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TAKING THE SUSTAINABLE AGRICULTURE CHALLENGE: RECONTEXTUALIZING RURAL SOCIOLOGY¹

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ABSTRACT

Agroecosystems Analysis (SusAg 509), a required course for all majors in Iowa State University's Graduate Program in Sustainable Agriculture, provides an immersion experience in the situated challenges of sustainable agriculture. The field portion of SusAg 509, which takes place every year during the first two weeks of August, brings students face-to-face with different understandings of sustainability and the diverse complexity of Midwestern agriculture. Dialogue and reflection turn the raw stuff of experience into learning, as students discover the power and validity of multiple perspectives. More than two dozen site visits help make abstract concepts, such as the economy and social relationships, real. The course succeeds (based on evidence such as capacity enrollments, course evaluations, and program exit interviews) because of its problem-focus and immediacy: it engages the real world, as it is now, not as it has become institutionalized in disciplinary departments.

One challenge noted in the call for manuscripts for this special issue on *Innovations in Teaching Rural Sociology* is meeting student demand for courses and programs in food and agricultural sustainability. In this paper, I address how I am meeting this challenge with a course called Agroecosystems Analysis (henceforth to be referred to by course number). SusAg 509 is required for all majors in Iowa State University's Graduate Program in Sustainable Agriculture (GPSA). It has been offered annually beginning with the first cohort of students in August 2001, following approval of the program by the Iowa Board of Regents. I have co-taught the course for five successive years, beginning in August 2005 and mostly recently in 2009.

The course is typically fully enrolled (20 students plus teaching team consisting of two faculty members and one student assistant). The students include graduate majors, minors, nonmajors, the occasional undergraduate, and sometimes guests from other universities in the U.S. and abroad.

¹I would like to acknowledge my co-teachers, especially Gretchen Zdorkowski who has been my teaching partner each fall term from 2006-2009, and Margaret Smith, my partner in 2005. We have been ably assisted by graduate students Denis Reich, Sarah Carlson, Arion Thiboumery, Jessica Veenstra, and Stefans Gailans. Teaching teams before 2005 included Gretchen Zdorkowski, Ricardo Salvador, and Lorna Michael Butler as faculty. They were assisted by Pete Lammers, Amy Best (Hasan), and Heather Hughes (Anderson).

In this paper, I will often use the pronoun “we,” as the course has been jointly constructed, but what follows is my account and inevitably partial. The course has changed as times and context have changed. For an account of the course’s beginning, see Butler and Zdorskowski (2002). SusAg 509 works in tandem with another required core course, SusAg 610 Foundations of Sustainable Agriculture, which was added to the curriculum in 2006, and about which I will say more later in the paper. Other required courses in the GPSA are SusAg 600 Sustainable Agriculture Colloquium (a weekly one-credit offering that is required for six semesters for Ph.D. majors, four semesters for M.S. majors, and three semesters for minors); cross disciplinary credits (six for M.S. students and 12 for Ph.D. students); statistics; electives; and research credits for thesis, dissertation, or creative component.

In SusAg 509, students come face-to-face with the diverse complexity of Iowa agriculture and different understandings of sustainability. They discover the power and validity of multiple perspectives and begin to question ingrained assumptions. The catalog description:

Experiential, interdisciplinary examination of Midwestern agricultural/food systems emphasizing field visits, with some classroom activities. Focus on understanding multiple elements, perspectives (agronomic, economic, ecological, social, etc), and scales of operation. Co-listed as AGRON, SOC, ANTHRO.

The primary vehicle for learning is field visits, with regularly scheduled reflection sessions, during the first two weeks of August. The major product for evaluation is a personal journal in which students analyze and reflect upon field notes, readings, and experiences. They engage in two group projects: a “weekend food exercise” at the midpoint of the field portion of the course and a group presentation to the aforementioned weekly Colloquium (SusAg 600) during the early weeks of the fall semester. This presentation does extra duty, introducing the new cohort of students to the GPSA community and sharing the bounty of the summer field visits. Students also receive credit for participation, which we term “co-construction” of the course. This includes positive engagement in reflection sessions and group projects, cheerful performance on “green team” rotations (keeping vans and meeting places spiffy, tending to recyclables, etc.), and lending help when needed, whether back up driving or fixing flat tires.

