There's a lot more to it than making a living…” Human-animal relationships in three Iowa sustainable farming systems

by

Cassi Ann Johnson

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Program of Study Committee:
Betty Wells, Major Professor
Mark Honeyman
Clark Wolf

Iowa State University
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This is to certify that the master’s thesis of

Cassi Ann Johnson

has met the thesis requirements of Iowa State University

Signatures have been redacted for privacy
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CHAPTER 1: INTRODUCTION

Human-animal relationships in American agriculture have changed drastically since Word War II. Traditional farmsteads included a variety of crops and livestock. Most people, even those who did not farm, had some connection to animals raised for food and fiber. Richard Bulliet (2005) points out that when Piggly Wiggly grocery stores first opened in Memphis in 1917, they did not even carry meat because most shoppers still slaughtered their own.

Bernard Rollin (1995) argues that traditional agriculture was characterized by a symbiotic relationship between humans and animals. He outlines a “social contract” between animals and humans in which “Humans provided food, forage, protection against extremes of weather and predation, and, in essence, the opportunity for the animals to live lives for which they were maximally adapted—better lives than they would live if left to fend for themselves” (Rollin, 1995, p. 4). In return, farmers received food, fiber, traction, and financial security. Farmers were motivated to treat animals well by their own self-interest. Rollin points out the significance of the etymological meaning of the word husbandry: “bonded to the house.” In traditional agriculture, human well-being and animal well-being were intertwined.

It is also significant, then, that Departments of Animal Husbandry in American universities changed their names to Departments of Animal Science as the nation shifted from traditional to industrial agriculture (Rollin, 1995). In post-World War II agriculture, diversified farms have been replaced by large, industrial farms that typically raise only crops or livestock. Far fewer farmers and farm workers manage far more animals today than prior to WWII; in 1940, each farm worker supplied food for eleven persons in the general
population, and by 1990 each worker supplied eighty persons (Rollin, 1995). Industrial farms are able to house large numbers of animals due to new agricultural technologies, including mechanization and pharmaceuticals such as antibiotics. These technologies have broken the symbiotic relationship between humans and animals that existed in traditional agriculture (Rollin, 1995). Farmers can now raise animals in ways contrary to their natures and not face negative economic consequences—in fact, they can increase profit by doing so. Rollin (1995) offers the example of poultry in battery cages: in traditional agriculture, birds kept in close confinement would have quickly succumbed to infestations of disease, whereas vaccines and antibiotics now make this practice the standard for industrial poultry farms.

Bulliet (2005) describes the current era of human-animal relationships as “post-domestic;” in this era, humans are both physically and physiologically removed from food and fiber animals, yet they maintain close relationships with companion animals. The author argues that humans consume large amounts of animal products, but most feel disturbed by the industrial system in which animals are raised, slaughtered, and processed. Bulliet (2005) states:

Meat, leather, and test animals are hard to give up, but details about what goes on behind the scenes to provide these goods and cultural services are revolting. Pets and wildlife evoke deep positive feelings, but domestic animals feeding the consumer market are morally revolting. (p.3)

The author argues that this era of human-animal relationships, in which most humans are sheltered from natural cycles of animal reproduction and animal slaughter, has led society to compensate with obsessions with violence and sex.
Although some readers may find the correlation between industrial agriculture, violent video games, and internet pornography a stretch, it is difficult to deny the systemic social and environmental problems associated with industrial agriculture. Public debate over the building of confined animal feeding operations (CAFOs) has pitted neighbor against neighbor, tearing apart communities in Nebraska (Johnsen, 2003), Iowa (Nickles, 1998), North Carolina (Charleston, 2004), and Oklahoma (North Central Regional Center for Rural Development (NCRCRD), 1999). Residents are concerned over the stench, environmental degradation, and human health impacts caused by these operations. Their concerns are not unfounded. The Environmental Protection Agency’s (EPA) The National Water Quality Inventory 1998 Report to Congress notes that animal feeding operations were responsible for 16 percent of impaired river miles in the 28 participating states and tribes (EPA, 1998). In her review of the human health impacts of large-scale hog farms, Bullers (2005) found evidence that residents living near hog confinement operations experience higher levels of respiratory, headache, runny nose, coughing, diarrhea, and nausea symptoms than in the general public, higher levels of psychological distress than in the general public, and increased rates of methemoglobinemia (blue baby syndrome). In Iowa, the nation’s largest pork and egg producing state and the second-largest producer of red meat (Iowa Agricultural Statistics Service, 2005), public debate over animal feeding operations fills the editorial pages of the Des Moines Register and local newspapers.

Perhaps more pronounced than the human health impacts of individual farms are the impacts of the industrial food and agriculture system as a whole. In 2001, Eric Schlosser caught the nation’s attention when he told us in his book “Fast Food Nation” that the reason people are getting sick from eating fast food hamburgers is because “there is shit in the
meat.” In his 2003 New York Times Magazine article “The (Agri) Cultural Contradictions of Obesity,” journalist Michael Pollan tied growing rates of obesity to American farm policy that encourages the overproduction of cheap grain. The surprisingly popular 2004 documentary “Super-size Me” showed the world the negative health impacts (some of them unexpected even by medical professionals) of a 30 day fast food diet.

Although the contemporary food and agriculture system is characterized by industrialization and centralization, there is a growing sustainable agriculture movement that presents an alternative to industrial agriculture. Although no single, agreed upon definition of sustainable agriculture exists today, since the late 1980s and early 1990s, most scholars and practitioners have agreed that the sustainable agriculture discourse should include social, economic and ecological components (Francis & Youngberg, 1990). Rachel Carson’s 1962 book Silent Spring first brought the environmental and human health impacts of industrial agriculture to the attention of the public (Pesek, 1994). Sustainable agriculture advocates and scholars focused their work though the 1980s on environmental conservation and toxins in food. Allen (1993) states that the early development of the sustainability discourse neglected the role of human social relations in shaping a sustainable, or unsustainable, agriculture. Only fairly recently have concepts of social justice, profitability, community, and human relationships begun to enter into this discourse.

Few definitions of sustainable agriculture address animal welfare. Early work on sustainable agriculture rarely included mention of animals outside of their role in cycling nutrients in ecological systems. Gips (1988) offers the only scholarly definition of sustainable agriculture that directly addresses animal welfare concerns. He states: “a sustainable agriculture is ecologically sound, economically viable, socially just, and humane”
The author defines humaneness as having fundamental respect for animals and for diversity in human cultures. Lund (2002) seeks a conception of animal welfare specifically in organic farming. She calls for an ethic that is both holistic—recognizes animals' roles in agroecological systems—while still placing intrinsic value on individual animals.

Farmers, consumers, and non-profit organizations have worked together to create sustainable, humane forms of animal production. Certified organic meat, eggs, and dairy are perhaps the most recognizable products of this alternative animal agriculture system. The Organic Foods Production Act of 1990 created a National Organic Program administered by the United States Department of Agriculture ("Introduction", n.d.). Organically raised animals must be able to access to the outdoors (including pasture for ruminant animals) and they cannot be given growth hormones or antibiotics ("Organic Farming", n.d.). Although these standards include some welfare-enhancing provisions, many farmers and consumers believe they are not strict enough or worry they will be watered down by industry groups (Humane Society of the United States (HSUS), 2003; Deardoff, 2005). The non-profit organizations Animal Welfare Institute (AWI) and Humane Farm Animal Care (HFAC) have both issued animal welfare certifications backed by standards more strict than those outlined in the organic standards (HSUS, 2003; AWI, n.d.). Increasingly, farmers are selling meat, eggs, and dairy products directly to consumers through direct marketing. Direct marketing allows the consumer to develop a relationship with the farmer and can reduce the need for certifications and labels because the consumer is in touch with the farmer’s production and welfare practices.

In this study, I address human-animal relationships on three Iowa sustainable farms. What do these relationships look like? How do human-animal relationships impact other
sustainability goals? Are these farmers, who are helping create an alternative to the industrial agriculture system, recreating the symbiotic human-animal relationships discussed by Rollin? In order to address these questions, I have chosen to study three farms that are known for both their excellent animal welfare practices and sustainable farming practices.
CHAPTER 2: RESEARCH METHODS

My interest in this research project stems from my own sense of conflict about animal agriculture. I came to the graduate program in sustainable agriculture at Iowa State University as a vegan—meaning I abstained from all animal products, including meat, milk, eggs, and honey. I was vegan when I began work on this project. I stopped eating meat, and then all animal products, because I believed it was inherently wrong to cause suffering to animals for our own gain. At the same time, I understood that alternative animal agriculture can be ecologically sound and provide a livelihood for small and mid-size sustainable farmers. I often felt guilty eating packaged, processed soy products when I knew farmers who raised eggs, meat, and milk responsibly.

When I began to think about this research project, I had already completed one full year of another thesis project evaluating farmer cooperation in sustainable farming systems. This project was related to my research assistantship and although I had tried to find a way to make the research personally satisfying, I was failing. Through farm visits for that work, however, I began to hear farmers discussing their relationships with their animals. One farmer, who raised hogs in confinement prior to switching to an alternative hoop system, told me how drastically making that switch transformed his own life. He felt he and his family were happier, healthier, and more fulfilled raising hogs in hoops. Shortly after this conversation, I read a similar quotation from Tom Frantzen, an Iowa farmer who also made a switch from confinement to hoops, in the book *Farm as Natural Habitat*. He states:

> Every time I observed the crowded, stressed pigs, I too became stressed—
> their social brutality was caused by my failure to meet their basic instincts...

> On a hoop-building tour, I was told that pigs have three desires: they want to
run around, build a nest, and chew on something. This behavior is impossible in a building with metal pens and slat floors. (DeVore, 2002, p. 116)

The author describes how Frantzen decided to switch to from his confinement operation to an alternative hoop system, despite his apprehensiveness about switching from a system that had the “agri-science seal of approval” to one that did not. One morning, while his hoops were still being built, he decided to move a group of 160 pigs to one of the new buildings because they were so stressed he felt they were close to cannibalizing one another. Frantzen describes the change he witnessed after moving the group of pigs:

Boy did those pigs have fun. In the new hoop building they had twenty-one hundred square feet of room to run, straw to chew, and lots of bedding to nest in. They ran around all day into the night. The next morning I ran out to check on them and I will never forget what I found. As I walked up to the open door, it was quiet, very quiet. I peeked into the hoop house to see 160 pigs in one massive straw nest, snoring with great content. I laughed until I cried. Their stress was gone, and so was mine. (DeVore, 2002, p. 116)

These observations were important in helping me resolve my own conflict over my veganism—I realized it is possible for humans and animals to interact in farming systems in a way that is non-exploitative.

I thought his observations also seemed of great importance in the sustainable agriculture community. Much of the discussion of animal welfare on farms I had read made it seem as if urban consumers, who are not very knowledgeable about farm life, demand certain animal welfare provisions like access to outdoors, and some farmers, who wish to increase their profit, begrudgingly raise their animals this way so they can access better
markets. This view was not compatible with what I was hearing from the sustainable Iowa farmers I encountered in my previous study. They expressed an understanding of interconnectedness between animal well-being and human well-being in their sustainable farming systems.

I told my new advisor I wanted to study this phenomenon and she agreed. We struggled to think of a way to capture the essence of what these farmers had communicated. Should I study just pig farmers or just farmers who had switched from conventional systems? Should I compare and contrast sustainable systems with conventional systems? I decided to study three systems that are known for their excellent animal welfare and sustainable farming practices. I wanted, in the words of Sarah Lawrence-Lightfoot, to avoid the “general tendency of social scientists to focus their investigations on disease and pathology rather than on health and resilience” (1997, p. 8). Lawrence-Lightfoot and co-author Jessica Hoffmann Davis, in their book “The Art and Science of Portraiture,” outline an approach to qualitative inquiry that seeks to illuminate how actors in a setting define “goodness,” without idealizing or ignoring imperfections. I did not want to look at conventional systems, because, as Lawrence-Lightfoot points out, social inquiry that focuses on disease often blames those who are least powerful. I did not want to focus on conventional animal farmers because most are stuck in a system over which they have very little control. I did not want to offer a picture of hopelessness. I also did not want to compare and contrast conventional systems with sustainable systems. I wanted to focus on capturing the essence of the three sustainable systems I chose to study.

Qualitative Methodology
Even before conceiving of this project, I knew I wanted to use a qualitative approach for my thesis research. This is an interest I brought from my undergraduate education. The aim of qualitative social research is the same as quantitative social research: to understand social phenomenon. However, what constitutes “understanding” in these two methodologies is different because their philosophical underpinnings are different. Quantitative research methodology is rooted in the belief that if the right research tools are used, the researcher can reveal objective truths about the world (Holliday, 2002). This is the basis of the Scientific Method. Qualitative research methodology holds that reality is socially constructed (Merriam, 2002). Each individual views the world in a different way based on his or her experiences. The aim of the researcher is to understand how those experiences impact individuals’ construction of reality. Holliday (2002) states that qualitative research methodologies are interpretive, or based on the belief that “the realities of the research setting and the people in it are mysterious and can only be superficially touched by research which tries to make sense [of it]” (p. 5). She continues, “[This belief] maintains that we can explore, catch glimpses, illuminate, and then try to interpret bits of reality. Interpretation is as far as we can go” (Holliday, 2002, p. 5).

This research methodology is contextual. Unlike positivist quantitative research, qualitative research does not aim to be generalizable to a broader population. The subtitle of this thesis sets the boundaries of the study: “Human-Animal Relationships in Three Iowa Sustainable Farming Systems.” This is a study about three very specific farms in Iowa. Although it is not the aim of this study for the results to be statistically generalizable to a certain population, the concepts explored in the paper should be useful outside the three farms in the study. Merriam (2002) states that qualitative researchers deal with
generalizability in several different ways. Some researchers argue that interpretive research can yield “working hypotheses” that offer practitioners a framework to which they can add their own experiences and observations in order to make decisions. Other scholars believe, as Merriam states, that “the general lies in the particular; what we learn in a particular situation we can transfer to similar situations subsequently encountered” (p. 28). Interpretive researchers also employ the concept of reader generalizability, in which the reader decides which aspects of the study findings apply to his or her own context.

**Research Methods**

When I decided on the format for my study, I began to ask my committee members and colleagues to recommend research respondents. I wanted to make sure there was at least one woman in my study, that each farmer’s operation was very different from the others, and that I included a hog farmer in my study. My advisor recommended I speak with Karen¹, an organic farmer who has an eclectic mix of angora goats, sheep, llamas, chickens, ducks, angora rabbits, and an extensive vegetable and herb operation. As I will elaborate in Chapter 4, from the moment I began to tell people about my research, they recommended emphatically that I speak with Andy, a dairy farmer who rotationally grazes his cows and processes milk on-farm. I knew I wanted a pig farmer in the study, and another committee member recommended a former student, Christopher, who raises pigs in hoop barns and on pasture. I was especially interested in speaking with Christopher because he is young—only in his late twenties. I thought this would add an interesting counterpoint to the two more established farmers in the study. I was fortunate that each farmer I contacted agreed almost immediately to participate.

¹ Each of the respondent’s names has been changed to ensure confidentiality.
My original goal was to do three separate sessions of participant observation, in which I worked alongside my respondent in his or her daily tasks, and three in-depth interviews with each respondent. Esterberg (2002) states, “Observation—looking in a focused way—is at the heart of qualitative research” (p. 58). Participant observation sessions allowed me to observe each farmer’s interactions with his or her animals, provided the context for my understanding of his or her farming system, and generated questions for subsequent interviews.

I hoped for a total of six visits to each farm. For the most part, I met this goal. Due to the long distance to Christopher’s farm, I combined the last interview with the last observation. During each observation session, I took notes that were written up when I returned home. Observation sessions lasted between forty-five minutes to several hours. On Karen’s farm, I helped “pluck” fur from angora rabbits, assisted with chores, and helped paint a chicken coop. Each time I visited Andy’s farm, including after each interview, I assisted with afternoon milking chores. Each of my observations of Christopher’s farm was of afternoon chores. There were fewer opportunities to truly participate on his farm as the tasks at hand seemed to require more knowledge of the farm, or Christopher simply found them easier to do himself.

