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Students Creating Curriculum Change: Sustainable Agriculture and Social Justice

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Abstract

As the sustainable agriculture movement in the U.S. evolves, it faces the challenges of integration and inclusivity. Including social justice questions within sustainable agriculture education facilitates broader discussions about inequality and who benefits from this education and its practice. In this article, we present a case study in which we share our process and lessons learned from our student-led effort to integrate social justice work within the sustainable agriculture graduate curriculum at a Midwest public land-grant university. We analyze different sources and data to discuss: *a*) how students' efforts can lead to curriculum development, change, and implementation; *b*) how integrating social justice within sustainable agriculture curricula can fulfill existing gaps in content and pedagogy; and *c*) professional and personal lessons learned from this process. Conclusions and recommendations center on how programs undergoing or considering embarking on similar endeavors can learn from our efforts.

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Introduction

How can we, as students and as researchers, scientists, and practitioners, challenge the academic paradigms that characterize conventional agriculture? How can we engage in agrifood system transformation in more inclusive and creative ways? We, the authors, are a group of students in the Graduate Program in Sustainable Agriculture (GPSA) at Iowa State University (ISU) whose experiences, coursework, and/or research fostered our passion for social justice in agrifood systems and who recognized a need to integrate social justice frameworks within our graduate program. Our working-group consisted of the authors and fellow students from GPSA who explored the connections between social justice and our sustainable agriculture studies and research from 2009 to 2012.¹ During this time period, we worked together to further integrate social justice as an analytical framework within our program curriculum by proposing a new thematic area, planning seminars, and developing social justice modules for inclusion in the program's core courses.

This case study shares our vision, challenges, process, and lessons learned as part of an interdisciplinary student-led working group. We draw on information from a number of sources to explore the challenges and opportunities that we faced during this process. These sources include the GPSA's curriculum and learning outcomes; grant and curriculum proposals; feedback from faculty, staff, and allies; student evaluations; and self-evaluations of our work. The GPSA's openness to student-led initiatives, the interdisciplinary nature of the program, and the support of faculty members with decision-making power were important pre-conditions to the goals of our working-group's initiative. In order to ensure that social justice remained a component of our curriculum even after we graduated, we felt our student-led efforts should be institutionalized, and finding ways to do so presented a significant challenge. We hope our final outcomes will inspire scholars and practitioners involved in sustainable agriculture to rethink alternative processes to foster the "integration of the social, environmental, and economic dimensions of sustainability" (Smith, 2011, p. 2). By doing so, we not only address existing challenges but can better explore and imagine new solutions.

¹ Two of the authors have already graduated and the other two authors are nearing graduation.

Positionality/Motivation for Our Work

So having social justice as a thematic area...For new students coming into the program and for those who are already here, it makes social justice on the same page as these other components of sustainability...like livestock management or communications...Social justice is part of this whole. I think this is really important in institutionalizing social justice [...] that it is part of the program now. It's not, "Should that be part of [the program]?" It is now; social justice is a thematic area. So, less time has to be spent justifying social justice now and why. We can just start with conversations about sustainability and social justice instead.

-- Working Group Participant #1²

We felt fortunate to have found other GPSA students and faculty with an interest in social justice, as well as students taking social justice courses in ISU's School of Education graduate program in Higher Education,³ with whom we could discuss social justice elements of problems in agrifood systems. This was especially important to us, since there were occasions in which we felt pressure to downplay social justice when discussing sustainable agriculture because of the perceived political implications of social justice within our program, on our campus, and within our community.⁴ We observed that, while many faculty and students in GPSA were exploring these questions, there was an opportunity to expand this component and to provide a framework and tools to further engage these questions. This was especially important given the dominant agricultural narrative's view of nature as a commodity to be dominated by humans rather than an interconnected community or system of which we are an important part (Leopold, 1989).

² "Working group" refers to a group of students, including the authors, in the Graduate Program in Sustainable Agriculture who meet to discuss and find opportunities to integrate social justice within the program's curriculum. Quotes were taken from a reflective conversation among the authors about the process.