SusAg 509 works, a conclusion I base on full enrollments, course evaluations, program exit interviews, and anecdotal unsolicited positive feedback. The program coordinator reports having never received a negative comment about SugAg 509 from any exiting student. Some students have volunteered that it is the best graduate course that they have taken; I received such a comment from a nonmajor sociology graduate student in the 2009 cohort. A student in 2006 cohort said he learned more in the class than during his entire undergraduate education. These comments may not be typical, but they are far from rare.

What are the secrets to SusAg 509's success? I have queried several students about this while writing this paper, and will share some of their answers. My view, to which I will return in the second half of the paper, is that it works because of its immediate relevance to the real world, by engaging the world as it is now not how it has become institutionalized in disciplinary departments.

OVERVIEW OF COURSE OBJECTIVES

In this section I will weave an articulation of course objectives into a description of the class. The two-week field experience in early August is the heart of SusAg 509. We average more than two dozen visits each year. We do two distinct round-trip loops in differing directions, returning to campus during the middle weekend. Day trips to nearby farms, and agricultural-related agencies, businesses, and organizations in Des Moines, the state capital, are typically scheduled on the early or latter days of the field portion, or on the Friday or Monday bookending the "weekend food exercise."

Farms predominate. We start on more typical farms, as one course objective is *to provide grounding in the complexity, subsystems, components, and historical and cultural roots of the mainstream agricultural and food system*. In Iowa, mainstream farms produce row crops (corn and soybeans) and raise livestock in confinement. We employ the term "mainstream" deliberately as less pejorative than the terms "conventional" or "industrial."

Because we can learn from both conformity to and variation from pattern, we also visit grass-based livestock and dairy operations; fruit, vegetable and horticultural enterprises; facilities processing meats and grains (for human or animal consumption, or for fuel); food wholesalers, distributors, and retailers; conservation sites; food banks; farmers' markets; and enterprises filling niche food and fiber markets. Our visits hardly constitute a representative sample, but we attempt to do justice to the diversity of Iowa's food and farming system.

Our hosts include government agencies, private companies, farm organizations, nonprofit organizations, and organizational networks and coalitions. We rarely repeat visits because our routes vary each year and because we prefer not to “wear out our welcome” with hosts. It is never a problem finding enough sites to visit, but can be a challenge gaining access to certain sorts of enterprises, such as large scale meat processing plants and poultry or egg-laying facilities. Although we occasionally venture across state lines, for the most part the course takes place within Iowa.

The “weekend food exercise” that takes place the middle weekend of the field portion of the course is the primary way we achieve our second objective *to build appreciation of the complex variety of pathways and tradeoffs involved in food’s journey from field to fork to human and ecosystem health*. This activity is the first of two group assignments. Several days before the exercise, teams get their assignments (bread and condiments, beverages, fruits, vegetables, or vegetarian entrée) and time to plan before a weekend at home that involves shopping for food and preparing a dish to serve at a class picnic late Sunday afternoon. The assignment includes comparing at least three sources of food and articulating decision criteria in a short paper. This exercise brings home the point that agroecosystems include the people who grow and handle the food that we eat and all the people who eat food.

A third course objective is to *put the concept of community to practical use, socially and academically*. SusAg 509 builds a sense of community and long-lasting bonds among students. A student from the 2007 cohort speaks of the value of understanding that he does not need to know everything because he knows who to call in his SusAg 509 network to get to an answer. A Latina student shares that SusAg 509 helped her integrate into the mainstream culture and develop Anglo friendships whereas in her two previous years in Iowa her circle of acquaintances was largely limited to other students from her home country.

The fourth SusAg 509 objective is *to provide a common set of experiences to facilitate analysis and appreciation of the complexity, diversity and importance of agroecosystems*. Shared experiences provide common ground against which individual worldviews (and their partiality) are shown in stark relief. Biases in the way we frame the phenomenon under study due to background and disciplinary culture become apparent; a mix of disciplines reveals the limits (and strengths) of one’s own. Ideally, multiple perspectives will provide a more comprehensive picture. I am reminded anew each year of how much more I see and hear thanks to the eyes and ears of my students and co-teachers.

Experience is a necessary ingredient, but is not sufficient alone. As John Dewey (1916) observed nearly a century ago, learning starts with experience, but does not end there. Real situations, problems and projects offer the possibility of reflection on the real world (Dewey 1916:154): "...methods which are permanently successful in formal education . . . depend for their efficiency upon the fact that they go back to the type of situation which causes reflection...."