Each interview was between forty-five minutes and one and a half hours in length. Interviews were audio taped and took place in Karen’s chicken house, garden, and kitchen table, Andy’s office, and Christopher’s kitchen table. Prior to each interview I drafted an “interview schedule” with questions tailored to each respondent. Each audio taped interview was transcribed and analyzed prior to the next interview with that respondent. This enabled me to build on themes as the interviews progressed. I transcribed all but two of the
interviews myself using a foot pedal transcription machine. I transcribed interviews true-to-word, including pauses, stammering, laughs, etc. For two interviews, I used the services of a professional transcriptionist who is also a qualitative researcher and sociology graduate student. With the permission of my advisor, I sought assistance with transcription due to the timing of my interviews and my desire to have the previous interview analyzed before each interview. One of the tapes was also particularly difficult to hear. For the two interviews that I did not personally transcribe, I listened to the tapes and compared the transcription and made changes where necessary.

Data Analysis

Esterberg (2002) states, “In qualitative research, data analysis is a process of making meaning” (p. 152). There is no single method for data analysis in qualitative research, and authors writing about data analysis in the field outline very different methods for sorting, coding, and analyzing data. Most authors do, however, emphasize the importance being rigorous, systematic, and detail-oriented (Esterberg, 2002; Holliday, 2002; Merriam, 2002). I used a system for data analysis I have developed and refined through my coursework and several different qualitative research projects. This process is influenced heavily by grounded theory, a qualitative research methodology developed by Glaser and Strauss in 1967. The aim of grounded theory is to build “substantive theory”—theory that emerges from the data (Merriam, 2002). This is an aspect of interpretive qualitative research that fundamentally distinguishes it from the positivist Scientific Method in which the researcher seeks to prove or disprove his or her theory based on data.

I began data analysis with open coding. The goal of open coding is to get a feel for what is going on in the data (Esterberg, 2002). I printed out each interview transcript and,
line by line, looked for words or phrases that stuck out. Most lines of transcription yielded three to four phrases I pulled from the data. During this process I also wrote “analytic memos” in a separate document as I developed questions or impressions about the data. When I finished coding each interview, I began to look for themes. This process was different for each transcription. For some of the transcripts, especially the first interview transcription for each respondent, I typed out the open codes into a new document and looked for themes, which I noted in the margins. Later interviews yielded fewer themes because I asked questions based on the themes from the previous interviews; therefore, I was less rigid in my approach to open coding later interviews. Examples of initial themes are “relationships” and “problems with labor.”

After the initial open coding, I went back to each interview transcription for focused coding. I again went through the data line by line (on a clean copy of the interview transcript), but this time with an eye for data that fit with the themes I identified previously. During the process of focused coding, many of the themes I had initially identified morphed into new themes, were combined with other themes, or disappeared entirely. For each theme, I created a “data bucket,” or a new document in which I copied and pasted quotations from the interview transcripts that were related to that theme. Two to three themes emerged for each respondent, and these are the sub-themes in each chapter.

Each data bucket served as an outline for the associated theme. I cut out each of the quotations from the data buckets with scissors and worked with their physical layout to build a theory from the theme. Often I began to build theory from one particular quotation. First, I interpreted the quotation using my knowledge of the respondent and his or her farming system. I then began to seek other accounts that related to the theory. My particular interest
was in finding qualitative research studies that either substantiated or contradicted the theories I developed from my research data. I also drew from fiction, memoir, and other types of texts. Finally, I drew from other theoretical writings related to my theory. This is the basic process I used for building each theme.

**Reflexivity**

Reflexivity, or self-reflection by the researcher about his or her role in the research process, is a critical component of qualitative research. Esterberg (2002) states, “Literally, what we see is shaped by who we are” (12). I think of reflexivity in qualitative research as the disclosure statement between the buyer and seller of a home: if I am selling my home, I am not an objective party—the stakes are big and I want to sell my home. The disclosure statement binds me both ethically and legally to admitting what is wrong with the house. The buyer can then decide to take it, leave it, or change the terms of the sale.

As a researcher, I am also not objective. I chose my study topic *because* I have a strong interest in the subject matter. And, because I have such a strong interest in the subject matter, I also experienced strong feelings and reactions to my respondents’ words and actions. Whereas positivist researchers design their studies to attempt to eliminate this subjectivity, qualitative researchers create a disclosure statement through their reflexive writing.

I kept a reflexive journal throughout the research process. My first entry was actually part of another research study, when I first spoke with a farmer about his relationships with his animals. I continued to write entries as I changed research projects and sought a format for my thesis research. I wrote reflexive entries after each observation, interview, after each time I transcribed an interview, and each day I was actively analyzing data and writing.
Sometimes my entries were as simple as “I really don’t know what to do with this chapter” and sometimes they were several pages of reflections about the frustration or joy I was experiencing that day of the research process. Reflexive writing has served to keep me honest with myself through the research process. I have also attempted to be reflexive in this paper to reveal to the reader which biases I bring to the research process.

**Member Check**

Another strategy I have employed in this study to ensure the integrity of my data interpretation is checking my interpretation with my respondents—a practice called “member checks.” I have sent each participant a copy of his or her chapter and asked for comments. The goal of the “member check” is to ensure that the researcher’s interpretation “rings true” with his or her respondents (Merriam, 2002). If the respondent does not feel the interpretation captures his or her experience, this does not necessarily mean the researcher is wrong. He or she should, however, be able to explain the discrepancy. For example, in a critical study of women’s work patterns, a feminist researcher might draw from her respondent’s experience that she felt pressured by gender stereotypes to stay at home with her children. The respondent may feel that the interpretation is completely false because she feels she really wanted to be a stay-at-home mom. The researcher, after evaluating her interpretation, maybe decide to stick to her original interpretation and argue that gender stereotypes are so pervasive in our society that even though the woman feels she wants to stay home with her kids, she is not making a truly free choice to do so.

Karen offered the kind of feedback every qualitative researcher wants to hear: she felt I captured the essence of her farming system. She enjoyed reading the chapter and was pleased I was able to articulate her attitudes and beliefs so clearly. Andy’s reaction to the
chapter was interesting. He said he abides by a quotation from Mark Twain that says “It’s none of my business what other people say about me.” He offered clarification on technical aspects of his chapter and he also asked to re-phrase a quotation he felt was unclear. After checking to ensure that the meaning of the edited quotation was the same as the original, I honored his wish.

Christopher offered perhaps the most elusive member check feedback. Here I will quote directly from the email he wrote me:

Overall I thought your writing somewhat revisionism without the stuff to revise. Good I mean......I think that you may be reaching for something that isn't there when you compare my system to the named Vastg.... system and others. Why do we need names for these systems? Does each farmers farm have to be pigeon holed. Just a thought? I liked it, and wish you well.

I was not quite sure what to make of this email when I received it. An accusation of “revisionism” is pretty serious, especially in qualitative research in which there is a strong emphasis on ensuring the interpretation is true to the data. I believe, though, that he is being modest when he discusses revisionism. He is stating that he believes he does not have much to say but I have managed to write about him anyway. As for comparing his system to the Västgötmodellen systems, I agree with him that each farming system (especially alternative systems) are individual and should not be pigeon-holed. I chose to compare his farm to a set of farming systems that have been well-researched with the aim of being able to discuss aspects of the farming system (such as environmental and animal welfare impacts) that were beyond the scope of this study to measure directly. I stand by my decision to make these comparisons.
A Problem

One question related to my research methodology nagged at me throughout the research process: Where do the animals fit? My goal for the project is to study human-animal relationships, but I did not figure out a way to interview the animals. I observed respondents interacting with their animals, but I am no animal behaviorist and my experience with most of the animal species included in this study was extremely limited so I had little with which to compare it. I read several texts to familiarize myself with concepts used in animal behavior research, such as flight distance or other fear behaviors, but I did not feel competent evaluating these behaviors when I was engaged in observation.

Regarding the question “Where do the animals fit?” I came to the answer “They don’t.” This is really a study about the humans. Qualitative, inductive research is ultimately about respect—it is a big responsibility to interpret another individual’s experience. This is why qualitative researchers work so carefully with their data, employ member checks, and engage in reflexive writing to reveal their own place in the research process. Some ethologists, animal behaviorists, and social scientists employing ethnographic research techniques have interpreted animal experience in their research studies (Arluke & Sanders, 1996). I did not having the training in behavior nor the time to devote to animal observation to attempt a study of this nature, and I am not entirely comfortable with the assumptions upon which that kind of research is based. Instead, I hope to offer an interpretation of the role human-animal relationships in the lives of humans and in the farming system as a whole.

Language
One problem that seems to plague writing on human-animal relationships is the language used to describe the parties involved. Some researchers use the terms “human” and “non-human animals.” Others stick with “human” and “animal.” The term “pet” has come under fire—many writers use “companion animal” to combat the objectification that is implied in the former term. Although I sympathize with those who try to reform language to reflect less hierarchical relationships, I found it an impossible task in this paper. First, the term “human/non-human animal relationships” is ungainly. Also, hierarchy is impossible to deny in the agricultural paradigm within which I worked. The one small concession I have made is to often refer to animals in the study with pronouns that are used to identify a person instead of using those that identify an object. For example, I use “who” instead of “that” where possible.

I have told you enough about my research, now it is time to see for yourself. The following three chapters represent human-animal relationships, both intimate relationships and systemic relationships, in the farming systems of Karen, Andy, and Christopher. Enjoy!
CHAPTER 3. KAREN

I was initially interested in speaking with Karen about her relationship with animals because she has such an eclectic farm. In addition to raising sheep, llamas, angora goats, and angora rabbits for fiber, she also raises ducks, geese, and chickens and has two acres of certified organic vegetables and herbs. When I turned off from the gravel road into her farmstead on my first visit, I felt very fortunate to have found Karen and her farm for my study. In the middle of the Iowa winter, her farm was bustling with life: goats were playing king of the mountain in their pasture, geese were waddling around honking at the goats, a llama skulked around the pasture keeping an eye out for intruders, and a dog ran to greet me and show me to the door. I was excited to learn more about the farm and the woman who created it.

In speaking with Karen, it became clear that her farm operation is the culmination of a lifelong interest in farming, animals, and nature. Karen grew up on a traditional small-scale Iowa farm, a diversified operation with row crops, cows, hogs, and sheep. Her father was an animal lover, and he would often bring ailing piglets or stray bunnies into their home to recuperate on the radiator. Her family always had barn cats, and she helped out on the farm by bottle-feeding lambs. Karen states: “I was completely surrounded by animals as a small child and am quite happy and really thankful that that was a part of my childhood.”

In the 1960s and 70s Karen was influenced by the environmental movement and the writings of Rachel Carson. At that time, she joined the back to the land movement, a loose social movement that emerged in the 1960s as an alternative to mainstream urban life (Jacob, 1997). Participants in the back to the land movement were motivated by the pursuit of a simpler way of life and living closer to nature, and they most often engaged in subsistence
agriculture (Jacob, 1997). As part of her subsistence living, Karen built a dairy goat operation and sold milk locally. Although Karen sold that farm in the 1980s, she states that she has never really left the back to the land movement because she has continued to live simply and engage in subsistence agriculture.

When Karen moved to her current farm, she knew she wanted to have livestock. She states: “I really wanted to have livestock because I truly missed having those moments where you go to the barn in the winter and it is cold and evil outside and you’re greeted by these warm grateful creatures.” She did not, however, want to raise dairy goats again because of the intense time and labor commitment they require. After learning about angora goats through a state program encouraging their use for multiflora rose control, Karen began to read up on fiber goats, spinning, weaving, and knitting.

After years of experimentation and adjustment, Karen’s farming system has evolved to what it is today: two acres of certified organic vegetables and herbs that are sold to a local natural foods cooperative, a small flock of around twenty fiber sheep and goats that graze on nine acres of pasture, a small colony of angora rabbits, geese and ducks for pest control, llamas for fiber and protection of the flock, and chickens for meat and eggs. Karen markets fiber through her on-farm store and at fiber shows across the country, and she sells breeding animals through contacts in the fiber community. She teaches fiber arts classes on her farm, and she also sells eggs, dried flowers, crafts, poetry, and fiber arts through her on-farm store. Karen is also active in the sustainable agriculture community through her participation in councils, outreach activities, and on-farm research.

I interviewed Karen three times at three different locations on her farm: first over coffee at her kitchen table; then sitting on lawn chairs by the garden, surrounded by dogs;
and lastly, in a converted chicken house she uses as a classroom. I observed Karen’s farm three times formally, twice arriving early in the morning to watch the flock head out to pasture, and once to help “pluck” the angora rabbits to harvest their fiber. I also attended a fiber show in which Karen participated and visited her farm several times after my research had officially ended in order to purchase gifts from her shop and ask a few follow up questions.

Emerging Themes

Karen is perhaps the only farmer in this study that truly exhibits the characteristics of the human-animal bond—the first theme for this chapter. Two other very unique relationships, the themes fiber art and communication, cross the boundary between intimate and systemic relationships.

The Human-Animal Bond

Karen’s relationships with her animals are different than typical human-animal relationships in the contemporary agricultural system. She speaks of her animals in terms of love and adoration, she has names for each animal, and she says that she can even discern individual sheep and goat voices through the baby monitor that links her animals’ stalls with her house during lambing and kidding season. When she travels to fiber shows across the Midwest, she hauls potential sale goats in the back of her van, not in a trailer or pick-up truck. She says she prefers for her goats to ride with her because the van is climate controlled and she can play music for them to keep them calm. Karen’s goats and sheep do not respond to her by fleeing, a typical response of farm animals to their handlers; instead, they run toward her and beg for treats or scratch their heads against her legs. Karen says again and again that her animals are “spoiled rotten pets that happen to earn their keep,” and
indeed, her relationships with her animals do resemble human-companion animal relationships.

Karen’s intimate, loving relationship with her animals is consistent with the characteristics of the human-animal bond (HAB). Tannenbaum (1985) defines the human-animal bond as:

A continuous, bi-directional relationship between a human and an animal that brings significant benefit to a central aspect of the lives of each, which is in some sense voluntary, and in which each party treats the other as an object of admiration, trust, devotion, or love. (p. 125)

As I stated in Chapter 2, the human-animal bond was first identified by researchers in the veterinary sciences and has mostly been used to describe human relationships with companion animals. Recently, however, a few animal scientists and agricultural ethicists have begun to discuss HAB with regard to farm animals. Hemsworth and Coleman (1998) argue that positive human-livestock relationships on the farm increases productivity by decreasing animal stress. Anthony (2003) argues that HAB promotes animal welfare on the farm because it creates special obligations between the farmer and the animals with whom she or he has relationships. Karen’s close bond with her animals is central to her farming system and contributes to her own quality of life, her animals’ quality of life, economic productivity, and ultimately, the sustainability of her farm.

Karen’s love of animals is the foundation of her farming system and a central aspect of her life. Karen chose to farm so that she could work with animals, so it is no surprise that her relationship with her animals is a source of great joy in her life. She clearly derives pleasure from the everyday chores associated with rearing animals. During my last
observation of her farm, we let the flock out of their stalls and as the animals skipped and
cavorted up the hill to the back pasture, she turned to me and said, “This is like my very
favorite thing in the entire universe.” I commented again and again in my observation and
interview notes how content Karen seemed with the life and farm she has built for herself. In
my third observation notes I wrote:

I guess my main impression from this observation was again how happy I
perceive Karen to be. She clearly loves what she does, and I don’t think you
could blame her. Her animals are delightful and her farm is beautiful. She
has built a living that she loves and her farm system reflects her personality
and values. It is great to be there because I truly get the sense that the whole
system is in balance, not just ecologically, but also psychologically and
spiritually.

Karen’s work on her farm is not “work” at all because she enjoys the everyday tasks
associated with caring for her flock. This sentiment is echoed by Louie Attebery, who
studied a transhumant sheep operation in the American West. The author calls this form of
semi-nomadic shepherding, in which the animals are moved seasonally to different climatic
regions, a “way of life” that “makes total demands on those who live it” (Attebery, 1992).
He quotes a Robert Frost poem that describes this blending of work and life:

But yield who will to their separation,

My object in living is to unite

My avocation and my vocation

As my two eyes make one in sight.

Only where love and need are one,
And the work is play for mortal stakes,
Is the deed ever really done
For Heaven and the future’s sakes. (qtd. in Attebery, 1992)

Although Karen’s farming operation is not transhumant, it is a “way of life” that transcends just work or a job. John Ikerd describes farmers such as Karen and the transhumant sheep farmers as “quality of life farmers” (Ikerd, 2001). He states that on many of these “quality of life farms,” farm animals enhance human quality of life through their double role as pets. Ikerd argues that “quality of life” farmers are truly sustainable farmers because they find purpose and meaning through balancing environmental integrity, economic profitability, and social responsibility on their farms (Ikerd, 2001).