³ The School of Education (SOE) is housed within the College of Human Sciences (CHS) at Iowa State University (ISU). The Higher Education graduate program offers a Social Justice Certificate, and several GPSA students have completed the certificate requirements in addition to their degrees in Sustainable Agriculture.

⁴ Our work was further motivated by events at ISU that inspired us to create an intentional space in which to discuss social justice and agriculture. Specifically, we were moved to action by the 2010 director search for the Leopold Center for Sustainable Agriculture at ISU and the role of the ISU College of Agriculture and Life Sciences (CALS) in the AgriSol Energy international agricultural development project in Tanzania during 2010-2011.

Our social justice-focused academic explorations were motivated by our acknowledgement that we, as students, should be able "to respond [critically] to a range of issues of social inequity, including the growing economic gap between rich and poor...global migration due to inequitable trade policies, persistence...and the transnational perseverance of racism, sexism, homophobia, xenophobia, ableism, and classism" (Osei-Kofi, Shahjahan, & Patton, 2010, p. 327). As a framework, social justice in sustainable agriculture studies facilitates dialogues to move beyond the symptoms of injustice - such as poverty, hunger, land degradation, worker exploitation, or pollution - to address the root causes of injustice, such as power, hegemony, and oppression. Social justice is intricately tied to issues related to the food system, public policy, social change, and environmental and ecological justice. A social justice framework provides a lens to understand these situations and to create alternatives to the dominant economic and food-systems ideology of conventional agriculture, which is characterized by the productionist paradigm that privileges trade liberalization and profit (Verstraeten et al., 2014, p. 133). The desired outcome of our work is that students who graduate with an MS or PhD degree in Sustainable Agriculture are able to explore systemic and creative solutions to problems in agrifood systems while using a social justice lens.

Academic and Institutional Context

"ISU is a public, doctoral/research extensive, land-grant university located in Ames, lowa [...] Throughout its history, ISU has gained a reputation as a leader in agriculture, engineering, veterinary medicine, consumer science, and for a commitment to university extension" (Osei-Kofi et al., 2010, p. 328). ISU established the first graduate program in sustainable agriculture in the United States in early 2001 (Kirschenmann, 2004). The establishment of an increasing number of sustainable agriculture programs at land-grant universities can be seen as a promising sign that educational institutions and civil society are increasingly questioning the effects of "conventional agriculture," defined in this paper as a mode of production in which the main goal is to achieve high yields and economic output, and which relies heavily on the use of chemical inputs and technology (Nemecek, Dubois, Huguenin-Elie, & Gaillard, 2011). However, the hegemony of conventional agriculture may be perpetuated (Allen, 2004, p. 55) when programs are created without challenging the academic paradigms and infrastructural constraints that characterize the universities where they are created (Allen & Van Dusen, 1991; Allen, Van Dusen, Lundy, & Gliessman, 1991, p. 37).

GPSA at ISU is an interdisciplinary program that "offers master's [Master of Science] and PhD degrees in the evaluation, analysis, design, and implementation of sustainable agricultural systems" (Delate, 2006, p. 445). There are three core courses (Appendix I) required for all GPSA students, and our program offers significant flexibility to students when shaping their program of study. As a way to assure an interdisciplinary education, the program requires each student to complement their previous education with a set of courses chosen from outside of their previous academic trajectory. The thematic area⁵ curriculum standard is intended to serve as a tool to achieve this goal. The diversity of students and disciplines is the program's greatest strength, though it also presents a significant challenge, as it creates a diverse spectrum of definitions and approaches to sustainability. Since its creation at ISU, GPSA has included "social benefits including social justice, human empowerment, and human health and safety" as an interrelated component of its curriculum, along with "ecological or environmental health benefits...[and] economic viability and a policy of resource use that does not compromise the lives of future generations" (Delate, 2006, p. 445). Our student-led initiative helped to institutionalize social justice as a program component through incorporation into program core courses and inclusion as a program thematic area.