For Dewey (1916:157) "it is a matter of indifference by what psychological means the subject matter for reflection is provided. Memory, observation, reading, communication, are all avenues for supplying data." SusAg 509 data sources include field visits, readings, guest speakers, and insights gained during informal discussion in vans and more formal regularly scheduled reflection sessions, consistent with the fifth course objective, *to introduce a spectrum of thought – from readings, speakers, site hosts – on the history, successes, challenges, and future of agriculture in the Midwest, the U.S. and beyond*. We organize assigned readings under the following headings: issues and concerns in mainstream agriculture and food systems; the Farm Bill and commodity payments; alternative visions of agriculture, food systems, and the economy; indicators of sustainability and leverage points; and observation and communication.

Students reflect individually in journals, in interpersonal conversations, and in small and larger group discussions. In this way, we address the sixth objective, *to facilitate student investigation of their own beliefs, worldviews and preconceptions and increase appreciation of the beliefs, worldviews and preconceptions of others*. Unique life experiences and personal values are part of the "baggage" students bring to the vans, along with their disciplines. Some students have farm backgrounds; those from mainstream farms may be defensive. Others may find their idyllic images of organic farms with rolling hills and happy cows tarnished. This cauldron of positions, personalities, and disciplinary orientations is the raw stuff of significant learning.

This brings us to the seventh and final objective: *to develop competence and confidence in methods of assessing and evaluating dominant and alternative agroecosystems*. A systems approach is integral to the GPSA curriculum (2010):

The intent of the GPSA is to develop student competence and expertise in the design, implementation, and evaluation of sustainable agricultural systems. The program's curriculum is designed to foster transdisciplinary and systems-level thinking. The curriculum is founded of the principles of

academic rigor and breadth, and flexibility for integrative thinking and experiences.

A systems approach helps us avoid the blame game, and the perception that one way is right and another way is wrong. As one student noted in a reflection session, *most people believe they are doing the right thing*. Replacing an individual level analysis with a systems analysis can, with time and reinforcement, reduce defensiveness and open minds.

Toward this end, in the final group assignment, student teams develop and share their own conception of sustainable agriculture informed by their experiences and data collected in the course. Their formulations are to begin with a critique of the well known three-legged stool model of an agriculture that is ecologically sound, economically viable and socially responsible (Ikerd 1999). They first present their ideas in a 20-30 minute session of the weekly Colloquium to an audience that includes peers, program faculty, and community members. Student teams incorporate reactions from this audience (and the SusAg 509 teaching team) into a short paper due several weeks later. This group exercise provides practice assessing and evaluating dominant and alternative agroecosystems, and builds on the other course objectives. Table 1 summarizes course objectives and activities that support them.

REFLECTION IN LEARNING

Dewey's observation that experience alone is not sufficient for learning is shared by David Boud and his colleagues (1985:7) who ask: What is it that turns experience into learning? How can we apply experience in new contexts? The key to learning from experience is structured reflection. Daudeline (1996:39) defines reflection as "...the process of stepping back from an experience to ponder, carefully and persistently, its meaning to the self through the development of inferences; learning is the creation of meaning from past or current events that serves as a guide for future behaviour." Boud et al. (1985) recommend a three-stage approach to reflection of preparation, engagement, and processing: preparing students for what is required to meet the demands of field visits, processing a variety of inputs arising during field visits, and consolidating what they have experienced. This parallels what we do in SusAg 509: we orient students on the first day, engage in scheduled reflection during the field portion of the course, and utilize journals and group presentations and papers to consolidate learning.

TABLE 1. COURSE OBJECTIVES AND SAMPLE COURSE ACTIVITIES

COURSE OBJECTIVES	SAMPLE COURSE ACTIVITIES
1. to provide grounding in the complexity, subsystems, components, and historical and cultural roots of the mainstream agricultural and food system	Site visits, overview of Iowa agriculture, class discussions
2. to build appreciation of the complex variety of pathways and tradeoffs involved in food's journey from field to fork to human and ecosystem health	Weekend food exercise, visits to food-related enterprises
3. to put the concept of community to practical use, socially and academically	Group projects and green team assignments
4. to provide a common set of experiences to facilitate analysis and appreciation of the complexity, diversity and importance of agroecosystems	Site visits and structured reflection
5. to introduce a spectrum of thought (from readings, speakers, site hosts) on the history, successes, challenges, and future of agriculture in the Midwest, the U.S. and beyond	Assigned readings, guest speakers, site visits
6. to facilitate student investigation of their own beliefs, worldviews and preconceptions and increase appreciation of the beliefs, worldviews and preconceptions of others	Journaling, formal and informal reflection
7. to develop competence and confidence in methods of assessing and evaluating dominant and alternative agroecosystems	Final assignment evaluating and developing sustainability models