One aspect of Karen’s relationship with her animals transcends the typical characterization of the human-animal bond: Karen feels that her connection to her animals is spiritual. She states:

I’ve loved animals my whole life. I raised everything from salamanders to sparrows when I was a kid… [Raising animals] grounds me. When the world is really scary and bad, I go to the barn. It’s a spiritual connection to me. It’s getting in touch with god. They aren’t inhibited by social rules, they’re governed by instinct. And to me it’s really comforting. It’s very, very comforting. It makes me feel like something’s right in the world. When the rest of the world seems completely wrong or insane, I can go to the barn. Karen’s flock is a source of spiritual energy. Her connection to her animals brings her closer to god because she feels that animals are closer to nature. When she is feeling overwhelmed
by the state of human affairs, she turns to her animals for comfort. The animal world seems less complex at these times because her sheep and goats do not adhere to human social rules.

Karen says she identifies with an earth-based faith. Her experience of finding god in her interactions with animals and nature is consistent with this diverse group of spiritualities—each with its own beliefs and practices—that includes neo-Paganism, Shamanism, Goddess worship, neo- Native American faiths, Wicca, Druidism, and others. Political activist, scholar, and earth-based faith practitioner Starhawk states that earth-based spiritualities share three basic concepts: immanence, interconnection, and community. She says immanence means that “spirit, sacred, Goddess, God—whatever you want to call it—is not found outside the world somewhere—it’s in the world: it is the world, and it is us” (Starhawk, p. 73, 1990). Starhawk believes people turn to earth-based spiritualities to fill the void left by modern society’s disconnect from the land (Starhawk, n.d.a). Karen’s desire to connect with the land and nature through earth-based spirituality is consistent with other aspects of her life, such as her participation in the back to the land movement.

The language Karen uses to describe her connection to her animals is another manifestation of this desire to become closer to nature. Karen states that raising animals “grounds her,” and although this term is used in general language to refer to keeping one close to one’s roots, this term has a special meaning in earth-based spirituality. Starhawk defines “grounding” as “Being present in a given situation, with all of your senses awakened, aware of what is going on around you, relaxed and calm but able to access power” (Starhawk, n.d.b). Starhawk considers grounding a magical practice that links practitioners with their energetic connection to the earth. Whether Karen uses the term “grounding” in the
general sense or in the language of her earth-based faith, it is clear that her animals provide her with a connection to the land that she has sought throughout her life.

Karen’s interactions with her animals bring her joy, provide her with a connection to nature, and are an integral part of her earth-based spirituality. She has consciously sought a farming system that allows her to blend avocation, her passion for working with animals, with vocation, her “job” as a market gardener, fiber artist, and animal breeder. Economic profitability is an important component of Karen’s farming system—without the ability to meet her economic needs, Karen would be forced to find off-farm work, breaking the unification of avocation and vocation that is crucial to her quality of life. Karen believes that her close relationship with her animals is critical to her operation’s economic sustainability because her daily, hands-on relationship with each animal in her flock ensures animal well-being and leads to high-quality products—fleece and breeding animals. She states:

Because I run a relatively small flock I’m really in touch with every nuance about their behavior, and I know they’re a little bit off or if somebody’s sick. That makes it so I can deal with it right away, and that makes a huge difference in the fiber and the quality of the fiber and the quality of their babies.

Karen says that she is known in the fiber community for the high quality of her fleece and her breeding animals and she attributes this reputation to her relationship with her animals. Karen’s small flock size and close relationship with each animal allow her to quickly identify and respond to changes in animal health and behavior, thus promoting their welfare and ensuring a better product. In the small, niche market in which Karen sells her products, differentiating her product is crucial to her business,
and the profitability of her business allows her to maintain her own quality of life and
the high quality of life she provides for her animals.

Karen’s love of animals brings profound benefit to her own life, but this relationship
is reciprocal—her close relationship with each individual animal in her flock allows her to
monitor their health on a daily basis, which insures their good health. She states:

One of the reasons I’ve made a firm commitment to having a small flock is
that I have a daily, hands-on relationship with every single animal in the flock.
This keeps me in touch with their health, and I also think it makes a better
quality product... You know what the animal is getting and you know how
it’s being treated, and you actually have this relationship with them that adds
to the quality of their life, and if the quality their life is better, then the quality
of whatever products they’re producing are better.

Because Karen limits the size of her flock to around twenty animals, she can maintain a
daily, hands-on relationship with each animal and stay attuned to their individual needs. This
promotes animal health and well-being. The welfare benefits of Karen’s close relationship
with her animals were apparent during each of my visits to the farm. As she let the goats,
sheep and llamas out to pasture in the morning, she touched almost every animal and scanned
the others for changes in their physical or mental behavior. One morning she sensed that a
new lamb named Winston was not integrating into the rest of the flock and that his physical
and mental health were deteriorating because of his isolation. She herded him toward a
sheep she knew would mother him and help him integrate into the flock. During another
visit to Karen’s farm, I saw that one ram had a wooden board duck-taped to his horns. Karen
explained that he had been getting his horns stuck in the fence and she created this “headgear” to teach him not to fiddle with the fence.

In a collection of essays and poetry Karen wrote about her farm, she tells another story that illustrates the health and welfare benefits of her close relationship with her animals. In “Goat Midwife,” Karen writes about Elsa, a pregnant angora goat whose delivery was going smoothly until only one leg presented itself after twenty minutes of contractions. Karen writes:

Sensing an urgency and danger I check for tiny feet and find a single foot and white nose emerging. Closing my eyes I try to visualize the coming kid. In a brief moment of panic I know that this kid has to have one leg bent back and can not be born until I intervene and rearrange the tiny unborn legs.

Running to the house, standing at the kitchen sink, I scrub and remove my rings. Running through my mind are all the possible tangle of tiny limbs I might find in the dark and fluid unseen world I am about to enter. My son walks with me to the barn opening gates and doors to keep my hands clean. On the short walk to the barn I struggle with wave after wave of apprehension.

Hand lubricated in KY jelly I kneel beside Elsa and wait for the next pause in her contractions. The moment comes and I close my eyes, will my hand small and wise, and slide it in pushing the tiny leg and head back into the fluid world. In a calm and steady tactual search I find the second leg bent back just as I had suspected. With a gentle movement of one finger the tiny leg eases forward. Two tiny feet in hand followed by a nose I pull slow, steady, out, and down as Elsa begins her next push.
The curly fleeced kid comes sliding out weak and barley [sic] breathing. Elsa turns and begins licking the sinuous strands of birthing fluid from the newborn face. I wipe the kid’s nose and mouth clear and begin rubbing the small body, moving my hands back and forth searching for a response. The kid seems to be growing weaker with each passing moment. She lays still with the shallowest of breaths. In an act of desperation I turn the small white kid on her back and use my thumbs to massage her chest and blow tiny puffs of air into her nose. Speaking softly I urge her to life puffs of breath, each second’s passing seems to hand endlessly long. Suddenly out of the blue as if she has just decided to choose this new goat life, her ears perk, legs begin moving and she is breathing well and strong on her own.” (Karen, n.d.a, p. 18-19)

Karen was able to save the life of the kid, and perhaps Elsa, because she had a close relationship with the mother, including a great deal of trust and knowledge about goat birthing.

Although these examples of good husbandry practices seem as if they should be standard on every farm, attention to individual animal health is not standard practice on contemporary industrialized livestock farms. Animal rights ethicist Bernard Rollin (2004) tells the story of one veterinarian who was called to a swine operation to examine a problem with vaginal discharge in sows. When he noticed a sow with broken leg he spoke to the facility operator, who told the veterinarian that they were going to let the sow live to farrow the next week, after which they planned to shoot her. When the veterinarian offered to set the leg at cost, the operator told him that they did not have the ability to care for the sick sow.
and refused his offer. This story is typical in an industry in which treating sick animals is considered inefficient and most livestock handlers are untrained, underpaid, and care for hundreds of thousands of animals per year.

Anthony (2003) argues that strong human-animal relationships prevent animal welfare abuses such as the cruel treatment of the sow mentioned above. When the farmer forms close bonds with individual animals, she feels obligated to ensure that her animals have quality care. Karen’s bond with her animals has led her to ensure that they have a good quality of life even if she passes away. Just as she did for her children when they were young, she keeps a piece of paper in her underwear drawer stating the arrangements she has made for her flock if she should die. She calls caring for animals a “huge, wonderful obligation.”

Trust is also an important component of Karen’s relationship with her animals. Karen spoke several times in our interviews of the high level of trust between herself and her flock. She states:

They trust me explicitly… I see this amazing relationship with them when they’re kidding in winter. If one of the girls is having a difficult birthing situation, if it’s a bad presentation, the kid is breech, or a leg is wrong and they can’t be born, they know that I will always help them out. They know this with every single cell of their being because they will stand there not tied up, not anything. They will just stand there and let me reach inside of them in the midst of labor and arrange kids. And that to me is the ultimate act of saying I trust you. I know you’re there to help me.
Karen’s close bonds with her animals result in a high level of trust. Karen is able to intervene in highly stressful situations—such as a breech birth or a ram stuck in a fence—that are potentially dangerous to her own physical being. Ultimately, this trust benefits her animals because they receive more comprehensive care, and the trusting relationship benefits Karen because she knows that she can give her animals the care they need without risking her own health. Karen says that this trusting relationship is exclusive to her—she does not think that any of her animals would allow any other human to intervene in the aforementioned situations. The mutual benefits of the trust between Karen and her flock confirms Anthony’s suggestion that HAB between farmers and their livestock improves animal welfare and the quality of the farmer’s working life because the mutual trust makes the animal more tolerant of health-improving procedures.

In his discussion of HAB on the farm, Anthony draws on the ethical concept of “care.” Care theory is a school of ethics, stemming from feminist scholarship, that emphasizes humankind’s relational nature. Anthony (2003) argues that ethics of caring, which have traditionally been prevalent in our notion of agriculture via the concepts of nurturing and empathy, allow for a moral discussion about what it means to be responsible to others. An ethic of care gives moral weight to personal relationships, an aspect of agriculture that geographer Janel Curry (2002) argues has been marginalized by the contemporary agriculture system’s emphasis on efficiency and scientific rationality. Curry prioritizes the concept of attentiveness in her elaboration of care. She states that being responsible to the needs of others requires “paying attention, learning to recognize and interpret patterns in others’ thoughts, feelings and activities, and what these are indicating” (Curry, 2002, p. 124).
Curry highlights hoop house hog systems in Iowa as sustainable agricultural systems that exemplify principles of care because of the high level of attentiveness to animals' needs and ecological cycles required by farmer in these systems.

Together, Anthony and Curry articulate a vision for human-animal relationships on the farm in which humankind's relational nature is acknowledged and supported, allowing farmers to balance their own needs with the needs of their animals. Karen's strong bond with her animals encompasses all of the characteristics offered by these authors: obligation, trust, mutual benefit, and attentiveness and responsiveness to animals' needs. Excellent animal health and welfare on Karen's farm stem from the presence of these characteristics. What distinguishes Karen's farm from the two other farmers in this study are aspects of the human-animal bond: the love, devotion, and admiration Karen feels for her animals. Anthony does not discuss these characteristics in his discussion of HAB on the farm, but they are included in most other authors' definitions of HAB in companion animals. These characteristics, along with the spiritual connection Karen feels with her animals, add immensely to Karen's own quality of life, which in turn motivates her to continue her small-scale, sustainable farming system.

Love, devotion, and admiration on Karen's farm are different, however, than the human-companion animal bond. Karen's relationship to her animals, which in many other ways resembles my own relationship to my dog, is tempered by the realities of farming: ultimately farmed animals are destined for human use. Karen eats unsaleable rams from her farm as well as chicken and geese. This power differential inherent to human-animal relationships leads many authors to questions the usefulness of the concept of the human-animal bond. Paul Shepard (1996) argues that humans cannot form reciprocal relationships
with domesticated animals because domestication means denying animals their true natural behavior—to be wild. He muses that “The primary symbol of a bond is a tether” (Shepard, 1996, p. 314). He and other authors, including Bernie Rollin, suggest that the concept of the human-animal bond actually places animal welfare at risk because it emphasizes relationships and not the welfare of individual animals.

However, I believe the human-animal bond provides a solid framework for understanding how Karen’s relationships with her animals promotes both her own quality of life and the quality of her animals’ lives. Perhaps the key to solving this debate is to acknowledge that both fields of inquiry are important and not mutually exclusive. We can continue to study animal welfare while acknowledging both the inherent power differential that exists between animals and humans, and that the human-animal bond is one type of relationship that can improve the lives of both parties.

**Fiber Art**

Fiber artistry is an essential component in Karen’s farming system and a unique way in which she relates to her animals. Karen’s spinning, weaving, knitting, felting, and arts instruction promote animal health and welfare and increase the economic stability of her farming system. Karen’s quality of life is also enhanced through her fiber arts because she is creative and enjoys expressing herself through art. Karen also writes volumes of poetry that reflect her life and her farm. She self-publishes and sells these volumes at her on-farm store.

Karen became interested in fiber arts as a way to add value to the fleece products from her angora goats, sheep, llamas, and angora rabbits. She says that her route to fiber artistry is unconventional: most artists who raise fiber animals are motivated by their love of fiber arts and begin raising animals to save costs or ensure a high quality product for their art.
Karen, on the other hand, was motivated by her love of animals. She raised fiber animals for years before she learned to spin. Art has always been a presence in Karen’s life, however. Karen says she took every single art class she could in high school and has explored different forms of art throughout her life. For a four year period in the late 1970s and early 1980s she lived in a small town in Indiana that was an artist’s colony in the first part of the century and continues to host a thriving arts scene. During this period, Karen worked extensively with earth materials to create art she sold in shows and shops. Fiber arts are a natural extension of Karen’s lifelong interest in the arts, and in particular, her interest in creating art from natural materials.

Fiber artistry deepens Karen’s relationship with her animals because she works so intimately with their fleece. Twice a year, in the fall and in the spring, Karen shears her goats, sheep, and llamas. Angora rabbits are “plucked” four times per year. This process involves extracting some of the rabbit’s hair by pulling gently with a brush. Karen weighs each animal’s fleece before and after skirting, or removing debris that has built up in the fleece, and keeps track of fleece weights in a calendar. Karen then sends fleece away to washed, carded, and processed into rovings suitable for spinning. Karen dyes and spins some of this fleece into yarn, and other fleece is sold unprocessed to other fiber artists. Karen then knits and weaves her yarn into beautiful creations that she sells from her on-farm store and at fiber shows. Karen also felts her fleece into hats, purses, and slippers, and she combines fleece with other natural elements from her farm to create decorative items such as wreaths.

In her poem “Refuge I,” Karen describes the sanctuary of retreating to the barn to sit with her animals on the wooden floor “nose to nose/ exchanging long soft breaths.” She begins this poem with the following epigraph: “Our years and lives/are sewn together/by
threads of common need” (Karen, n.d.b). The sewing metaphor is appropriate to describe Karen’s relationship with her animals because her art ties her so closely to her animals. Karen knit during two of our three interviews, and she told me that she knits most of the time she is not involved in another activity that requires her hands. Rugs, skins, tapestries, clothing, and other fiber arts fill her home. She is physically linked to her animals through the constant activity of creating fiber arts and the abundant presence of fiber art in her life.

Karen’s tactile link to her animals through their fiber allows her to monitor changes in animal well-being. When Karen shears her animals and prepares their fleece for processing, she quite literally “has her hands all over” their fleece. She is able to tell how well the fleece will spin and knit based on factors such as the coarseness of the fibers and oil content. She keeps a mental record of the quality of the fleece from shearing to shearing, and this record allows her to monitor animal health and the impacts of any changes she makes to diet. One year, Karen began adding black oil sunflower seed to her fiber flock’s feed. Within one shearing she could see and feel the improvement the supplement brought her animals’ fleece.

Karen’s fiber art is highly integrated into the farming system and both influences and is influenced by other aspects of the system. As fiber animals become older, their fleece becomes coarser and inappropriate for knitting or selling as yarn. When she first began her farming and fiber business, Karen was forced to decide between slaughtering her animals or allowing them to graze with no economic return when they reached this age. Although she calls herself a “sucker” and says she usually allowed her older fiber animals to graze with flock until their natural death, the extra animals were an economic burden. Karen solved this problem by learning how to weave rugs. She states:
Now that I’m starting to weave rugs it’s really great because coarse, old fleeces are perfect for rugs. So now the girls can live out their whole lives here and as the fleece gets older and coarser it doesn’t matter ‘cause I just designate their fleece to rugs and they get to have babies.