History of Our Working Group

In 2009, a group of students (including some of the authors) proposed an expansion of social justice concepts in the GPSA curriculum to the GPSA curriculum committee. In the spring of 2010, one of the student pioneers met with the GPSA program coordinator to discuss the possibility of forming a working group in which GPSA students would meet to explore ways to make social justice discussions more present in the curriculum and in the conversations that students and faculty were having within and outside the program. The curriculum committee and program coordinator approved the initiative, and the student-led working group began to form.

The interdisciplinary working group was composed of graduate students from GPSA and was open to anyone interested in working informally on these efforts to explore the connections between social justice and our sustainable agriculture research and studies. Several faculty within and outside of our program were important allies in our work, attending some of our

⁵ Thematic areas described out-of-area courses that each GPSA student was required to take. Currently, these courses are described as "Cross-Disciplinary Courses," but their purpose remains the same. Because the efforts described in this article took place while the term "thematic area" was used, we will retain that term.

meetings, helping us develop our ideas and documents, and providing support for us as we moved forward. Our efforts focused on how to integrate social justice within all areas of our program, including in the required core courses and through the creation of a new social justice thematic area, as well as other ways for faculty, staff, and students to explore the role of social justice within sustainable agriculture. We found guidance in two local efforts that were published as we pursued our initiative: the Iowa Food Systems Council's *Cultivating Resilience* (Tagtow & Roberts, 2011) and the Leopold Center for Sustainable Agriculture's lowa Local Food Farm Plan (Pirog et al., 2011). Cultivating Resilience stressed the need for people who both understand our food system's biophysical elements and who can address these elements within a social justice framework, while the *lowa Local Food Farm Plan* highlighted how lowa could improve and build a more resilient local food system. Through exploration of these local examples and the existing social justice and sustainable agriculture literature, we defined the following goals of our initiative: 1) to create space within the curriculum in which students and faculty can make connections between sustainable agriculture and social justice; 2) to increase these connections in both our research and graduate course work; and 3) to create opportunities for systemic change within our graduate program and/or our future careers as sustainable agriculture scholars, practitioners, and citizens.

Together, with the sanction of the course instructors, we organized the creation of social justice modules within the three GPSA core courses (Appendix I). Additionally, we drafted a proposal to the GPSA curriculum committee recommending that a new social justice thematic area be added to our program to encourage students from the natural and biological sciences to enroll in social justice-related courses. We specified that the inclusion of a social justice thematic areas in GPSA would enhance opportunities for the program's students to address areas not currently included in the coursework of existing thematic areas, such as antipoverty and sustainable-food-systems, alternative food systems focused on social equity, food security, food justice, empowerment, promotion of a more equitable distribution of profits in the food supply chain, and underrepresented groups (e.g., small, local and family farms; fair-trade movements).

We worked with faculty to identify specific courses and to approve syllabi to be included in this new thematic area. In October 2011, the GPSA curriculum committee approved our proposal to add a seventh thematic area — social justice — to the other six cross-disciplinary thematic areas in 1) crop and livestock production and protection; 2) engagement and communications; 3) international development and food security; 4) landscape and watershed management; 5) philosophy, ethics, and history; and 6) policy, governance, and economics. In the spring of 2012, the GPSA coordinating committee — the governing body of our program — approved the new thematic area and officially added it to our curriculum. This social justice thematic area includes courses already being offered at ISU through the School of Education's graduate program in Higher Education, as well as courses from Women and Gender Studies, Anthropology, and Sociology, many of which were not previously approved for fulfillment of thematic area requirements.

Social Justice as a Framework in Sustainable Agriculture

[W]hat got me thinking was that, "Wow, we all need to be having this." It's not just for me. It's not that I just need to take these social justice classes, but that this would benefit all of us. "Nana"⁶ asked very (...) personal (...) questions about our research. "How does your research reinforce or support unjust things and practices?" The honest answers that people gave to that question were very telling. I appreciated that people were willing to be so honest and say, "Yes, my research...we don't think about that and it is detrimental," or, "It is serving to perpetuate this injustice," or, "I had never thought about that before." So, that for me got me [to thinking] that we need to be thinking about it. That is step one – we need to thinking about it. What we do with it after that might be out of our hands, but we need to be thinking about it.