During the first class session, to “de-mystify” reflection and dialogue, I present five dimensions of dialogue articulated by Mario Cayer (2005): conversation, participatory process, inquiry, collective meditation, and creation of shared meaning. I note that dialogue can be among any number of people, not just two. As Brockbank and McGill (2007: 67) explain, the first syllable of dialogue means “through” and the second means “the word,” revealing David Bohm’s (1996:6) understanding of dialogue as “...a *stream of meaning* flowing among and through us

and between us...out of which may emerge some new understanding.” Students easily understand the first component, conversation, as that which takes place during breaks, in the vans, etc., and the second, participation, as engagement in and co-construction of the course.

Cayer describes the third dimension, collective inquiry, as exploration into the content of what we say, think and feel and our underlying motivations, assumptions and beliefs. We encourage students to ask questions of hosts, but tactfully; “grilling” is not acceptable. From the syllabus:

At each stop, you should feel free to interact with our hosts and to probe for insights into the facts, reasons, beliefs, rationale and worldview underlying their various agricultural practices. However, at all times be respectful of their dignity and integrity and refrain from instantaneous and public judgments of their roles and beliefs. View the field visits as data-collection activities; we will provide more appropriate settings to examine and discuss the data collected, express opinions, deconstruct and understand the worldviews expressed, and formulate hypotheses based on aggregate data collected throughout the course.

Because some site hosts anticipate from a class of “sustainable agriculture” students a certain world view or attitude, we take special care to convey the diversity of backgrounds, viewpoints and disciplines represented in the class.

Mention of collective meditation, Cayer’s fourth dimension, can bring a few chuckles, but serves to put spirituality “out there” as a legitimate topic, a phenomenon we are sure to encounter during our field visits.

The fifth dimension, creation of shared meaning, draws upon David Bohm’s view of shared meaning as the cement or glue that holds society together, akin to culture, involving significance, value, and purpose. To Bohm (1989), meaning is not a thing we can touch, but we can experience it and reflect upon it. Ideally, dialogue creates a stream of meaning flowing among, through and between us from which some new understanding might emerge (Bohm 1996:6).

Cayer notes tensions and paradoxes between these dimensions, for example, conversation that puts emphasis on listening and receptivity, and inquiry that explores and questions. Collective meditation could be seen as inconsistent with all the others. My purpose in introducing these dimensions is to give students a sense of the possibilities of dialogue and reflection. All dimensions are at work and move us toward our expectations for reflection. As John Blewitt (2008:ix) puts it,

Sustainable development is the product of many stories, worldviews, values, actions and perspectives which to be fully appreciated require a readiness to listen to others, respect differences, suspend established opinions, and see with others' eyes while allowing other voices to resonate and be heard. Sustainable development both requires dialogue and is a dialogue of values.

Reflection that engages us at the edge of knowledge, sense of self and world as experienced—and challenges our assumptions about knowing, being and acting—can produce new disciplinary and transdisciplinary understanding. Transformational learning occurs at the point of awareness of doubt, disturbance, or puzzlement in relation to an existing paradigm, similar to what Leon Festinger (1957) calls *cognitive dissonance*. As we can uncover new meanings, we move from ordinary, day-to-day “single-loop” learning to “double-loop” learning, which often starts with questioning a paradigm (Brockbank and McGill 2007:52; Argyris and Schon 1978). Combining multiple perspectives in dialogue can accelerate the process of transformative learning.

While confrontation with the limits of one's own perspective can be a catalyst for learning, if not handled carefully it can be counterproductive, causing defensiveness or even intransigence. We have seen little of this, even less so with each successive year of the course. Why is this? We believe we circumvent this by emphasizing the validity of different world views, by insisting on showing respect to classmates and site hosts, by providing venues and outlets for reflection and processing the raw experiential material, and by taking a deliberate systems approach.