Karen’s fiber animals produce fleece and give birth for many years—during which time Karen forms strong bonds with them. These bonds led her to sacrifice profit by allowing older animals to remain on the farm once their fleeces were no longer sellable. Through modifying her art by learning to weave rugs, Karen was able to bring her farming system into compatibility with her desire to keep her animals, thus ensuring her quality of life and improving the economic sustainability of her farm.

Economic sustainability is the foundation of Karen’s fiber art. By processing her raw product and creating art for sale, Karen increases the value of her animals’ fleece. Her creation of fiber art is a value-added agricultural process that increases her profits and ensures the economic sustainability of her farming system. The USDA Natural Resources Conservation Service (NRCS) information sheet “Alternative Enterprises: Value-Added Agriculture” defines five ways farmers add value to their farm products: growing a commodity for a special market; changing the form of a commodity before it is marketed; changing the way a commodity is packaged for market; changing the way a commodity is marketed; adding a new enterprise (NRCS, n.d.). Value-added agriculture is an important tool for small-scale, sustainable farmers who seek to differentiate their product from the agricultural commodities produced by large-scale farms. With a small flock of only about twenty animals, Karen could not remain economically viable selling her wool and mohair (angora goat fleece) through conventional commodity outlets. Through her art, Karen creates
a product that is absolutely unique to her farm. By direct-marketing her product through her on-farm store and at fiber shows, she retains an even greater percentage of her profits and creates long-lasting, personal relationships with her customers. Karen offers her customers more than just a piece of art, but also the story of her farm. Holly Born (2001), in an Appropriate Technology Transfer for Rural Areas (ATTRA) report entitled “Keys to Success in Value-Added Agriculture,” suggests that the “farm story” is the most unique product a small farmer has to offer, and the successful marketing of that story is a key to developing a value-added agricultural enterprise.

Teaching fiber arts is the newest addition to Karen’s portfolio of revenue streams. Karen teaches spinning to students in a converted chicken house. She states:

Another [advantage of my fiber art] is the value-added [aspect]. I’m processing fiber and I’m teaching spinning classes, which means there will be more spinners in my world, which means there will be more people purchasing fiber, which means there’s more potential for the system to maintain itself.

Karen considers her classes another form of value-added agriculture because she increases the value of her raw fiber by linking her product with fiber arts instruction. She counts on her students demanding her product when they continue spinning after the class ends. Karen links the economic advantages of her spinning classes to the sustainability of the farming system as a whole.

Karen’s fiber art is highly integrated into her farming system. Her intimate physical relationship with her animals’ fiber is an additional channel through which she gets information about their health. She has both adapted her fiber art to her farming system and
adapted her farming system to her fiber art in order to improve the well being of her animals. Fiber art adds to Karen’s quality of life because she enjoys creative expression and also because fiber art brings economic stability to her system, allowing her to continue the farming lifestyle she loves.

Communication

Some kinds of human-animal communication are fairly well accepted within the scientific community. It is well-accepted in the fields of psychology, veterinary medicine, animal welfare, and semiotics that humans are constantly exchanging information with the farm or companion animals who share their lives. Researchers estimate that dogs living closely with human companions can learn hundreds of words, and it turns out that parrots do not just speak in parrot fashion: these birds can learn thousands of words and use them to describe the texture, color, and shape of different objects (Townsend, 2005). Animals also respond strongly to human body language and emotional cues.

Understanding the language of animals is more complex, but researchers in many fields believe they have “cracked” the vocal and physical languages of animals. Analysis of physiological attributes such as heart rate, blood pressure, hormone levels, and neural impulse activity may even help researchers understand the emotional lives of animals—animal welfare researchers use these attributes as indicator of stress in farmed animals (Ewing, Lay, & von Borell, 1999). Temple Grandin, an animal scientist who has designed one third of all the livestock handling facilities in the United States, attributes her unique understanding of animal behavior to her autism (Grandin, 1995). She states that she is able to understand animals’ experiences because animals and autistic humans perceive the world visually—they “think in pictures.” Grandin uses her ability to “think in pictures,” her
scientific understanding of animal evolution and behavior, and intensive observation of
animals to achieve a close connection to the animals with which she works.

The term “communication” is used to describe all of the preceding ways in which
humans exchange information with animals. There are people, however, who feel they can
communicate directly with animals through words, images, and feelings. These people refer
to their field as animal communication, interspecies communication, or animal telepathy and
there are hundreds of books, websites, workshops, and conferences available to those who
already practice animal communication and those who want to learn. Karen is among the
former group; she began actively practicing animal communication about three years ago. At
this time, a friend told her about working with an animal communicator to solve behavioral
problems with her cat. Karen, intrigued by the idea, bought a basic book on animal
communication. She says that as soon as read the book she discovered her ability to
communicate with animals—an ability she believes she has always possessed. She states, “I
think on some level it’s always been around. I just didn’t define it as animal
communication.” Karen’s communication with animals is not typically verbal—although
sometimes she does “hear” a word or phrase. Instead, Karen says she comes to a state of
“knowing” when communicating with animals.

One of Karen’s favorite stories about animal communication is an incident that
occurred shortly after she acknowledged her ability to communicate. She told her son, who
was visiting from Portland, Oregon, about some of the contacts she had made with animals
since learning to communicate. Her son asked her to try to resolve a problem with his
roommate’s dog who was terrified of him but no one else. Karen tells the story:
So when I had told my son about [the animal communication] I was doing, he was visiting Iowa so he was two thousand miles from his house—this is what’s amazing about communication with animals, it can be done over long distances. He said to me... you should talk to this dog that I live with. I [thought] I could get in touch with her on some level. Meditation would be the closest conventional term I can use to describe [the state from which I communicate]. I just kind of let myself relax. The best time for me to do it is when I’m lying down almost drifting off to sleep. So this dog had always been very, very, very, very, very, very, very fearful of my son. As soon as he walked in the house she would run to the other end of the house. My son said, “You should talk to her.” And so I talked to her one evening when he was here in Iowa. As I was lying down, I kind of zoned out I talked to this dog. The dog instantly said to me, “I don’t like him, I don’t like the way he smells, I don’t like his boots.” And I thought, “wow, that’s just really weird.” So when she said to me “I don’t like to me the way he smells” I had a very clear awareness that what it was about his smell is that he is a bicycle courier by trade.” The only means of transportation he has is a motorcycle and a bicycle, and when he rides his motorcycle he wears his motorcycle boots. I know that this dog had been kicked by boots like this before when she was at some traumatic stage in her life. When she said to me “I don’t like the way he smells,” I became instantly, acutely aware that she could smell traffic on him. And since this had been a dog who was rescued from the streets, she associated that smell with dodging cars and being in a very frightening place
in her life. So I talked to my son, and told him [what I had learned], and that I had told the dog that he is a very nice person and that my two dogs love him dearly. He is very nice to animals. And I told her that I would tell him what she had said. I told my son what she had said. I suggested to him that he take off his boots as soon as [he] gets in the house and that he never try to approach her but let her approach him. And a few days later he took off [for home]. He rode two days home to Portland, Oregon, on his motorcycle the entire time, with his motorcycle boots on. He was thinking I was a little over the top, nuts, but when he walked into his house in Portland, Oregon, after being gone for ten days, two weeks, whatever—he had not seen this dog [in weeks]—he walks in, he’d been camping and on the road for two days, he smelled like exhaust, he had on his boots, he walked in the house, he walked in his room and sat down and the dog walked into his room and came up to him and wagged her tail. He called my on the phone and he was in total shock—it creeped him out. This dog had avoided him for a year and a half, and after that they had a perfectly normal relationship. He always let her approach him and they had a perfectly, perfectly trusting relationship after that.

Karen’s story shares many similarities with other communicators’ accounts of telepathic contact with animals. In her book “Animal Talk,” Penelope Smith (1999) discusses her philosophy of animal communication and tells the communication stories of prominent practitioners, including her own. Like Karen, most practitioners feel that they have always been able to communicate with animals or they were able to communicate as children and
“turned off” their skill because it was not socially acceptable. Smith (1999) argues that all beings, including humans, are born with the ability to communicate telepathically. Those who write about animal telepathy argue that it can occur across great distances—in fact, Smith points out the etymological roots of the word “telepathy” are tele-, referring to distance, and -pathy, referring to feeling. Smith relates telepathic communication to finding the right station on the radio or dialing the right phone number—it is about making a connection with another being, which does not require physical proximity.

Karen’s descriptions of “coming to a state of knowing” and “becoming instantly, acutely aware” are also shared among practitioners’ accounts of communication. Smith states that telepathic communication occurs in many different ways, including the transmission of images, thoughts, words, smells, emotions, sounds, and tastes. The communicator then translates these signals into words or attempts to make meaning from the message. Karen’s experience of “knowing” that the dog smelled traffic on her son is similar to a story told by communicator Marelene Sandler to Aurthur Myers (1997) in his book Communicating with Animals. Marlene, a professional animal communicator, was approached by a woman whose cats had stopped eating. In communicating with the cats, Marlene received the impression, “You haven’t taken a bath” as well as an image of a bathtub. After speaking with the woman, Marlene learned that she had just begun a high-stress job and switched to showering from her usual routine of taking long baths, during which the cats would sit at the edge of the tub and play. The cats felt upset and neglected due to her change in lifestyle, and the bathtub image was a manifestation of these feelings that Marlene had to interpret in order to relay the message to the cats’ owner.
Animal communication is often intertwined with new age spirituality. In Karen’s case, her communication with her animals is another form of spiritual “grounding.” She states:

[Animals are] aware of a spiritual, ethereal world and they just view bodies as convenient things— they’re not necessary. I had a goat kid die a year ago and I talked to her mother about it. The mother was really sad, but yet her mother knew that she was ok, that her baby was ok. They just aren’t as disturbed by [death] as we are.

Karen views animals as spiritual beings who are more closely connected to nature. Through her communication with animals, Karen is reminded of the spiritual “big picture”—that earthly cycles of life and death are part of nature but that animals (human and non-human) also exist in a “spiritual, ethereal” world.

Teresa Wagner, a communicator who specializes in helping clients cope with their animals’ deaths, echoes Karen’s sentiments on animals and death. She states:

Without exception, I have never talked to an animal in the process of dying, or who had already died, who was afraid of death. They know they have had past lives and will have future lives. They’re very different from humans. I think most people are terrified of death because of their religious beliefs. (qtd. in Myers, 1997, p. 136).

Here, Wagner draws a dividing line between her own religious beliefs and those of other humans who are afraid of death. Although she does not state her own religious beliefs explicitly, it is inferred through her self-identification as an outsider that she does not identify with mainstream religious traditions. Most animal communicators speak of their practice in
spiritual language, invoking terms such as The Spirit, the Web of Life, reincarnation, Karma, grounding, and Life Force. The title of Arthur Myers’ book, *Communicating with Animals: the Spiritual Connection between People and Animals*, infers that communication itself is inherently spiritual. Interestingly, there is no discussion in the book about how or why this connection is spiritual. Likewise, no communicator, in the dozens of accounts of animal communication I have read, discusses his or her religious beliefs. However, animal communication does seem most compatible with earth-based faiths such as Karen’s.

Although Karen’s close bond with her animals is an asset to both herself and her flock, as was discussed earlier in the chapter, this bond also presents an emotional liability for Karen: animals die, animals are sold, animals are eaten. Karen must also place her animals in stressful situations, such as long-distance transport and separating mothers and offspring. Communication with her animals allows her to cope more effectively with the emotional challenges presented by the human-animal bond. She states:

Several years ago [a market gardener friend and I] were at a sheep farm picking up some organic fertilizer. Outside of the sheep barn was a pile of dead baby lambs—it was lambing season. He said to me, ‘that’s why I could just never handle having animals, because they die.’ It’s just like people—caring about people, or caring about anything. Yeah, there’s going to be pain, if you love somebody. There’s going to be things in it that hurt, but you also get all the really great stuff along with it. And so I think [animal communication] definitely deepens the relationship I have with [my animals]. One of the hard parts about having livestock you breed every year is that you sell a certain portion of the babies. There are times when I feel like a slave
trader—I’m selling your daughter. It’s really hard for me. And now that I’m openly working on animal communication, it makes it easier for me. I can tell [my animals] what’s coming, and I think it does lessen the stress on them. I see [the stress] being less, just in physically watching them, than before I started doing conscious animal communication and saying, ‘Ok, Cidra, Thursday morning I’m going to put you in the car in the dog box and you’re going to go down to Nevada, Missouri to a big goat show and then you’re going to go home and live with Laurel Smith’s flock.’ I think when you communicate to them what’s coming ahead of time, it lowers the stress level tremendously, physically. I physically can see a difference. And so to me it’s convinced me that it does really help them deal with it.

Karen acknowledges that farming can be emotionally painful. Animal communication has helped Karen face these realities in two ways. First, through communication with animals, Karen has learned that animals are less attached to their bodies than humans and that they remain in contact with other beings across great distances and even after their physical death. This knowledge helps her cope with selling animals and with animal death. Secondly, Karen feels that she can make some of the traumas of farming less stressful to her animals by communicating with them first. This ability helps her feel better about putting animals in the stressful situations that are inevitable on farms.

One interpretation of Karen’s communication with her animals is that it is a coping mechanism—a tool to help her deal with the moral ambiguities stemming from her use of animals. Karen’s bond with her animals is strong, yet she also eats and sells animals from her farm. Lewis Holloway (2001), a geographer who studied “hobby,” or small-scale,
farmers in England and Wales, uses the notion of “situated morality” to describe the moral ambiguity small farmers face in thinking of their animals simultaneously as pets and livestock. He found that farmers used several different coping strategies to help them deal with this ambiguity. Farmers in Holloway’s study justified animal slaughter by describing the pleasant nature of their lives or the steps taken to minimize stress at slaughter. Some farmers also distinguished between those farm animals that were pets and those that would be sold for slaughter. This mental, and sometimes even spatial (in cases where “pet” animals versus stock were kept in different paddocks), separation helped farmers in the study cope with animal death.

This interpretation of Karen’s communication with her animals may lead some readers to dismiss her experience as something she fabricated to help her cope with the pain of animal loss. This is an easy conclusion because most of us have not experienced animal communication. Karen herself admits that most people think animal communication is a bunch of hogwash. As a social researcher, I have struggled with how to discuss this particular phenomenon. Do I acknowledge, like Karen does, that animal communication is an ideological stretch for most people? Do I “try to understand the meaning of social events for those who are involved in them” as Esterberg (2002) states is the goal of qualitative research? Do I take into account my own subjective experience of this phenomenon, another central component of qualitative inquiry (Esterberg, 2002)?

I feel that to successfully analyze the role of communication as a human-animal relationship on Karen’s farm, the answer to all three of these questions must be “Yes.” I would feel insincere breezing through my analysis without acknowledging that I know this topic will be difficult for some readers to take seriously. This understanding has shaped the
way I have thought about this theme since Karen first raised the issue in our second observation. I respect Karen and believe a great deal can be learned through the analysis of her farming system and the role human-animal relationships play in that system. I do not want readers to dismiss new insights available through analysis of her farming system.

My own experience with animal communication impacts my analysis as well. I do believe in animal communication and have sought the advice of a professional animal communicator in handling behavioral problems with my dog, Django. I did not, however, expect that animal communication would arise as an issue in my thesis research. To add to my surprise, and as you will learn in the next chapter, Karen is not the only farmer in this study to discuss animal communication: Andy has used the services of an animal communicator with his dairy cows. My belief in animal communication places me in an interesting role as researcher. On the one hand, my context for understanding Karen’s animal communication is different than hers because I do not have direct experience communicating with animals. I do, however, believe in animal communication in the same way I believe in drug-induced hallucinations: I have never experienced either phenomenon, but it is within my realm of interactions with the world and other humans to believe that these are legitimate experiences.