-- Working Group Participant #2

Agricultural production practices alone do not transform the agricultural system so that it meets the environmental, economic, and social goals of sustainable agriculture: "Social goals must be addressed explicitly" (Allen et al., 1991, p. 38). Development in agriculture is a historical experience that has entailed the creation of dominant thought and action rooted in a Western monoculture (Shiva, 1995), as "system[s] of power that regulate...practice[s] and ...forms of subjectivit[ies] fostered by...discourse[s]" (Escobar, 1995, p. 10). The gap between "mainstream sustainability" and social approaches can be seen if we analyze social justice issues and their absence in the dominant academic discourses in sustainable agriculture

⁶ Dr. Nana Osei-Kofi, former Associate Professor and Director of the Social Justice Studies Certificate Program in the School of Education at ISU, presented a seminar to the SusAg 600 Colloquium in Spring 2010. She is currently the Director of the Difference, Power, & Discrimination Program and Associate Professor of Women, Gender, and Sexuality Studies at Oregon State University.

education. Who produces knowledge and how knowledge is exercised through discourse and the use of power create unequal possibilities for different sectors of society and establish political hierarchies (Foucault, 2000). It is, therefore, paramount that any discussion of the transformation of the current dominant agrifood system includes acknowledgement and analysis of power structures.

In sustainability, the social, economic, and environmental dimensions are seen as overlapping, interconnected, and equally important (Robinson & Tinker, 1995). Sustainable agriculture, though it is considered an alternative movement, is developed from this Western, monoculture-focused point of view. It has been noted in past studies that most of the current sustainability definitions challenge some of agriculture's unsustainable aspects, but "generally [neglect] questions of...social justice or [devote] little specific language to it" (Allen et al., 1991, p. 35). Thus, we need different perspectives and tools to rethink this approach and to create a socially just alternative to the current dominant agrifood system. In terms of our case study, this means including diverse pedagogical approaches and voices in our discussion of sustainable agriculture, as well as reflection on the implications of our own work within the agrifood system.

The incorporation of underrepresented groups in sustainable agriculture movements may not, as an action in and of itself, change the existing hegemony of dominant agricultural groups and their approaches. However, the incorporation of an analysis of privilege within conceptualizations of sustainability requires us to look at the power structures at work and would, therefore, make visible currently invisible parts of our agro-ecosystem, since "[a]s food [and agriculture] become disassociated with power, the ability to exploit and oppress people diminishes in a number of ways" (Sumner, 2011, p. 71). A definition of sustainability that does not wrestle with the question of privilege exists in "the luxury of obliviousness" (Johnson, 2005, p. 22). Integrating social justice within the curricula of sustainability studies may not avoid replicating these injustices, but this integration is an important first step. Without it, we face the likelihood that these injustices will be perpetuated within sustainable agriculture as we replicate existing oppressions (Allen, 2004, p. 88).

If a sustainable agriculture curriculum is to present an alternative to the current dominant model of agriculture, it must be alternative both in content and in pedagogy (MacRae, Hill, Hennings, & Mehuys, 1989, p. 200; Parr et al., 2007). Such revision "requires progressive, integrated, experiential, interdisciplinary, systems-based curricula where learning grounds theory to practice in relevant and purposeful social and environmental contexts" (Parr, Trexler, Khanna, & Battisti, 2007, p. 530). Sustainability scholars (e.g., Jucker, 2002; Orr, 2004; Sterling,

2001) agree that "any approach to sustainability needs to be different from the traditional forms of education and training that are currently delivered through schools, colleges, universities and continuing professional development" (Martin, 2005, p. 168). Whereas it is disadvantageous to have an "overreliance on reductionism and quantification," (Allen et al., 1991, p. 35), we need new ways to better conceptualize the interactions between the social, environmental, and economic dimensions of sustainability.