“Aha’s!:” Beyond Weeds and below the Ground

Moments of insight (called Aha’s!) aid in shifting perspective and learning. A big “Aha!” for me (and one shared by several students) was my first visit to Lake Cairo, part of our introduction to the landscape of Iowa (its history, hydrology and soils). My initial surprise was that Lake Cairo was not a lake at all (anymore), but the “Aha!” was my first glimpse into the magnitude of the transformation of the landscape. The first transformation occurred in glacial time, as the Des Moines lobe was carved by the movement of successive glaciers. The second happened in recent human time, in a scarce human generation. The realization that the hydrology of Iowa’s landscape was altered by raw human labor, not machine, spoke to me of a powerful human impulse. Accompanying this was realization that there is more than meets the eye, that what is most significant may lie below the surface, and that

we cannot appreciate what see we cannot see. *We see what we know* is the trademark phrase of Les Barrow (and protégé Julie Venkman), our guides for this SusAg 509 learning journey. My amazement continues as I see and feel differences between prairie soil and row-cropped soil. *We see what we know*. Some European settlers saw the ocean in the prairie. Some saw wetlands needing draining. Those reared in the shadow of industrial agriculture see weeds and lost productivity (and yet more land to drain).

Weeds are an “Aha!” for some students as they hear farmers criticize their neighbors’ weedy fields; we also hear self criticism or acknowledgment from farmers that their neighbors are passing judgment on their weeds – even when the weeds are not affecting productivity. Weeds become a medium for reflection. They become a moral issue. Are weeds just a cultural borrowing that configures virtue in straight lines and tidiness? Are they a judgment on a lagging work ethic, for someone to let fields get into such a state? One farmer, clearly understanding the sociocultural component of weed control, jokingly says he only walks bean rows bordering the road. A student whose passion is the ISU student organic farm reminds us that a neighboring field full of thistles can be a problem for organic farmers too. 2009 was a very wet year so we heard more apologies than typical from farmers who just could not stay ahead of the weeds. It is complex. Weeds are fraught with meaning.

These are only two of many examples of “*Aha’s!*” These moments of awakening and revelation that “things may not be the way I’ve thought” or “there is sure more to the world than I’ve seen before” create an opening for learning that can remain with us for a long time. I am in substantial agreement with Arjen Wals and Richard Bawden (2005:23) that people will only effectively embrace systemic ideas when they have achieved particular “states of mind” which may be triggered most effectively through experiential strategies and critical reflection. In the next section I will return to the theme of reflection and why it works best when concrete. I will conclude by addressing how I incorporate “the social” into SusAg 509, along with some cautionary notes.

CONTEXT: ZOOMING IN ON MEANING AND SIGNIFICANCE

Dewey viewed the neglect of context as the besetting fallacy of reflective thinking (Seigfried 2002). Context matters because meaning (what is significant, valuable) ultimately depends on context. The SusAg 509 immersion sensitizes students to the “situatedness of sustainability” and enhances their appreciation of real-time situation-specific challenges. It takes abstract concepts encountered in the classroom and makes them real. A visit to a dairy farm losing \$250,000 a month

offered first hand evidence of the difficulties facing dairy farmers in August 2009 and made the economy real. In relation to agriculture, Wendell Berry (1990:210) has observed that

...neither economy nor nature can be abstract in practice. When we adopt nature as measure, we require practice that is locally knowledgeable. The particular farm, that is, must not be treated as any farm.... Farming by the measure of nature, which is to say the nature of the particular place, means that farmers must tend farms that they know and love, farms small enough to know and love, using tools and methods that they know and love, in the company of neighbors that they know and love.

Relationships are embedded in context, as Berry clearly conveys.

Aldo Leopold (1949:214) connects relationships and love (of land) to ethics: "We can be ethical only in relation to something we can see, feel, understand, love, or otherwise have faith in." About ethics and relationships, John Dewey (cited by Davison 2001:161) said: "[A] man has not to do Justice and Love and Truth, he has to do justly and truly and lovingly. And this means that he has to respond to the actual relations in which he finds himself." Relationships are hard to see, to grasp, to visualize, to classify, to treat "scientifically" (Brunello 2009), but when SusAg 509 site hosts speak of their love for their family or their land, and we walk on this land and talk with family members, relationships become real.

By putting things into context, SusAg 509 puts them into perspective, enabling us to look at them in relationship to each other and in relationship to their background, surroundings and environments. Things are what they are due to different perspectives, relative to what is different, in contrast against other things. Sometimes we "zoom in" and sometimes we "zoom out." SusAg 509 generally focuses on the particular, as we "zoom in" to feel and smell the soil, and consider the everyday people we meet in their day-to-day life. Sometimes we need to step back, to "zoom out" to put things in perspective. Intentionally shifting the perspective, by zooming out expands the boundaries (context) of inquiry as needed for understanding or explanation (Brunello 2009). We "zoom out" to encompass whole ecosystems or policy environments.