Karen’s experience of communicating with her animals represents a very unique human-animal relationship in which some barriers to understanding that normally exist between humans and animals are minimized. In this relationship, animals can offer the farmer information about their own behavior and the farming system. I was not able to locate any other accounts of animal communication offered by farmers, although there are many accounts offered by people who have communicated with their companion animals,
including horses. The animal communicator whose services I used for Django told me that several farmers have contacted her seeking affirmation because they had experienced animal communication and wanted a kindred spirit to assure them they weren’t crazy. It would certainly be an interesting course of further study to learn how prevalent experiences of animal communication are among farmers.
CHAPTER 4. ANDY

When I first began speaking to friends and colleagues about my thesis research topic, at least a half dozen people exclaimed, "Oh, you have to talk to Andy!" More than one person told me "His cows are so happy." Each of these people had either seen Andy interact with his cows or had heard Andy speak about his farming system. They told me that Andy's unique relationship with his cows and his well articulated farming philosophy would add immensely to my study. When I contacted Andy about participating in my research project he was hesitant due to the large time commitment. He is very active in the sustainable agriculture community and often speaks at conferences, writes articles for publication, and participates in other activities that take him away from the farm. After more discussion about the requirements of the research, Andy did agree to participate, and I am so glad he did. My friends and colleagues were right—Andy’s relationship with his animals, and the role that relationship plays in his farming system, bring a unique perspective to my study.

Andy and his wife, Valerie, have a grass-based, organic dairy farm in southeast Iowa. They handle 130 Jersey cows in total, although only 65 animals produce milk at any given time. An additional 65 animals are either in a rest period or are too old or too young to milk. Milk is processed on-farm into skim, 2 percent, and whole milk, cream, yogurt, and cheese. One hundred percent of the milk products from Andy’s farm are sold in retail establishments and restaurants in the nearby town of Greenville. Andy and Valerie also raise chickens for eggs for their personal consumption.

Andy was raised on a diversified farm, with hogs, poultry, and a dairy operation. After studying soil science in graduate school, he worked for the United States Department of Agriculture (USDA) for four years. He states that he probably would not have left his job
at the USDA to run a conventional dairy operation, but he and Valerie learned of a small dairy for sale in Iowa that processed milk on-farm and decided to purchase the cows and processing equipment and rent the farm. After farming for four years at that location, they bought their current farm. They wanted the opportunity to own their farm land, and the new location offered more acreage, a larger processing facility, and a better milking barn. They have continued to farm in their current location for almost ten years. Andy feels that dairy farming is “in [his] blood” and that growing up on a dairy farm allowed him to “absorb the whole picture” of how a dairy operation runs.

I interviewed Andy three times, with each interview taking place in his home office. Each of my three observations of his farm took place during afternoon milking. I assisted with milking by herding the cows into their stalls in the milking parlor, feeding grain and nutritional supplement, hooking them up to the milking machines, and assisting with clean up. I was pleased to get several chances to sample products from Andy’s farm: during one observation Andy and I drank yogurt still warm from the incubator, and several times after our interviews and observations I headed to the local natural foods cooperative to purchase ice cream and cheese from Andy’s farm. I certainly enjoyed these opportunities to engage in participant observation via my favorite sense—taste.

Emerging Themes

Managing ecological relationships on his farm is Andy’s central focus. He views the health of his animals as inextricably intertwined with the health of his agroecological system. Andy’s relationship with his animals is embedded in the context of managing ecological relationships among soil, nutrients, water, plants, and animals on his farm. He is known throughout the sustainable agriculture community for his excellent animal welfare despite the
fact that animal welfare is not the central focus of his farming system. Therefore, the first theme I will address in this chapter is serendipitous animal welfare. Andy believes, however, that ecological relationships are not “earthbound,” or limited to the physical attributes of his farming system. He uses the term spiritual ecology— the second theme—to refer to his belief that all of nature is interconnected. This belief is the foundation for Andy’s personal spirituality that has been formed by a variety of spiritual influences. I will discuss how Andy’s spirituality impacts his farming system and his relationship with his animals.

**Serendipitous Animal Welfare**

Andy is known in the sustainable agriculture community for his excellent animal welfare. When I began to discuss my research topic with friends and colleagues, many of them suggested Andy as a potential respondent because they were familiar with his excellent animal practices. When I asked Andy about his conception of animal welfare, however, he stumbled a bit and offered a cautious answer. He then admitted, “I guess I’ve never really thought that much about animal welfare explicitly.” He continued:

I think more in terms of using the integrating power of nature you might say, that ecological kind of connection, and if you can use both the ecological connection and the power of nature, then you can avoid having to do a lot of work, for one thing, and you can accommodate the natural tendencies of animals and of grasses and soils and then they just proliferate pretty effortlessly. So, to me it’s more of a study in trying to see how nature works best and trying to facilitate nature to work in that way, and that way nature comes out ahead and we come out ahead at the same time.
Despite being known for his excellent animal welfare practices, Andy is not explicitly concerned about animal welfare on his farm. Instead, he considers animal welfare one aspect of the ecological system. He believes that if he harnesses the power of nature by maintaining healthy ecological relationships on his farm, all aspects of his farming system, including animals, plants, the soil, and his own quality of life, will prosper.

Andy’s perspective of his farm as an ecological system enables him to cultivate excellent animal welfare without making it an explicit priority in his farming operation. This is why I have chosen to term this section “serendipitous animal welfare.” Wikipedia defines serendipity as “finding something unexpected and useful while searching for something else entirely” (“Serendipity”, n.d.). I have chosen “serendipity” to express the idea that an ecological perspective makes it possible for Andy to be known for his excellent animal welfare without animal welfare being a driving force in his system.

An ecological perspective is an important common thread across the diverse strains of thought and practice in the sustainable agriculture movement. Fred Kirschenmann, an organic farmer and agricultural ethicist, argues that in order to foster a sustainable agriculture, we as a society need to abandon the “productionist ethic” that defines any behavior as “good” if it increases productivity (Kirschenmann, 2004a). He calls instead for the transition to “ecological morality.” He states:

What we do need is an ethic that recognizes the need for agriculture to be conducted in a manner that makes a decent life for humans possible on this planet while, at the same time, recognizing the ecological dynamics that sustain all life on the planet. And that will require, among other things, an
agricultural ethic that respects the complex, ecological relationships in which a farm exists. (Kirschenmann, 2004a, p. 169)

Kirschenmann’s view closely echoes Aldo Leopold’s vision that farmers be conservationists, utilizing ecological relationships on their farms to achieve a harmony of balance between the needs of humans and the land. The edited volume *Farm as Natural Habitat: Reconnecting Food Systems with Ecosystems* highlights sustainable farmers who have realized the vision expressed by Leopold and Kirschenmann (Jackson & Jackson, 2002).

Wes Jackson calls for scientists to develop an “ecological worldview” that looks to nature for finding ways to make agriculture and more generally, human civilization, more sustainable (Jackson, 1996). In her book “Biomimicry,” Janine M. Benyus profiles scientists (including Jackson) who are already looking to nature for the answers to human problems such as agricultural sustainability. She calls this phenomenon “biomimicry,” which she defines in several ways, including: as a scientific discipline; as an ethic for measuring the “rightness” of technological innovations; and as a worldview that values nature not for what we extract from it, but for what we can learn from it (Benyus, 1997).

Although Jackson made his call for scientists to develop an “ecological worldview” just over ten years ago, agroecologists have been toiling with this task for over thirty years. Agroecology is a scientific discipline that emphasizes the “ecological sustainability” of the farming system (Hecht, 1987). The term “agroecology” originated in the 1970s to describe a concept that is as old as agriculture—the idea that by understanding ecological processes and relationships in the farm field, farming systems can be managed to be more sustainable with fewer external inputs and less labor (Hecht, 1987). The study of agroecology by scientists (mostly residing outside the field of agronomy in departments of ecology or environmental
studies) was a reaction to the reductionist approach of the conventional agricultural sciences. Hecht (1987) states that conventional agricultural scientists target problems such as pest outbreaks or soil fertility decline. These problems are often defined by scientists with a focus on production and increasing yields. Agroecologists work within multiple disciplinary fields to address problems on a systemic level, including economic, social, and environmental concerns. Agroecology has also been heavily influenced by the study of indigenous agricultural systems.

These conceptions of ecological agriculture are rooted in theory and academic research. Stephen Gliessman (2004), a prominent agroecologist, states it is critical that agroecologists play an important role in helping farmers make the transition from conventional to more sustainable systems. Yet, many alternative farmers with whom I have spoken, including Andy, state they do not receive much information or support from universities. There are several “practical” movements within sustainable agriculture that give farmers the tools they need to apply ecological principles to their farming practice.

Austrian philosopher Rudolph Steiner’s writings and lectures on biodynamic agriculture are perhaps the oldest of these movements, and are indeed older than the sustainable agriculture movement itself. Fred Kirschenmann states that Steiner’s lectures on agriculture, first published in 1924, are one of four bodies of work that formed the foundation for the contemporary sustainable agriculture movement (Kirschenmann, 2004b). Steiner introduced the idea of the farm as an organism, in which humans, animals, plants, and minerals are united in a complex system (Forsell, 2004). At the root of biodynamic agriculture are harmonious relationships between farm practices and local ecosystems. Steiner extended his conception of the ecosystem to include cosmological processes;
biodynamic systems therefore seek to restore the subtle life forces that Steiner argues are the foundation for biological processes. Life forces are restored through the application to soil and plants, in extreme dilution, of certain preparations made from herbs, minerals, and manure (Forsell, 2004). Like contemporary agroecologists, Steiner condemned the reductionist approach of agricultural scientists. He advocated the careful observation of wild and agricultural ecosystems, and the participation of farmers in agricultural research (Forsell, 2004). Today, biodynamics is a thriving sub-movement within the greater sustainable agriculture movement.

Holistic Resource Management (HRM) is another subfield of sustainable agriculture that focuses on maintaining healthy ecological relationships on the farm. Holistic Resource Management is a decision-making tool for farmers that utilizes a holistic, systems approach in helping farmers meet their quality of life goals while enhancing environmental quality (“About Holistic Resource Management”, n.d.). Careful attention to ecological relationships are part of this process. Allan Savory, founder of HRM, writes, “History shows, if anything, that any attempt to, ‘manage’ natural resources, given the complexity of our ecosystem, must consider the entire system or assume a high risk of breakdown in the long run” (Savory, 1988, p. 4). HRM practitioners develop a “holistic goal” for their farm, and engage in a process of testing their decisions against the goal and monitoring their progress toward their goal (“About Holistic Resource Management”, n.d.). Although HRM was originally developed for ranchers, many sustainable farmers in all types of farming systems utilize HRM. The Savory Center provides education and training to farmers utilizing HRM.

Andy practices rotational grazing, sometimes referred to as management-intensive rotational grazing (MIRG) or controlled grazing, on his farm. Rotational grazing more
closely mimics grazing patterns of the animals with which prairie and perennial pasture
coevolved (Jackson, 2002). Rotational grazing is perhaps the best, most common, and most
well-developed example of a farming system that works with natural ecological relationships.
Rotational grazing involves grazing and then resting small subdivisions of the pasture, called
paddocks. These paddocks are cordoned off by portable electric fencing. Andy has sixty
paddocks of about two to three acres each on his farm, and he subdivides these paddocks
even further into two to three sections by drawing temporary wires across the paddock.
Cows get a fresh section of paddock after each milking. During the three months of winter in
which there is no grass, Andy feeds his cows hay made during the summertime. Andy
utilizes a “leader-follower” system in which milking cows graze a paddock first, followed by
the dry cows that do not need higher-quality feed due to their decreased energy requirements.

Grazing systems are inherently closer to natural systems than conventional dairy
operations. An Iowa farmer, quoted in the Appropriate Technology Transfer for Rural Areas
(ATTRA) report “Rotational Grazing,” states he hopes one day scientists will realize that
“animals like to move around and plants like to stand still” (Beetz, 2004). This is a
humorous way of pointing out the inefficiencies of conventional dairy operations, in which
harvested forages and grains are made into hay and silage and fed to animals in confinement
(Beetz, 2004). Wes Jackson, author, sustainable agriculture advocate, and founder of The
Land Institute, points out that soil does not erode in perennial ecosystems such as forests,
prairies, and perennial pastures (Jackson, 1996). He states that these systems actually build
soil while requiring no external inputs other than sunshine, and they do not have negative
“downstream” impacts on other ecosystems. These characteristics are in stark contrast to the
input-dependent, monoculture cropping systems that produce feed for conventional dairy
operations. Jackson and other visionaries at The Land Institute advocate agricultural systems that use nature as a model.

Using nature as the template for his farm brings benefits to all aspects of Andy’s farming system, including environmental health, animal welfare, and human quality of life. The environmental benefits of rotational grazing are well documented. When grazing systems are properly managed, increased ground cover reduces soil erosion, water runoff, and nutrient losses (De Ramus, 2004). Soil fertility can be improved in grazing systems that are designed to control animals’ movements and therefore manure distribution patterns (De Ramus, 2004). By feeding hay in the pasture instead of the barn during the winter, Andy’s cows get to be outside and Andy can control the placement of their manure by varying the places he feeds them. Andy has also designed watering system and shade tree placement on his farm to ensure even manure distribution patterns. These measures increase soil fertility by assuring that nutrients do not congregate in one area of the pasture while other areas receive no nutrients. The ability of well-managed grazing systems to increase soil fertility makes these systems an extremely important tool in the sustainable agriculture “portfolio,” especially considering that conventional, monoculture systems are typically characterized by soil loss and fertility declines.

Management-intensive grazing systems encourage both managed and wild biodiversity. Well-managed pastures contain a diversity of plant species, including legumes, small grains, and native grasses (Beetz, 2004). Andy believes that by allowing his paddocks adequate rest between grazing episodes, he increases the density and diversity of plant species in his pasture. Increased biodiversity in agricultural systems increases soil productivity (Mader, P., Fliebach, A., Dubois, D. Fried, P. & Niggli, U., 2002) and reduces
incidence of plant disease (Wolfe, M. & Barrett, J. A., 1980). Andy has also experienced an increase in wild biodiversity on his farm since he moved there and began grazing the land. Increasing numbers of cowbirds, deer, wild turkeys, and songbirds make his farm their home each year. Andy has also identified cow egrets on his farm, rare birds that are native to Iowa but have been scarce in the state for decades. Andy’s experience of increasing wildlife on his farm is similar to farmers who participated in a management-intensive grazing monitoring project sponsored by the Land Stewardship Project, a Minnesota-based sustainable agriculture organization. The six farmers who participated in the monitoring project noticed increased wild biodiversity on their land when they switched from row crop systems to grazing systems (Jackson, 2002). The increased presence of wildlife on their farms led these farmers to create even more wildlife habitat on their land—a truly positive feedback loop that encouraged these farmers to pursue more sustainable farming practices.

Ecological farming also adds to human quality of life, for farm families, communities, and consumers. Authors writing about rotational grazing systems typically cite two main benefits of switching from conventional beef or dairy production to grazing systems: time and money. As Andy points out:

In the confinement system the cows are kept close in one place and then the forages have to be harvested in the field and chopped and brought home and blown up into the silo and then blown back down into the feed bunk eventually when it’s ready. Then the manure from the cows has to be scraped up and hauled back to the field. Whereas, in a well designed grazing system all you have to do after milking is open the gate and the cows go into the pasture and you close the gate. They harvest their own feed and they spread
their own manure. Hauling the feed and hauling the manure is all taken care of. That’s the principle behind [my rotational grazing system]—it is more energy efficient and should be easier if it’s designed well.

Andy points out establishing a rotational grazing system may require more time and labor up front, as the farmer designs, monitors, and adjusts the system. Beetz (2004) states that these considerations are even more pertinent for livestock operators who are not used to consistently monitoring their animals. Eventually, however, a well designed rotational grazing system requires less labor because the cows do much of the labor required of the farmer in conventional systems.

For the same reasons that rotational grazing systems require less time and labor, these systems are also much less capital intensive. When cows harvest their own feed and deposit their own manure, little machinery is needed to grow, harvest, and transport crops and spread manure. Many grass-based farmers do not own much machinery at all and either share machinery with other farmers in their area or employ custom harvesters to bring in their crops (Jackson, 2002).

In addition to maintaining lower overhead costs, many grass-based cattle and dairy farmers increase their profit by direct-marketing their product or using differentiated labeling. Farmers retain a greater share of their food dollar when they sell products directly to customers (Adam, Balasubrahmanyam, & Born, 1999). In Salad Bar Beef, one of the first and most popular grazing “how-to manuals,” author and grazing advocate Joel Salatin argues that marketing grass-raised beef directly to consumer instead of simply selling to commodity markets is critical to capitalizing on the economic benefits of grass-based farming (1995). Although Andy sells his product to retail outlets and not directly to consumers, his marketing
strategy is still considered direct-marketing because it bypasses conventional commodity
chains and is local (Adam, Balasubrahmanyam, & Born, 1999). Although customers in his
small town may not buy the product directly from him, they still know the story of the farm
and can most likely put a “human face” on his product.