Research Questions and Methods

In this case study, we draw upon secondary data analysis to analyze the process of our student-led working group; written feedback from faculty, staff, peers, and allies; program descriptions from the GPSA website; and a reflective conversation about our work. The case study is an appropriate approach when the researcher wants to ask "how" and "why" questions about a contemporary set of events. In a case study inquiry, data is triangulated through multiple sources of evidence (Khan, 2010; Yin, 2008). Our case study facilitates reconstruction and analysis of our social justice initiative while addressing the following research questions: 1) How can students incorporate social justice within a graduate curriculum?; and 2) What can be learned from this process?

Our case study includes data from a variety of sources reflecting our work. First, we analyzed data from student feedback gained through an online survey given to students who took part in the social justice module we created for the SusAg 610 Foundations of Sustainable Agriculture core course in 2010-2012. This survey provided both quantitative and qualitative data about the students' experiences participating in the module. We asked questions about specific activities and assignments from the module, as well as questions related to the overall module and their general thoughts about the relationship between social justice and sustainable agriculture. Additionally, we analyzed the GPSA program curriculum and outcomes and the Social Justice Thematic Area proposal we submitted in Spring 2011, as well as the ISU Provost Diversity Grant application that was written and funded in Spring 2011. We also analyzed feedback we received in the fall of 2011 from faculty and staff members who supported or guided our efforts. This feedback includes responses to a list of questions we mailed to these individuals, as well as any other feedback they felt was relevant. One faculty member elected to respond to the questions in person, while the others responded in writing. These responses were coded for emergent themes. Finally, the four authors participated in a reflective

conversation about our work in this initiative, which was facilitated by a fellow GPSA student in the spring of 2011. This conversation was recorded, transcribed, and analyzed. Together, this data represents the documentation of our working group's efforts in integrating social justice within the GPSA curriculum through the creation of a new thematic area, modules in core courses, and our attempts to institutionalize our process.

Results from Our Process

Most of the students who were being kind of pessimistic about their research work or their future were the students that were in our same cohort....who were really involved in their research....in that sense, I think that they were pessimistic about whether change would be possible. But after being part of this group, I have a very different approach about how things can be personally and professionally. I think that I would like for the people in the program to have the same thing that we are having. So, if the other students in the program could have the happiness that we are having, I think that would be really cool....people being happy about the kind of work that they are doing and people having hope about making change.

-- Working Group Participant #4

Social Justice Integration Results from Core Courses 2010-2012

Some of our efforts were focused on ways to integrate social justice within the three required GPSA core courses: SusAg 509 Agroecosystem Analysis, SusAg 600 Sustainable Agriculture Colloquium, and SusAg 610 Foundations of Sustainable Agriculture (Appendix I). While we knew that our initiative was special in regards to it being student-led, we hoped that, one day, social justice would become a part of the regular curriculum and that it would be supported as a critical component of sustainable agriculture by our program leadership and faculty, without students having to devote so much time and attention to ensuring its continued discussion.

In the spring of 2010, the working group selected readings from courses in the Higher Education program's Social Justice Certificate Program in which some of us had participated. Some of these readings were assigned as required readings for the summer SusAg 509 course, a field course in which students spend two weeks visiting Iowa farms, people, and institutions involved in the food and agricultural systems. An essential element of this class was a period of reflection, during which students would get together to debrief about what they saw during the day's sessions. In addition to our recommended readings for this course, in 2011, we created a series of questions to be used as discussion prompts in order to encourage more in-depth analysis of social justice in this experiential course.

The working group also prepared a social justice module that was integrated into the coursework of the SusAg 610 Foundations of Sustainability course in 2010, 2011, and 2012. This course focuses on the historical, biophysical, socioeconomic, and ethical dimensions of agricultural sustainability through an interdisciplinary theoretical framework (GPSA, 2011a). The social justice module consisted of three class sessions with defined objectives, activities, and outcomes. In 2010, through the creation of in- and out-of-class activities, we asked students to reflect upon how their research supports the dominant agrifood system. Our intended outcomes were that students would understand the difference between social justice and social work (Kivel, 2000), and that students would position themselves in a way that illustrated the implications of their research and studies within the dominant agrifood system paradigm. Instead, this individualistic approach caused many of the students to feel defensive and to step back from the discussion, rather than to further engage with their peers in this reflection.