Environmental philosopher Don Marietta (2003:122) also advocates for concrete (contextualized) reflection, explaining that

Our perception of whole contexts in concrete reflection enables us to move from the particular to the general, and it provides a context for seeing the connection between description and explanation. The horizon of the matters reflected on is flexible. It can focus narrowly on an object in its more immediate context, or it can see the matter in a much wider context, a context in which other similar things can be attended to [which] incorporates naming and grouping of things. Since we see some things as associated with other things, including seeing some as causally related to others, an element of explanation enters our reflection. At this point, we must be careful not to let reestablished schema override our attention to the matters themselves. A critical attitude toward interpretive schema and a frequent *return to the matters themselves* [italics mine] is an important difference between concrete reflection and abstract, intellectualizing reflection.

This echoes Dewey's view that successful educational methods go back to the type of situation which causes reflection. To avoid excessive abstraction in reflection, we "tie the balloon to the ground" with examples.

Sociologist Paulo Brunello (2009) provides a useful heuristic (which he credits to Gregory Bateson) about context driving relationships that drive behavior: "What you say and do depends on who you are talking to, and who you are talking to depends on what game you are in." The relationships and actions of those in the game of mainstream agriculture will follow from that system. The practice of monoculture row crop production is part of this "game," kept in place by a system of subsidies for row crop production and capital investments in machinery, which lock into place a system of farming requiring huge tracts of land. Alternatively, relationships and practices are quite different and varied for those in the nonmainstream game, where subsidies are not in play.

The contexts appear so different as to constitute different leagues, but they are not. Producers share and compete for the same land, with each other and with investors, and some are in both games. We can view one as the context for the other, with mainstream agriculture wagging the nonmainstream tail. However, mainstream and nonmainstream alike are embedded in the larger U.S. economy and policy context. To appreciate the details of a relationship between an event and the context in which it takes place, between an organization and its environment, requires casting our net of observations wide enough to include this context (Watzlawick et al. 1967:20,21).

When we “zoom back in” we see opportunities for the nonmainstream producers that are not there for the mainstream producers, a game in which there is a richer web of relationships, more variety, and potentially greater adaptability and resilience. In 2008, the juxtaposition of visits to a large meat packing plant on one day and to a small custom locker the next provided a stark contrast between the slaughter of thousands of hogs in a single day on an industrial line with a labor force specialized in various parts of the pig and the artisan-like slaughter and butchering of a single steer and single goat by an individual butcher. It also provided a visceral experience of qualitatively different relationships behind the practices.

Seigfried (2002:6), writing from a feminist perspective, elaborates some dangers of context-free thinking: “Abstract thinking that does not recognize and call into question its own background conditions and embeddedness in social and political power structures inevitably distorts reality and mistakes its own perspective for unbiased access to the truth.” Concrete reflection on the unique circumstances of people in place and in relationship to other beings provides a window on how issues related to gender play out on the ground and brings matters of structure and power into our conversation, unlike context-free thinking which erases differences.

Gender plays out in context. In summer 2009, a SusAg 509 alumna held a visit to her home family farm. Although she was the oldest of the children and actively participated in farming before departing for college, her younger brother will be taking over the farm. Her “take home” message to the students seeking to understand the situation: *Look behind the practices*. Behind the practices, we find women farmers and landowners embedded in a complex thicket of family and neighborly relationships, all in the context of historical stereotypical gender roles and practical institutional neglect (Eells 2008).

We note the “graying” of Iowa’s farmers and landowners at nearly every turn. *Who will take over the farm? Who will farm? Who will own the land? Who gets the farm?* The huge capital expenditures needed for entry into farming, and near record high farmland prices, exclude nearly everyone from mainstream farming who lacks a family connection. We learned from an Iowa Farm Bureau economist in August 2009 that the most important factor in a young farmer succeeding in mainstream farming was having a father who was a farmer. The second most important factor was having a grandfather who was a farmer. This speaks to class as well as gender, especially the enormous privilege of owning the land. Unlike the mainstream game where machinery has largely replaced labor, labor is still a significant input into nonmainstream and animal agriculture. Here we find significant immigrant labor,

and the intersection of race, class, and gender in large scale meat-packing (Fink 1995).