Grazing dairy systems also have human health benefits, both for the farmer and the
consumer. Gaseous and particulate contaminants in confinement livestock facilities put
agricultural workers in confinement systems at a considerably higher risk for chronic
bronchitis, wheezing, and other health problems than workers in non-confinement livestock
systems (Harmon, Zhang, & Xin, 1994). Farmers in grazing systems also benefit from less
exposure to hazards such as chemical inputs and injury from heavy machinery. Consumers
benefit from a healthier product. Ruminants produce a chemical called conjugated linoleic
acid (CLA), which has been shown to have antioxidant and anticarcinogenic properties (De
Ramus, 2004). CLA content in milk increases proportionately to the amount of pasture
included in dairy cows’ diets (De Ramus, 2004).

Grass-raised dairy is also an excellent source of Omega-3 fatty acids, which have
been linked to reducing the risk of heart disease and stroke, lowering blood pressure, treating
depression, ADD, and arthritis, and preventing birth defects in unborn children (Bouchez,
2004). British researchers warn that the lack of Omega-3s in western diets, in part due to
intensive farming practices in which ruminants are fed grain, could lead to an epidemic of
developmental and behavioral problems in children and depression among adults (McKie,
2004). Many Americans are turning to the burgeoning nutritional supplement industry to
meet the recommended levels of these CLA and Omega-3s, but researchers believe that these
supplements do not function the same way in the human body as food-based nutrients, and
some of the supplements have been shown to have negative side-effects (Bouchez, 2004). Andy told me he read an article about researchers trying to add Omega-3s to conventionally-raised milk but they could not get the fishy taste out. We both agreed that there is a more systemic, sustainable solution to the problem—putting beef and dairy cows back on grass!

Andy takes seriously his task of raising a healthy product for his customers. He states:

We have the mind-set that we’re producing food for people, whereas most dairy farmers are producing a commodity for a market. We try to think about things that we do that affect the value of the product from the [perspective of the] people who are drinking it. One of the things we can do is decrease the grain and increase the amount of forage [in our cows’ diets] and also graze [our cows] as long as we can from the spring until fall.

As producers of food for people, and not for the commodity market, Andy and his wife try to adjust their farming system to provide the healthiest food possible for their customers. By grazing his animals longer in the fall and spring, Andy increases the amounts of CLA and Omega-3s in his product. His customers appreciate his emphasis on health. He says a lot of people have told him they were not able to eat dairy products before finding his milk, yogurt and cheese. One woman from a different state says that Andy’s products are some of the only foods she can eat after being poisoned by an insecticide. She is extremely chemically sensitive and is unable to eat even many organic products. Andy is not quite sure what it is about his product that causes these accolades, but it must be rooted in his ecologically-based farming system.
A final characteristic of ecological farming that adds to human quality of life is, simply, fun. Many sustainable and organic farmers argue that alternative farming is more enjoyable than farming in a conventional system. Andy states that there is less “drudgery” in grazing systems than conventional dairy systems, and there is “more opportunity for creativity in the system.” He says that grazing farmers are always:

watching and observing nature. [They’re] out there observing the pastures to see which ones are growing, which ones are ready to graze, which ones are not and learning and seeing what makes the pastures do better and what makes the cows do better... [They’re] constantly absorbing and learning.

Indeed, rotational grazing is called “management-intensive rotational grazing” because it does require skilled, thoughtful observation of animal, plant, and soil interactions. In MIRG, much of the “drudgery” of harvesting and moving feed and manure is replaced with strategic decision-making—the part of farming that many sustainable farmers find to be most stimulating. Andy’s opinion that rotational grazing is more fun than conventional dairy systems is confirmed by many sustainable farmers who have switched from conventional to alternative farming systems. In a qualitative study of Swedish livestock farmers, Lund (2002) found that many respondents cited the excitement and challenge of organic farming as their reason for converting from their conventional system. One respondent stated:

It’s a new world, with different things to test to try to come up with. You get to run things yourself and make them work. Before you just had to look things up in tables: if the plants have this many leaves you have to spray with this or that, and you have to put on such-and-such amount of artificial
fertilizer to get this big a yield. Yes, it was really damn easy to be a conventional farmer. (Lund, 2002, p. 260)

In a study of dairy farmers practicing MIRG in Wisconsin, graziers who moved their cows more than one time per day rated their quality of life more highly than less intensive graziers or confinement farmers rated theirs (Ostrom & Jackson-Smith, 2000). MIRG graziers were also more likely to feel they were farming in accordance with their own personal goals and ambitions, leading the researchers to believe this group’s higher self-reported quality of life stems from the compatibility of their farming system with their values (Ostrom & Jackson-Smith, 2000). Compatibility between his personal goals and his occupation is at the very foundation of Andy’s farming system—he says he would not have returned to farming if he couldn’t farm in a way that is compatible with his values.

Finally, ecological farming systems promote animal well-being. Andy states, “It seems to me that a large part of animal welfare is looking at an animal’s natural inclinations and natural instincts and trying to accommodate them in the farming system.” Andy ensures that his animals are able to express their natural behaviors by mimicking natural ecological relationships as closely as possible. Andy’s conception of animal welfare fits closely with one of three main views of animal welfare in contemporary animal welfare theory and research. This view calls for “animals to be raised in a manner that suits the ‘nature’ of the species or such that the animal performs its full repertoire of behavior” (Duncan & Fraser, 1997, p. 19). Bernie Rollin (1992) argues that each animal species has a genetically encoded nature, which he calls ‘telos.’ He argues that animal welfare should be defined not just by alleviation of pain and suffering, but by animals’ ability to express their natures. The ability to graze is perhaps the most important natural behavior of ruminant animals, but it is a
behavior that is denied to most conventional dairy cattle. Grazing allows cattle access to fresh air and sunshine, a requirement that prominent animal rights activist Astrid Lindgren states is central to promoting animal welfare (Duncan & Fraser, 1997).

Grazing systems also promote animal health by respecting the unique physiological and nutritional requirements of ruminant animals. Ruminants' digestive systems are composed of multiple stomachs, including a fermentation vat full of microorganisms that allows them to break down cellulose (De Ramus, 2004). Ruminants require roughage in their diet and have a difficult time processing energy-rich grains. As a result, many cattle living in confinement suffer from chronic “acidosis” (acid indigestion), liver abscesses, and gaseous bloat (“Grass Farming and Animal Welfare,” n.d.). Rotationally grazed pastures are cleaner than confinement lots and open pastures, thus reducing incidence of disease in MIRG systems (DeVore, 1996). Farmers in the Land Stewardship Grazing Monitoring Project experienced significant decreases in their veterinary bills after switching from confinement dairy systems to MIRG systems (DeVore, 1996). This finding is noteworthy given that dairy farmers spend more money on veterinary care than any other group of farmers (DeVore, 1996). Dennis Johnson, University of Minnesota animal scientist states, "I think reduced health costs is a pretty common observation among management intensive graziers. The animal is more fit than in a confined situation" (DeVore, 1996, p. 1).

Andy’s farming system is the best example in this study of a synergistic relationship between animal welfare, human quality of life, and agricultural sustainability. Andy’s main drive in his farming system is managing ecological relationships; he possesses the “ecological morality” suggested by Fred Kirschenmann as a prerequisite for agricultural sustainability. Andy enjoys the creativity and intellectual challenge of observing
relationships between the plants, soil, and animals on his farm and using these observations to manage his system. Yet, because he manages his farm as a system, the benefits of his ecological focus extend out to the well-being of his animals and his own quality of life. This phenomenon has important implications for both the sustainable agriculture and animal welfare movements because it means that animal welfare does not need to be an “add-on” in a string of requirements for a sustainable agriculture. Instead, animal welfare should be considered one facet of a healthy, balanced relationship between farms and the ecosystems within which they operate.

Spiritual Ecology

Andy believes ecological relationships extend beyond the physical elements of earthbound ecosystems. He has a complex, personal spirituality that is influenced by a diversity of spiritual traditions. His bookshelves are full of religious and philosophical texts.

Andy was raised in the Catholic Church but no longer considers himself religious; instead, he prefers to think of himself as spiritual. He states:

*I don’t have any religion—religion to me is just dogma… Spirituality is an experience, and so I just follow my experience. In a sense I have beliefs but they’re more temporal beliefs, they’re not dogma. When you have a religion, you have a belief system you have to believe forever. To me, my beliefs are how I see the world and [they] may be different tomorrow and so it shifts over time.*

Interconnectedness and universality of all nature are central tenets in Andy’s spirituality. He explains:
As I see it, all of nature is interconnected on a spiritual level, although different forms in nature manifest in different ways. For example, as Rudolph Steiner explained, the mineral kingdom manifests through a physical body; a plant has both a physical and etheric (or vital) body; an animal has, in addition to physical and etheric bodies, an astral (or emotional) body; and humans additionally possess mental and individual soul bodies, which give us the additional faculties of reasoning and ego identification. But underlying all the diversity in nature is an interconnecting unity. As eastern traditions teach, all is one, and humans have the capability to experience that oneness directly, on the level of consciousness.

Andy believes that nature is composed of layers of hierarchies of “energy and intelligence,” similar to the way our bodies are made of atoms, then molecules, then organelles, cells, tissues, organs, and so on. He uses the term “spiritual ecology” to describe how all of these layers are interconnected and interact with one another. He believes that we should look to spiritual ecology to learn how to organize our physical ecology, and also our economic and political systems.

Throughout the course of our interviews and observations, Andy spoke of a diversity of spiritual practices and philosophies that have influenced his thought, including Theosophy, Paganism, Mysticism, eastern religions, Reiki, the writings of Rudolph Steiner, and even physics. These belief systems share a common thread—a belief in the “oneness” of all of nature. Andy states that this belief is a teaching of the mystics, and this belief is also at the root of Theosophy, a movement based in philosophical mysticism that Charles Ryan
describes as a “philosophy of life” (Ryan, 1988). He describes the fundamental belief of
Theosophists as follows:

There is one infinite Life, without beginning or end; no such thing as dead
matter exists in nature. Every atom is a spark of the one Life. The divine unity
behind all manifestation, commonly called spirit and matter, which some call
God, others That (Sanskrit *sat* or *tat*), is so infinitely beyond comprehension
that we can only stand in mute awe and refuse to insult its majesty by
attempting to describe it. (Ryan, 1988, para. 2).

Andy states even the field of modern physics is revealing unity in the natural order of the
universe. Whereas physicists used to believe there were four forces dictating how matter
behaves in the universe, they now have proven there are only three (E. Freeland, personal
communication, February 28, 2005). Most physicists believe that it is possible to find one
universal equation—uniting these four forces—that describes how the universe works.
Universality is also the foundation of Reiki, an ancient healing practice Andy uses on his
farm.

Although Andy does not profess to identify with any particular spiritual tradition, he
did use the term spiritual ecology several times when speaking of his dynamic, diversely-
influenced belief system. There is no single, well-accepted definition of spiritual ecology;
instead authors across diverse fields use the term to describe many different phenomena,
from Native American and other earth-based spiritualities to simply an individual’s reverence
for nature. This diversity is reflected in Sponsel’s definition of spiritual ecology as “a
complex and diverse arena of spiritual, emotional, intellectual, and practical activities at the
interface of religions and environment” (2001, p. 181). Sponsel states that spiritual ecology
is fundamentally a union of the natural and the supernatural. I have chosen to use the term spiritual ecology to describe Andy’s spiritual beliefs because the flexibility and open-endedness of the term is a good fit with Andy’s spirituality.

Andy’s spiritual belief system greatly influences his farming practices and his relationship with his animals. This influence is evident in Andy’s strong commitment to fostering healthy ecological relationships on his farm, the theme described in the last section. Just as Andy believes ecological relationships extend beyond the physical properties of his farming system, his spiritual beliefs are manifest in other ways too. Andy is a “spiritual vegetarian,” eschewing meat not for environmental or health reasons, but instead for the imbalance caused in the spiritual ecology by inhumane treatment of animals. He states:

I’ve been a vegetarian for about 30 years. [Being vegetarian] is more of a spiritual thing for me. Especially the way we butcher animals in the slaughterhouses, where they have all this fear when they die. It’s not good for them or for us who eat it— all that fear goes in the meat. I think that’s one of the things that causes a lot of problems in society, stress in the slaughterhouses. All of that stress is accumulated stress at the astral level— these things are going on and they don’t just go away. As the theosophists will tell you, these thought forms—they are actually forms—we are putting all of this energy off into our environment and we have to deal with it. I think that collective fear, that collective kind of stress, creates the thinking in our minds that makes us go to war in Iraq for stupid reasons. All of these things impose on our thinking.
For Andy, vegetarianism is another form of managing ecological relationships. He believes that eating meat from animals raised and slaughtered inhumanely sends negative energy into the universe, upsetting the energetic balance. This imbalance impacts all of nature, including humans, because of the oneness of the universe. He uses the war in Iraq as an example of the conflict and suffering humans bring upon themselves by causing this imbalance in the universe. His sentiments are echoed by Dr. George Arundale, former president of the Theosophical Society, who states:

> Whenever I see a meat and fish ridden dining table I know that I am looking upon the seeds of war and hatred .... When people ask me, 'Is there likely to be a future war?' I answer, 'Yes, until the animals are treated as our younger brothers'. (Theosophy Society of Seattle, n.d., para. 18)

The last section demonstrated that human and animal well-being are interconnected in the physical ecosystem; in Andy’s belief system, humans and animals are interconnected at a greater, spiritual level. Andy believes his vegetarianism helps sustain a healthy balance in the spiritual ecosystem.

Many ecologically-minded people believe that meat consumption is a part of nature’s cycles of life and death. Andy’s extension of ecological relationships to include the spiritual realm, however, broadens the boundaries of the ecological system to include the negative energy generated by meat consumption. In this system, physical energy may cycle through the ecosystem via the predator-prey relationship, but unmitigated negative spiritual energy remains present in the universe. Andy believes that it is possible for humans to have positive spiritual relationships with animals they eat; he cites Native Americans’ offering of prayer and thanks for the animals they hunt as one example of such a relationship. Andy does
occasionally eat meat raised sustainably by one of his farmer friends, and he also sometimes
eats fish he catches himself from the pond on his farm. Overall, however, Andy feels it
spiritually “safer” to abstain from eating meat.

Andy has made some unusual decisions in his farming system to accommodate his
spiritual vegetarianism. Cows who milk for seven years are retired and graze with the rest of
the herd until they die from natural causes. Andy has made some unusual decisions in his
farming system to accommodate his spiritual vegetarianism. Cows who have reached the end
of their productive life and have milked for at least seven years are retired and taken to
pastures owned by friends in the area (who are also customers) until the cows die from
natural causes, after which they are brought back to the farm and composted. Andy places
cows who have substandard genetics, or are low-producing, on farms with families who want
the companionship and several gallons of milk these cows have to offer. Male calves are
sold to families who raise them for meat, and he donates the profit from these sales to a local
food pantry. Although he states that his system is not perfect in terms of preventing animal
slaughter, his system certainly results in less animal suffering than conventional systems, in
which older animals are sent to the slaughterhouse and young males become veal calves.

Andy abstains from eating meat to prevent sending negative energy into the universe,
but he also works with positive energy on his farm in order to make his farming system more
sustainable. Reiki is one tool Andy uses to bring positive energy to his farm. Reiki is the
practice of harnessing “universal life-force energy” to restore health and well-being to an
individual (Rowland, 1998). The first time I helped Andy with milking, he told me when we
were finished that he had performed Reiki on a cow with an injury that made milking painful
for her. I did not observe him performing Reiki, but as I later learned, this is not unusual;
energy is transferred when the practitioner lays his or her hands gently on the body of the recipient—slight actions that would be easy to miss during a milking session. Both Andy and Valerie have received their first two Reiki “attunements,” a ritual through which the recipient’s ability to harness the universal life force is increased.

In addition to using Reiki on individual animals, Andy does light visualization exercises to bring positive energy to his whole farm. He states:

I often try to work with that universality. For example I do some light exercises—energy work—here on the farm, everyday basically. The higher dimensions become pure light...and so I sort of do a visualization where I activate that light source through my own body for my own health and through the whole of the farm to make that interconnect, building that integrity of the whole farm. Also for the animals that are weaker I try to focus the light on them and also the group, so I do sort of a light energy, with the idea that it’s all connected, that unified field, that we’re all connected.

Through Reiki, Andy is able to utilize the interconnectedness of all of nature in order to bring health and well being to himself, his animals, and his farm. Although it is more common for Reiki practitioners to work with individual people or animals, some Reiki practitioners utilize universal light energy to heal ecosystems, political conflicts, or even the planet as a whole (Rowland, 1998).