In creating the 2011 and 2012 SusAg 610 modules, we had several advantages over the previous years. We had learned a good deal from leading the module during 2010; the working group members had taken more classes in the Social Justice Certificate Program; and some individuals who had participated in SusAg 610 as students in 2010 had joined our working group. We revisited our approach and used case studies from the earlier mentioned examples of the Leopold Center for Sustainable Agriculture director search and AgriSol's Tanzania sustainable development project. These case studies allowed students to examine the role of power and privilege within the culture of our educational institution before considering the role of their departments and their own research. This was a more indirect approach than we had attempted in 2010 and allowed students to make their own connections regarding their placement within the system through debate, discussion, and reflection with their peers. In comparing the 2010 with the 2011 and 2012 approaches, the professors co-teaching the course shared the following feedback:

The problems you had, as a group, were all problems familiar to me because they're problems I sometimes have in my own classes. Overall, I think these sessions were very successful. People in the class obviously appreciated them, and I enjoyed them too. As I mentioned in class, my initial skepticism was put to rest when I saw that you made things work that had seemed questionable to me.

-- Professor 1

I thought it was successful on the level of bringing the concept of social justice and related concepts directly into sight of the students and, for that, I thank you. I feel it was also very successful at the level of engaging students. I am still struggling a bit with how this becomes better integrated into the course in the future.

-- Professor 2

This feedback from the professors shows our working group's success at improving the module and engaging more students, but also highlights the remaining challenge of incorporating the module within the course curriculum and institutionalizing our efforts from year to year. The modules were completely planned, facilitated, and evaluated by the student-led working group. The Provost Diversity Fund, which we applied for and obtained in Spring 2011, funded a ¹/₄ time research assistantship for the organization of the modules; however, this funding was only awarded for one year, meaning that continuing efforts over the long term would remain challenging, as students join the group and graduate. As one faculty member explained in her reflection upon our efforts: "The funding from the provost's office was helpful and should be recognized, but it still amounts to doing what is critical work on a shoe-string budget, when other initiatives, that are perceived to have more 'value,' don't have to struggle in the same way." This illustrates one of the constraints our working group has faced in institutionalizing our efforts.

We sent an evaluation survey to students upon completion of the module in 2010, 2011, and 2012. One section of questions asked about their experiences in the module and their views about social justice and agriculture (see Appendix II). Student feedback after completion of the 2010 module indicated that 87.5% of students perceived the importance of learning about and discussing social justice within the context of sustainable agriculture. Our experience facilitating this module made clear the need for further integration of social justice within the GPSA curriculum.

We asked three open-ended questions on the evaluation survey that covered ways the module could be made more engaging, a summary of their experience, and suggestions for

future programs. In 2010, several of the students expressed their frustration with the module, as evidenced by statements such as "I'm not sure what I was supposed to learn from this unit," "a vague and inconclusive discussion about social justice," "I would have liked it to be more focused on agricultural issues that clearly violate social justice and what we can do about that, and less focused on figuring out how our research might relate to social justice", and "shorten this section to one class period or omit it." On the other hand, some students responded with, "I will recommend to have this same experience for next SusAgers," "it was a good experience, gave me tools to better analyze social justice on a broader spectrum," "well done, it was excellent for a first time," and "social justice needed to achieve SusAg because it humanizes agriculture."

We asked the same three open-ended questions on the survey in 2011 and 2012, and saw the beginning of a transition in students' attitudes, as the social justice thematic area approval was underway and then finalized. Students in the 2011 class did not express frustration with the module, but rather made specific suggestions about content or activities to include or modify in the future, such as "more small groups;" more case studies "from other decades so that we can see the perpetuation of injustice on the continuum of time/history;" "more readings that deal with social justice in sustainable agriculture;" "more discussion of intersectionality in the readings;" and "the group work within small groups be shortened and the larger class discussion be lengthened." Students expressed that they enjoyed the module and gained from their participation in it. Comments in this vein included, "It changed my opinion regarding the importance of Social Justice in Sustainable Agriculture;" "I have a lot of questions but in a good way!"; "provided the short time (only 3 classes), I thought it was a great job;" "I wish it was longer!"; "It was fun and I'd integrate these ideas more with the rest of the course;" "Through this module, I learned a lot from my classmates and the facilitators that helped me to re-examine my own research and ideology;" and "It really got us talking as a class and it made me feel connected [with] my peers in an extremely positive way that I have not experienced since starting at ISU." Students in 2012 offered similar comments, but also reflected that they did not see an explicit need for such a module.