Policy is an important contextual backdrop, as it constitutes the rules of the game. Federal agricultural policy keeps in place a system that rewards those monopolizing inputs, owning land, or employing certain kinds of practices. Of course, context can change. The price of land and rent have recently become linked to the energy market, whereas before subsidies were the main driver of land prices. Policy can also be a lever for changing context, as we see in the emergence of local food policy councils.

The ideologies that undergird the system, the worldviews that form the unquestioned assumptions that organize how we think and live our lives, form a largely invisible backdrop. Patricia Allen (2004:80) organizes a discussion of ideologies around Raymond William's conception of dominant, residual, and emergent cultures. Residual ideologies, such as the Jeffersonian notion of agrarianism, linger somewhere in the recesses of memory. Dominant ideologies are just that – dominant and hegemonic. Their power is such that we are often unaware of their influence. Individualism is an example of a dominant ideology, one that Michelle Simon (2006:xvii) sees food companies deploying to keep the focus on individual choice in order to maintain their status quo and profits in the ways food is produced, sold, and marketed.

Productionism is another. Paul Thompson (2005:58-61) explains that the view that more is always better, appealing to common sense and religious values, emerged as the uncritically accepted code of behavior for generations of farmers and continued to thrive when scientific agriculture, rather than religion, became the philosophical foundation for agriculture policies. Thompson explains that the agriculture research and extension functions were filled by second sons of farms too small to support them, insuring that the agricultural institutional establishment inherited and accepted uncritically the productionist and religious values of the farm. Productionism was thus reconstructed into a scientific and public policy paradigm.

Sustainability is an emergent ideology, I would argue. Of course not all emergent ideologies attain the status of a dominant ideology. Sustainability remains a contested and ill-defined concept (Davison 2001; Blewitt 2008), some advantages of ambiguity notwithstanding (Wals and Bawden 2005:38). At base are differing assumptions about ontology (the nature of nature) and epistemology (how that nature is known). We do not teach about hegemonic discourse in SusAg 509, or

even mention the terms epistemology or ontology, but we grapple with such conceptions nonetheless.

BRINGING IN THE SOCIAL

So where does the social come into all of this? Patricia Allen (2004) delineates several ways that the social has often gotten short shrift in the paradigmatic shift to sustainable agriculture, and some attendant frustrations. Formulations of a socially acceptable and social responsible agriculture beg the question of “for whom?” Social equity or justice has gained a bare foothold among proponents of sustainable agriculture in the American context. The social seems at most to get lip service and is often viewed as an irritation or distraction. Jill Auburn, Director of SARE, the Sustainable Agriculture Research and Education program (cited by Allen 2004:97) reports being challenged to talk about social issues in a way that resonates with rather than alienates farmers.

Allen writes about the privileging of the natural sciences and the predominant view that the social is somehow a given, static and unchanging, and that only agricultural practices are mutable. Frustration can be palpable as it is obvious, at least to sociologists, that social conditions make science possible, and that research is always embedded in social relations, including those that make science possible in the first place. Although Allen is speaking about research, it is also challenging to bring the social into an interdisciplinary teaching situation.

Because the founders of the GPSA had the foresight to integrate the social sciences from the inception of the program, I have not had to earn place on the teaching team. Still, students from disciplines with strong objectivist and neopositivist traditions may balk when encountering an epistemology based on volatile things such as the negotiation of meanings, interpretations, and the social construction of reality (Brunello 2009), scoffing at the notion of reality being anything but naturally defined.

Howard Gardner’s (2001) observation that issues of what to learn are bound up with issues of how to teach is apt. We bring the social into SusAg 509 with concrete reflection on experience and return “to the matter at hand” with stories and examples. We teach few concepts directly; conceptualization follows experience. Only one formal presentation, an overview of Iowa agriculture, is a permanent fixture our schedule. More typically we weave content and concepts into the course as it unfolds. SusAg 509 generally complements the other core required course for GPSA: SusAg 610 Foundations of Sustainable Agriculture, a more typical course, organized around concepts and themes. Most students complete the field portion

of SusAg 509 before Foundations and, I think, that order is appropriate. As expressed by poet and novelist Mary Oliver (cited by Davison, 2001:167), “it is the intimate, never the general, that is teacherly.... Time must grow thick and merry with incident, before thought can begin.” Incidents can have a long life as fodder for learning in other courses. At a plenary presentation at the 2009 conference on Facilitating Sustainable Agriculture Education, an alumna praised SusAg 509 as a source of stories she puts to use in her own classroom.