Andy also uses the interrelationships that exist in the spiritual ecosystem to help him make decisions about his farming system. When I asked him where he gets information about his alternative farming practices, he stated that he mostly speaks with other farmers. Then he added:
But also I think to a great degree I look inward. There is this interconnectedness in all of nature and all problems have their solutions—they’re already there and all knowledge exists already. It’s just a matter of being aware of what the solution is and tuning into the solution. So sometimes I think I get my answers just from thinking about it. (He laughs). Or, I shouldn’t say thinking about it, but intuition. Basically what I’m saying is that if knowledge exists, if that total or wholeness is there, then it’s just a matter of your mind intuiting or realizing that interconnectedness or cognizing that knowledge.

Sometimes, however, Andy has to consult others to help him tap into this universal knowledge. For example, when Andy began farming, he initially decided not to dehorn his dairy cows because he understood from Rudolph Steiner’s teachings that horns play an important role in helping animals channel energy. During my first few trips to his farm, Andy expressed frustration that cows were butting and hurting one another in the close quarters near the milking parlor. He worried about the health of his animals because they were causing each other so much physical damage. He consulted a person in his community he refers to as a shaman or intuitive—someone sensitive to energy who can communicate with nature to achieve greater understanding of nature’s intelligence. This person learned that cows’ ears—not horns—are the critical area through which they channel energy. Andy decided to dehorn his cows based on this new information.

Andy refers to the process by which he makes decisions on his farm as “co-creative agriculture.” In this process, Andy combines his own observations and experiences of his farming system with insight from nature’s intelligence. Andy taps into nature’s intelligence
through looking inward to his own intuition, or through consulting people who are able to communicate directly with natural spirits. Through this process, Andy draws on information from both the physical ecology and on the spiritual ecology of his farm in making decisions.

Andy’s term “co-creative agriculture” is an adaptation of the term “co-creative gardening” coined by Machelle Small Wright. *In Behaving as if the God in All Things Mattered*, Wright describes her journey of learning to work with nature’s intelligence in her garden (1997). Through meditation, Wright learned to communicate with the devas and nature spirits present on her Virginia homestead. Deva is the Sanskrit word for “body of light,” and the author describes devas as “architects” that contain all of the information about a plant species, animal species, or ecosystem. She states:

> It is the devic level that designs the blueprint and draws together all the various energies that make up the complex ‘package’ for the carrot. The Carrot Deva ‘pulls together’ the various energies that determine the size, color, texture, taste, growing season, nutritional needs, shape, flower, and seed process of the carrot. (Small Wright, 1997, p. 109)

Wright characterizes nature spirits as the “blue-collar workers” of the energy world (Small Wright, 1997). Nature spirits travel around and make sure that energy is fused in the proper form to create plants, animals, and ecosystems that match their blueprint.

Wright’s writings and practices are influenced by members of the Findhorn Community, an intentional community that began in Scotland in the 1960s. Findhorn Community members achieved remarkable horticultural results in their garden, which grew on land that was originally barren, gravely, and infertile. Members attribute these results to their communications with devas and nature spirits and have shared their knowledge with the
world through their book *The Findhorn Garden*, through speaking tours, and tours and classes at the community. Wright and members of the Findhorn Community consider their communication with nature to be both a practical tool for gardening and, at a more spiritual level, and way of living in harmony and balance with nature.

Although I have separated the themes *serendipitous animal welfare* and *spiritual ecology* in this paper, this is a false division. Andy’s systems approach to his farm, from the ecological realm to the spiritual, enables him to achieve excellent animal welfare without explicitly focusing on welfare practices.
CHAPTER 5. CHRISTOPHER

I wanted to include a pig farmer in this study because pigs are currently a Big Deal in Iowa. Citizens’ groups like Iowa Citizens for Community Improvement are fighting vehemently against Confined Animal Feeding Operations (CAFOs) — massive buildings in which thousands of pigs are housed with little room to move or express their natural rooting and nesting behaviors. Opponents of CAFOs voice their concerns over the operations’ impacts on the environment and neighboring communities, citing animal welfare and human health issues, environmental risks from manure storage lagoons, and perhaps most prominently, the foul stench the operations emit. Proponents of CAFOs, including industry groups and some farmers’ groups such as the Coalition to Support Iowa’s Farmers, argue that large-scale hog confinements are efficient, promote animal health and well-being, and are the economic backbone of the state.

Strong feelings on both sides have led to a fierce public debate in Iowa that is played out in the state’s courts, on the editorial pages of the Des Moines Register, and even on homemade signs that dot the state’s rural highways and interstates. For me, one particular sign along Interstate 35 best embodies Iowa’s public debate over hog confinements. The first time I passed this large plywood sign it read “Hog factories: Poisoning Iowa.” A skull and crossbones and fish skeletons further illustrated the author’s message. The next time I passed the sign, however, the skull, crossbones, and dead fish were erased, and the sign had been spray painted to read “Hog Factories: Feeding Iowa.” My mind raced to fill in the story behind this sign: was the changing message the result of a bitter battle between two neighbors, or did a young Iowa State student climb the fence to change the message, threatened by the sign’s assault on his or her family’s way of life?
When I approached one of my faculty advisors to suggest a pig farmer for my study, he put me in contact with Christopher. I was especially enthusiastic for Christopher to participate in my study both because my advisor said he is very thoughtful about his alternative pig farming system, and also because he is very young: just a few years out of his undergraduate agriculture degree at Iowa State University. I felt his age and his relatively short tenure as a farmer would provide a good counterpart to the two more established farmers in this study.

My research process with Christopher included three interviews, three observations, and one follow-up phone interview. During my three observations, I followed Christopher as he completed afternoon chores. Although my intent was to engage in participant observation with each of my respondents, my observations of Christopher’s farm did not include much participation. He seemed reluctant to delegate work to me during my observations, perhaps because most of the chore tasks were either easily accomplished by one person or required knowledge about pigs and his farming system I did not posses. I did, however, appreciate the opportunity to watch and ask questions. Each of our three interviews took place at his kitchen table.

During one observation, Christopher and I had to end chores early due to a string of thunderstorms passing through the area. Christopher’s mother urged me not to drive home because there were tornado warnings to the west, crossing my path home. While waiting out the storm, I had the opportunity to look at some photographs of Christopher’s most recent trip to Europe. He explained to me the farming systems he toured in Denmark and England and how they had influenced his thoughts about his own farming system. This observation
“event,” although unplanned, added dimension to my understanding of Christopher’s system as I learned more about the importance of his European trips in shaping his farming system.

Christopher grew up on a farm, and his family raised some crops and cattle until he was eight years old, at which point they began to rent their land out to another farmer. Christopher went to Iowa State University for a degree in agricultural studies. Christopher says it was initially “the insane budgetary accounting desire I had to figure out a system that could work for my farm” that led him to learn more about organic systems. He continued, “I just kept running into a wall with all these conventional systems and figuring out this is never going to work for me, that can’t work for me, I can’t make a living doing that, I can’t support a family doing that.” He wanted to farm his family’s land after college—land that had been cash rented to other farmers since he was eight—but he “kept running into a wall” as he devised business plans for conventional systems. Then, he states, “I ran along organic farming, and I thought, ‘Well, this is interesting, the whole concept is fascinating.’” He began to read about the interconnections between agricultural sustainability, ecology, animal welfare and economic stability. He then sought out people who could help him in his journey to pursue an organic system.

Christopher started small in developing his organic farming system. While still in college, he got organic certification for a parcel of his grandmother’s land that was already in the USDA Conservation Reserve Program. After graduation, he bought six sows and began learning more about pig production and marketing. Today, Christopher believes he is the largest organic hog producer in the country, and his farming system is still evolving. He belongs to a group of farmers exploring alternative hog production practices, and through this group he has evaluated different technologies on his farm, some of which he has integrated
permanently into his system and others he has abandoned or changed. He has traveled to Europe with this group and independently in order to learn about cutting-edge hog production practices and technologies that have not yet made their way to America.

Christopher’s farming system is a conglomeration of several different alternative pig production systems. His farm can be both physically and conceptually subdivided into four distinct parts, each based on a different stage of the pig’s life cycle. Breeding occurs in a deep-bedded gestation facility. After piglets are weaned from their mothers, sows (female pigs who have borne a litter) are moved to this facility. There they go into heat and are mated using artificial insemination. Christopher’s deep-bedded gestation facility is similar to the Västgötmodellen system developed in the 1980s by Swedish farmers. These farmers were seeking alternatives to conventional confinement systems, in response to public concern about animal welfare, stricter animal welfare laws, and new laws regulating the use of subtherapeutic antibiotics (Honeyman, 1995).

Christopher’s system is more comparable to the Thorstensson model, named after farmer who developed this particular version of the Västgötmodellen system. In this system, breeding and gestating sows are housed inside a hooped structure filled with straw bedding (Honeyman & Kent, 2001). Sows have their choice of individual feeding stalls, decreasing competition for feed and allowing for ease in vaccination, artificial insemination, and sorting (Honeyman & Kent, 2001). Pregnant sows are then moved to a remodeled confinement building for farrowing and lactation. These buildings are equipped with temporary cubicles that are removed after piglets are two weeks old. After pigs are weaned from five to six weeks of age, the sows are moved back to the gestation building. Pigs are fed in the lactation room until they weigh 25 kg, at which time they are moved to a finishing unit.
The Västgötmodellen system has animal welfare, economic, environmental advantages over conventional confinement facilities. In the Västgötmodellen system, sows have room to move about to nest (Halverson, 1991). Stocking density is regulated to ensure adequate space for pigs to establish social hierarchies, thus reducing aggressive behavior. Pigs are less stressed because they can exhibit their natural behaviors. Intensive management is required in these systems; about half of the farmer’s labor is spent in interaction with the pigs (Halverson, 1991). This intensive interaction benefits both farmer and pig. Farmers and researchers have found fewer incidence of disease in these systems, which they attribute to consistent and humane interaction with the pigs, as well as excellent air quality in the buildings and the presence of straw (Halverson, 1991). Honeyman (1995) reports that one Swedish farm couple who use the Västgötmodellen system visit the farrowing operation five times per day and have a strong bond with their pigs—the couple greatly enjoys interacting with their pigs. The intensive interaction with their livestock required by their alternative system is not a burden, but instead enriches their lives. Västgötmodellen systems also bring economic benefits because they cost less to build and maintain. Growth rates in Västgötmodellen systems are comparable to U.S. industry standards (Halverson, 1991), although one study at an Iowa research and demonstration farm found that while growth rates remained comparable in a modified Västgötmodellen system, mortality rates were higher (Honeyman & Kent, 2001).

Environmental benefits of the Västgötmodellen system stem from the use of straw bedding. Waste and urine mix with the straw to create compost that can then be distributed directly on fields. These features of the Västgötmodellen system solidly differentiate it from conventional hog gestation operations, in which sows live in crates, have little opportunity to
exhibit natural behaviors, have little interaction with farmers, and in which manure is held in environmentally risky lagoons.

When sows in Christopher’s system are ready to give birth, they are moved outdoors to farrowing huts placed on pasture. Outdoor pasture farrowing systems maximize sows’ ability to express natural behaviors, provide ample space, and have a very low housing investment (Honeyman, 2002). Grazing of sows also reduces feed requirements, decreases labor through less hauling of feed and manure, and allows for the ecological benefits of including a forage crop in the crop rotation (Honeyman, 2002). Although extreme temperatures can cause difficulty in outdoor farrowing systems, Christopher has mediated this problem with the use of specially designed farrowing huts that provide protection from the elements. Although herd management can prove difficult in an outdoor setting, Christopher has partially solved this problem by breeding and gestating indoors and only farrowing outside.

Christopher imported galvanized steel farrowing huts from Denmark after seeing how effective they were on the farms he toured during his travels there. He was also ready to import special waterers Denmark designed for outdoor farrowing during the winter. Components of the waterers are buried deep in the ground in order to keep water from freezing during in cold winter temperatures. After facing difficulty importing the waterers from Europe, Christopher found a similar technology being used in the U.S. for a different purpose. He adapted these waterers to meet his needs. Christopher is also in the process of importing a machine from England that will cut straw and blow it directly into his farrowing huts.
After piglets are weaned, they move to the greenhouse nursery building. Sows then move back to the deep-bedded gestation facility. Christopher did not originally conceive of the greenhouse as a nursery building. He built the greenhouse as part of an Alternative Hog Farmers’ Group project to evaluate the use of greenhouses for winter farrowing. He hoped to replicate warm-weather conditions of outdoor pasture farrowing inside the greenhouse during Iowa’s frigid winter months. Instead, Christopher faced unforeseen problems with moisture that led to increased disease. He abandoned the idea of using the greenhouse for farrowing and instead decided to use the space as transitional housing for young pigs that are weaned but not quite hardy enough to move to the hoop houses he uses for finishing.

The last stage in the lives of Christopher’s hogs is finishing in deep-bedded hoop houses. These are simple structures covered with arched hoops and filled with straw bedding, which allows pigs to express their natural behaviors and composes urine and manure for ecologically-sound nutrient management. The hogs live in the hoops until they reach market weight and are trucked to a slaughterhouse in western Iowa. The deep bedded hoop house was originally developed in Canada for hog finishing, and they are typically constructed of arched metal frames secured to ground posts and covered in a stretched polyethylene tarp (Gegner, 2001). The average hoop house is 30’ wide by 60 to 80’ long, and houses 200 hogs at 12 square feet per hog. These systems include many of the environmental and animal welfare benefits of the Västgötmodellen system, including the composting of manure in bedding and pigs’ expression of natural rooting, nesting, and social hierarchical behaviors.

The two themes that initially emerged in my examination of Christopher’s farming system were technology and good stockmanship. Really, though, these themes are two sides of one phenomenon. Christopher enjoys working with technology to solve problems on his
farm. However, Christopher fits technology to his pigs. He does not try to fit his pigs to technology. He consistently seeks out, tests, and adapts new technologies on his farm in an effort to enhance his ability to be a good stockperson and therefore increase animal health and well-being. These technologies also increase his own quality of life, environmental sustainability, and his farm’s profitability. The welfare and sustainability-enhancing role that technology plays in Christopher’s farming system contradicts much of the literature in the fields of sustainable agriculture and animal welfare. Literature from the field of sustainable agriculture frequently suggests that dependence on technology detracts from sustainability goals. Animal welfare literature is more mixed on the issue of technology, but there does seem to be a general attitude that dependence on technology both of which frequently suggest that dependence on technology detracts from sustainability goals.

Perhaps this contradiction is an underlying cause of the third theme: *Identity*. Christopher seems to feel like an outsider in sustainable agriculture. This was manifest in various ways throughout our interviews and observations, and it impacts his farming system. Christopher is skeptical about other sustainable farmers and also consumers, especially the urban people who are likely his biggest customers. During my first visit to Christopher’s farm, he commented that his farm sometimes fails to meet visitors’ expectations about what a sustainable farm should look like. He said some “hippies” think his farm is too big and too smelly, and are surprised by how modern his farming system is. For the record, I found his farm to be less pungent than other alternative hog farms I have visited. I was, however, struck by the number and diversity of structures on the farm; a greenhouse, hoop houses, farrowing huts on pasture, and several barns and outbuildings were visible. He also spoke of many different technologies he has experimented with or wants to utilize on his farm,
running the gamut from waterers to farrowing huts to new building designs. I got the impression that working with new technologies to solve problems on his farm is a source of great enjoyment for Christopher.

I asked Christopher during our first interview about the role of technology on his farm. He stated:

Technology is really critical here. I think there’s a myth in organic farming that somehow I’m doing things old fashioned. I’ve got all the latest technology here. And without that I couldn’t win the battle. So I think that’s a big myth. I embrace technology—I just do it in more of a green way, something more friendly to the whole system. A less abrasive way.

Christopher feels technology is critical to his success as a sustainable farmer. He seeks out new technologies that will help him “win the battle” of farming profitably and sustainably. He does not, however, accept new technologies uncritically. He looks for “green” technologies that are a good fit with the overall goals of his farming system. Although Christopher feels that technology plays a vital role in his farming system, the ideology surrounding technology in the sustainable agriculture movement is a source of tension for him. He mentioned feeling judged both by “hippies” who disapprove of the sophisticated level of technology on his farm, and by those outside the sustainable agriculture movement who assume his farm is stuck in the past.

