.
- Stern, Paul, Thomas Dietz, and Gregory Guagnano. 1995. “The New Ecological Paradigm in Social-Psychological Context.” *Environment and Behavior* 27(6):723-43.
- Zimmerman Umble, Diane. 2002. “The Identity of the Outsider Within.” Pp. 39-52 in *Strangers at Home: Amish and Mennonite Women in History* edited by Kimberly Schmidt, Diane Zimmerman Umble, and Steven Reschly. Baltimore, MD: Johns Hopkins University Press.