Stories bring in the social by conveying context, capturing what is personally and ethically significant in an experience, and contextualizing in ways that centralize relationships and beings-in-relationships (Warren 2000). How and why have people come to see and interpret the world as they do? How did Fairway Stores become the business it is today? How has Asa Turner’s system of grazing evolved over time? How did Jane Bergson come to be raising red deer? When we extend the boundaries of inquiry to include the effects of certain practices on others, how those others react, and the context in which this takes place, we shift focus from lonely individuals to relationships. What is in the system and what is out are questions always percolating below the surface in SusAg 509.

Concrete reflection on weeds (an “*Aha!*” discussed earlier) readily reveals their social construction, their social as well as economic and ecological meaning. “Looking below the surface” becomes a metaphor for more than just Iowa’s hydrological system, and “looking behind the practices” applies to more than gender relations on a farm in northwest Iowa. Returning to the matter at hand, through concrete reflection, allows us effectively to generalize from these principles.

Sociology is no less equipped than other disciplines to meet the sustainability challenge, nor are disciplines irrelevant. Interdisciplinarity is not a rejection of disciplines, but a corrective to the dominance of disciplinary ways of knowing and specialization, adding—to the depth and focus of disciplines—a broader context and other ways of constructing knowledge (DeZure 1999). Breadth and reach is the trademark of the GPSA, while depth generally lies in the province of disciplines.

That said, sociological content can benefit from real world tests. Dorothy Smith (2005) encourages us take a critical look at the conceptual currency of sociology and return to a focus on actual work relations. Similar messages come from scholars in other disciplines. Systems guru Donella Meadows (2002) asks us to expose our mental models to the open air because everything we know is only a model:

Get your model out there where it can be shot at. Invite others to challenge your assumptions and add their own. Instead of becoming a champion for

one possible explanation or hypothesis or model, collect as many as possible. Consider all of them plausible until you find some evidence that causes you to rule one out. That way you will be emotionally able to see the evidence that rules out an assumption with which you might have confused your own identity.

Sustainability educator John Blewitt (2008:ix) cautions us to “avoid imposing convenient conceptual frameworks which the world just does not fit but which we find comfortable or accessible.”

SusAg 509 works because it engages the world as it is now not how it is abstracted and institutionalized in disciplinary departments. Immediacy brings back the relevance that has been leaking from disciplinary curricula. Content disconnected from context loses its vitality, relevance, and meaning. We can restore meaning by recontextualizing. Concrete (or phenomenological) reflection helps as “there is a sort of directness and immediacy in matters as reflected on.” (Marietta, p. 131). It is

...not the abstract and analytical sort of reflection, which sorts through things and places them in previously acquired, and usually unquestioned, categories. It is a reflection that seeks to describe our awareness of the world with as little presupposition as possible.... Finding the world there for us, not only in its physical qualities but also with values.

The value in concrete reflection is in seeing that there is no sharp division between the physical and the social aspects of the world, and that distinction between fact and value in logical reasoning *is not a wall that continues down to the core of our awareness of the world* [italics mine]. It follows that

trying to deal with facts, values, and obligations in terms of logical reasoning is not necessary and will be futile. Once we have separated facts and values in an abstract kind of reflection, we will not be able to bring them together again, successfully...put[ting] them in a context of logical reasoning [with its]...rules and procedures [does] not allow the restoration of the primal unity of physical, social, valuational, and volitional aspects of our world. (p. 131)

An alternative to logical reasoning is what Aidan Davison (2001:161) terms practical reasoning or the “rationality of relationships,” which draws from the specific, the embodied, and the experiential toward the generic. Practical reasoning responds to claims made on us in particular situations and by particular people. It entertains stories rendered real by concrete reflection, about value-laden social relationships, sometimes hidden behind practices and back grounded by ideological context or power structures.

At the base of differing views about sustainability are differing assumptions about epistemology (how nature is known) and ontology (the nature of nature). Regarding the former John Blewitt (2008:x) cautions that “We do not, and maybe cannot, understand everything, however hard we might try.” I share his view that we need to accept uncertainty and that our knowledge is incomplete, and to recognize and accept that other people may not see things at all the same way. I also share Don Marietta’s ontological commitment to a critical holism. Viewed this way, sustainability is a holistic way of looking at the world that involves understanding the natural world and the human social world as the same—multi-faceted, fragmented, yet complete (Blewitt 2008:ix). In this sense sustainability discourse informs and transcends sociology, but in no way displaces it if we are willing to contextualize and subject our favored perspectives to the occasional real world test.

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