The tension apparent in Christopher’s discussion of technology echoes a much wider debate occurring in the sustainable agriculture community. One side of the debate argues that new, green technologies will enable sustainable farmers to increase profitability while decreasing their ecological footprint. Critics argue that the technological paradigm is
inherently flawed and that sustainable agriculture cannot embrace the worldview that led agriculture astray in the first place.

In her 2002 qualitative study of Swedish organic hog farmers, Vonne Lund found that most of her respondents, like Christopher, approved of new technologies. Farmers in the study echoed Christopher’s sentiment that technology must only be used when it is compatible with the goals of the whole farm system. One farmer in the study did feel, however, that some technologies—like milking robots—defy consumers’ expectations of organic farming. The author referred to these expectations as “the old fashioned idyll consumers expect to find on an organic farm” echoing Christopher’s opinion that people tend to equate organic with “old fashioned” (Lund, 2002, p. 263). Lund identifies tension between consumers and producers about the use of technology on organic farms. Consumers have one set of expectations about what an organic farm should look like, whereas organic farmers are willing to accept new technologies that help them meet the goals of their farming system.

When he first began farming, Christopher, too, felt that organic farming should be low-technology, an attitude he now feels led him to make mistakes in forming his farming system. He states:

Oh yeah, I’ve made every mistake. When [I began farming] I thought that [I] would be able to raise pigs the old fashioned way and that was the key to doing organic pig farming. That was a big mistake. [I had] inadequate facilities that were outdated and parasite and disease harbors that [I] couldn’t get into with equipment like skid steers to clean. I couldn’t power wash. I tried fixing up a lot, I stuck a lot of money in fixing up old buildings that
should have been torn down. This was out of my romanticism. And belief that
the old fashioned way was the way to do this. And that was a huge mistake.

Christopher initially "romanticized" organic farming. He perceived organic farming as "old
fashioned" and requiring less sophisticated equipment than conventional livestock systems.
When he decided to raise hogs, he thought he could "make do" by modifying existing
buildings on his farm. He invested a lot of money in building modifications that did not
adequately suit his needs. He feels he would have been better off spending this money to tear
down the buildings on his property and investing in entirely new structures.

Although Christopher feels his old fashioned view of organic pig farming led him to
make some significant mistakes as a beginning farmer, his romantic view is one that is
commonly expressed in the sustainable agriculture literature. In "Future Harvest: Pesticide-
Free Farming," author and farmer Jim Bender urges beginning farmers or those transitioning
from conventional to pesticide-free systems to consider how the farm's existing
infrastructure can be adapted to fit the new farming system (Bender, 1994). In "The
Contrary Farmer," Gene Logsdon advocates his idea of a "pastoral economics" based on
thrift, avoidance of indebtedness, and staying small (Logsdon, 1994). He urges would-be
farmers to learn how to maintain equipment themselves and stay away from unnecessary
gadgets.

Logsdon admires the Amish for their smart pastoral economics; he cites as examples
Amish farmers who make their own machinery to avoid upgrading to machinery that is
larger, more expensive, and more difficult to maintain and the Amish practice of holding
church in homes to save money on community infrastructure. Wendell Berry (1981) also
holds up Amish farmers as examples of truly sustainable farmers. Like Logsdon, he admires
not only Amish agricultural practices, but also Amish community and family values. Although Berry and Logsdon do not explicitly reject modern technologies in their conception of sustainable farming, their writings certainly reinforce the stereotype that sustainable agriculture is “old fashioned” and rooted in the values of an earlier era.

After farming for a few years, Christopher felt his “old fashioned” farming system—characterized by modified old buildings, low quality feed, and little modern technology—was failing. He was experiencing high mortality rates during farrowing, slow growth rates, and parasites. The poorly planned layout of his farm buildings led to an inefficient use of his labor. He was losing money and could not continue to farm much longer unless he changed his system; yet, his system was the same as those of the other sustainable hog producers he knew in Iowa. A trip abroad caused Christopher to question his romantic view of organic systems. He states:

I was the same as everyone else but I realized we were all failing as a group.
The biggest epiphany for me was going to Denmark with the Sustainable Hog Producer’s Group, because I was still thinking in all these old ways when I went there. And it was just like a sledgehammer to [my] head—it was like, “Hello wake up, you’re failing, this system you have [is] a total failure. You need to look at what these people have, invest more money into feeding and proper nutrition and proper facilities and more modern facilities, more thoughtful organization of your production stream.” That’s where all the ideas I have now, all the seriousness of investment and management and everything came from.
Touring organic hog farms in Denmark allowed Christopher to step out of his system entirely and look at his own farm with new eyes. These Danish farms were a drastic departure from Christopher’s conception of sustainable hog farms; they were technologically advanced, highly organized, and required significant capital investment. Hogs in these systems were healthier, more productive, and gained weight more quickly than hogs on his farm.

Christopher’s view of organic hog production changed as a result of his trip to Denmark and he began to seriously examine his farming system. He began a three year process of modernizing his farm infrastructure, reorganizing the layout of his farm, and introducing new technologies to make his farm more profitable and efficient. He says he would like his farm to directly mimic European systems. Christopher interest in European alternative farming systems is an important part of his identity as a sustainable farmer. Although Christopher plans to continue his farm overhaul until Spring 2006, he feels his farm’s evolution is nearly complete. The resulting farming system is an interesting mix of new and old—two competing paradigms in the sustainable agriculture community.

Christopher’s farming system is his own creation—it is not taken from a book or bought as a package from a corporate input supplier. His farming system is a composite of several different farmer-developed technologies from across the globe, and he has further adapted them for use on his own farm. These technologies have improved Christopher’s own quality of life, improved the welfare of his animals, and increased the ecological sustainability of his farming system. These factors differentiate Christopher’s use of technology from the technologies of corporate agribusiness, which are often solely focused on cutting costs, saving labor, and increasing production.
Proponents of utilizing technology to make agriculture more sustainable distinguish between the top-down technologies of agribusiness and technology developed by and for farmers to help decrease costs and minimize environmental impacts. Several different terms can be used to describe these kinds of technologies, including “green,” “appropriate,” “intermediate,” and “farmer-driven.” E.F. Schumacher first coined the terms “appropriate technology” and “intermediate technology” in the 1970s during the energy crisis. His book, *Small is Beautiful: Economics as if People Mattered*, pioneered the idea that technology, created by and for people, can create sustainable solutions to problems in both the developed and developing world. George McRobie, a colleague of Schumacher’s, describes appropriate technologies as those that are “small scale, simple, capital saving instead of labor saving, and nonviolent toward people and the environment” (1982, para. 10).

Ownership and centralization are key concepts in determining which technologies are “appropriate” and which are not. Solar and wind energy generating technologies were the first technologies touted as “appropriate” because they are environmentally benign, simple, and encourage local ownership and control of energy sources. Oil, coal, and nuclear power, on the other hand, require complex technologies that must be controlled by large corporations, states, or even nations. Langdon Winner (1986) argues that technologies are inherently political because they require specific social arrangements to function appropriately. He points to Denis Hayes’s thesis that safe use of nuclear power necessitates authoritarianism, whereas decentralized renewable energy technologies “are more compatible… with social equity, freedom, and cultural pluralism” (as qtd. in Winner, 1986, p. 19). Fujimoto (1978) writes that “high” technologies are “elite” because only a few
people have the ability to understand, develop, and work with them. When high technologies dominate society, technical knowledge becomes concentrated in the hands of a few.

These same ideas are well suited to hog farming. Farmers in large-scale, confinement hog operations are typically sub-contractors to corporations that dictate the technologies used on the farms, provide the inputs, supply the technical expertise to farmers, and are the sole market outlet for finished hogs. Corporations work with private researchers and public universities to develop technologies to make these systems more efficient. Although farmers assume most of the risk in these arrangements, they reap few of the rewards. Farmers lose more and more economic power in the system as the hog industry becomes more and more concentrated. Winner’s statement, in which he describes the political nature of the tomato harvester’s impact on California agriculture, applies equally as well to hog farming: “What we see here instead is an ingoing social process in which scientific knowledge, technological invention, and corporate profit reinforce each other in deeply entrenched patterns, patterns, that bear the unmistakable stamp of political and economic power” (Winner, 1986, p. 27).

Perhaps, then, the concept of appropriate technology can resolve the tension Christopher has experienced, and that is present in the literature, over the role of technology in sustainable agriculture. Christopher controls the technical knowledge at play in his farming system, and he shares that knowledge with other farmers in the Sustainable Hog Farmers’ Organization. Christopher owns his own marketing label and has shared his technical expertise with other farmers to encourage them to make the transition to a more sustainable, profitable farming system.

The interconnection between stockmanship and technology in Christopher’s farming system is another aspect that defines the “appropriateness” of the technology in use on
Christopher’s farm. Like green technologies that work with nature instead of against it, Christopher adapts technologies on his farm to fit his pigs instead of trying to fit his pigs to the technology. Christopher offers an example of poor stockmanship in his discussion of the hog confinement system he worked in during college:

Confinement systems are the most headaches, and I’ve worked around them before, and so I know what this is. On paper it’s supposed to be automatic. But a confinement system is like a big house of cards and it can collapse really quickly if every piece of technology isn’t working just perfectly, which is always the case. So you end up working on the tools instead of working on the pigs. So you’re working on the machine that’s supposed to take the manure away from the pit that’s broken all the time. And find yourself in this terrible hazardous place that’s probably one of the worst jobs in the world. But, oh, this is supposed to be automatic, I’m the farmer I’m not supposed to be doing this, this isn’t part of the budget, this isn’t part of the plan, but it’s broken, we have to fix it. And you know the pigs are sick and so we spend our whole day with a syringe needling antibiotics working our way through endless pens of thousands of pigs. But wait a minute, that’s not supposed to happen, that’s supposed to be automatic. It’s supposed to take care of itself. You know, and so there’s a huge contradiction, or difference between the reality of confinement systems and theory of confinement systems.
Christopher states that in the confinement system in which he worked, he spent most of his time working on technology instead of working on the pigs. The system was so complex workers spent much of their time working on those very tools that were supposed to decrease labor and increase efficiency. And, because the system did not respect the pigs’ mental and physical natures, the time workers did spend working with pigs was spent attending to illness instead of practicing stockmanship.

English et al. (qtd. in English, 2002) outline several basic components of stockmanship. These include:

1. A sound basic knowledge of the animals and their requirements.
2. A basic attachment for and patience with, the stock.
3. The ability and willingness to communicate and develop a good relationship with the stock (empathy).
4. Careful and effective animal handling ability.
5. Ability to recognise all individual animals and to remember their particular eccentricities.
6. An understanding of normal behavioural characteristics of the stock and a keen sensitivity to recognising the slightest departure from normal behavior of individual animals (perceptual skills).
7. An ability to organise the working time well and having sufficient time to pay attention to detail.
8. Having a keen appreciation of priorities with a ready willingness to be side-tracked from routine duties as pressing needs arise to attend to individual animals in most need of attention.
9. Dedication to the task of caring. (p.23)

Although much of the literature on stockmanship in pig farming presumes the stockman is a hired hand, English (2002) states that these characteristics are also relevant on small farms like Christopher’s in which the farmer is both the manager and the stockperson.

Numerous studies link quality stockmanship to both animal health and well-being and farming system productivity. In a series of six studies, Hemsworth and his associates found that negative handling of pigs led to increased fear of humans, low growth rates, and low reproductive performance (1998). In his studies of single-operator dairy herds, Seabrook (as qtd. in English, 2002) found that major differences in milk production were entirely attributable to the stockperson. Gross and Siegel (as qtd. In English, 2002) found that positive human contact with young chickens from an early age improved growth rates and reduced infection rates as compared to chickens who had received deliberate negative human contact.

Initially I struggled to characterize Christopher’s relationship with his animals. He does not exhibit the human-animal bond with his pigs. During our first interview, I asked Christopher to describe his relationship with his animals and he stated:

I would be lying if I said that these animals have some kind of personalities to me or that they are something more than just a production unit. Because that’s really what they are, I mean I would be lying if I said anything else. They are here to utilize grain and provide manure and better cash flow. You know I really can’t say that they have personalities or are entities to me beyond animals. But that doesn’t mean that I don’t like them. I still like
them, I like pigs. I just think pigs are cool and what they do is cool and...I like working with them.

Christopher makes it clear that he sees his pigs as “animals.” His attitude toward them is utilitarian—they are present on his farm to add value to grain and provide manure for his organic system. Yet, when asked if his pigs add anything to his life beyond cash flow and their ecological services, he states:

Yeah, definitely, it’s enriched my life totally so far. I like working with pigs, I just enjoy it. Besides all these other benefits I just enjoy pigs, something about them is just fun for me...

Christopher’s attitude is consistent with quality stockmanship. He enjoys working with pigs, continually educates himself about pigs and pig production systems, is attentive to their needs, and has thoughtfully designed his farming system to be cost and labor efficient while still maximizing animal well-being.

I observed Christopher’s stockmanship the first time I visited his farm. During afternoon chores, I watched carefully as he walked through the pasture farrowing area to check on the piglets. I asked him what he was looking for and he said he wasn’t really sure, just “general health.” At first I attributed this brief answer to his reticence or disinterest in the interview. Then I realized after reading more about stockmanship that it probably was difficult for him to articulate what he looks for when checking on his herd. As stated by English (2002) in the previous list of attributes of good stockmanship, Christopher was utilizing his “understanding of normal behavioural characteristics of the stock and a keen sensitivity to recognising the slightest departure from normal behavior of individual animals (perceptual skills).” He could not articulate exactly what he was looking for because he was
looking for any slight changes in the pig’s behavior or appearance that might indicate a health problem. Although Christopher has 100 sows and markets 1000 pigs a year, he told me he does eventually learn to recognize individual animals and their characteristics.

Although Christopher does not have intimate relationships with his pigs, he provides a high quality of life for them through the use of technology and good stockmanship. His farm does not necessarily meet the ideals of some consumers who expect to see fewer animals, less technology, and perhaps more intimate human-animal relationships on the farm. Christopher seems to struggle a bit with his failure to meet these expectations; however, he is a fairly new farmer and will most likely become more secure in his identity as a sustainable farmer as his system becomes more established.
CHAPTER 6: CONCLUSION

As I read back over this study several months after completing the rest of the text, I am surprised by the conclusion at which I arrive: this is not necessarily a study about human-animal relationships. Instead, it seems that each of the three case studies identifies the essence of what drives these three farmers in their pursuit of sustainable agriculture. In Karen’s farming system, the driving force is the human-animal bond. Human-animal relationships do not, however, drive decision-making on Andy or Christopher’s farms. Animals are one factor in the ecological and technological relationships that drive these farming systems, but they are not the focus of the systems.

This revelation leads me to believe that there is no single way to arrive at animal welfare. A farmer does not necessarily have to be an “animal lover” to make sure his or her animals have a high quality of life. Instead, the farmers in this study engage with their animals in the areas where they have strengths and interests (be it fostering healthy ecosystems, developing alternative technologies, creating fiber art, practicing spirituality, etc.), and both humans and animals in the three farming systems benefit as a result.

This conclusion reinforces the importance of a systems-based approach to sustainable agriculture, which I believe in turn means that the sustainable agriculture community needs to re-think the way it conceptualizes animal welfare. It seems to me that animal welfare, if it is addressed at all, is tacked on to an ever-growing list of criteria for sustainability. In my mind, I picture the “sustainability police” going through their checklist:

- ecologically sound _✓_
- economically viable _✓_
- socially just _✓_
humane

Or, animal welfare is addressed in the form of a set of standards for practice, like those issued by the Animal Welfare Institute (AWI, n.d.). Although I think it is important for “humane” to be included in definitions of sustainable agriculture, and I think animal welfare standards are important, these lists make animal welfare seem like it is a component that can be isolated from other aspects of the farming system. On the three farms in this study, animal welfare is inextricably intertwined with other sustainability goals, and the happiness and profitability of the farmer: Animal welfare is an integral part of the whole system.

I think this study also illuminates the importance of understanding individual farmers’ attitudes, beliefs, and motivations for sustainable farming. Consumers and sustainable agriculture practitioners play an important role in supporting sustainable farmers. For consumers and practitioners to be able to support sustainable farmers, they must understand what drives the farmer in his or her operation. Most sustainable farmers would tell you they are not in the business for the bottom line. Likewise, as this study indicates, farmers are also not driven solely by environmental or animal welfare concerns, or any single issue. Case studies of individual farmers give consumers and practitioners a better understanding of the complexity of “why” sustainable farmers do what they do.
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