The 2010 and 2011 student cohorts were aware of the student-led social justice initiative because it was discussed on our graduate student listserv, in the SusAg 600 colloquium, and shared in the SusAg 610 social justice module. However, the 2012 cohort began the program without knowledge of the history of the creation of the social justice thematic area and did not realize that it was "new." Comments from the students participating in the 2012 social justice

module reflected their frustration in having to spend so much time defining terms and understanding why social justice or how social justice is part of sustainable agriculture, both areas that had been key with the 2010 and 2011 cohorts. The majority of the 2012 cohort seemed to already accept the integration of social justice within sustainable agriculture as a given and were eager to address injustice. For example, one student said, "I think that since most of us are familiar with the general principles of social justice, and were already acquainted with the Tanzania case study, it would have been more interesting to discuss other specific examples of social injustice besides the oppression of Tanzanian refugees." Another student commented, "Discuss more instances of social injustice, especially ones that were overcome. That way we could learn how to deal with oppression by example." While these statements are critiques of our module, we also viewed them as a sign of success of our efforts — many new students entering the program viewed social justice as another component of sustainable agriculture, not something that needed to be overemphasized or highlighted explicitly, and were eager to engage in addressing it.

Our goals in the module were two-fold. We wanted to both create a space for the discussion and exploration of what social justice means in the context of agriculture and to provide students language and conceptual tools to address social justice questions in the context of agriculture. We were successful on both fronts. The percentage of students who agreed or strongly agreed with the statement, "I want to learn more about social justice in the context of sustainable agriculture" increased each year that we led the module. While 63% of the students wanted to learn more about social justice in the context of sustainable agriculture in 2010, 75% of survey respondents in 2011 agreed or strongly agreed with this sentiment. In relation to feeling more comfortable engaging in social justice questions, we found that in 2010, 38% of survey respondents agreed with the statement, "I feel empowered by what I learned in this module." In contrast, in 2011, 75% of respondents agreed or strongly agreed with the same statement. We believe that these changes in students' willingness to learn more about social justice issues and their increased feelings of empowerment were influenced by our change in approach: by placing students first within the larger context of the institution, we were able to get them to see connections systemically. In 2012, the number of students agreeing or strongly agreeing with both statements declined. Only 23% of students in 2012 agreed or strongly agreed that they felt empowered by what they learned in the module, which, given the students' comments, we interpret as a reflection of our module's focus on defining terms and making the case for social justice's inclusion in sustainable agriculture. Due to the fact that social justice

had already been approved as a thematic area, and that the 2012 cohort was unaware that its validity had ever been in question, our module's content no longer addressed what the majority of students felt was most needed. Overall, the 2012 cohort's evaluation of the social justice module remained positive; however, we decided not to continue the module in 2013 because members of the working-group had to focus on their on-going academic work.

Our initial integration efforts also included the SusAg 600 colloquium seminar that meets weekly and includes guest speakers and discussion of key issues in the field (GPSA, 2011a). This space was created for students and faculty to come together weekly to discuss issues related to sustainability, with the goal to create a sense of community and a desire to take what we are learning in our courses and our research work to practice. Working with this course's student organizers, we scheduled a series of three seminars in the fall of 2011 that focused on social justice and touched upon diverse perspectives and approaches, including philosophy, food access, and workers' rights. We received positive feedback from students about these seminars and feel that the scheduling of these in conjunction with the SusAg 610 social justice course modules lent credibility to our efforts through their integration within the course curriculum.

Social Justice Thematic Area

Throughout our process, we have been very mindful of our role as students and of our temporary status within the program. In 2010, we began to look for ways to institutionalize our efforts, one of which was through the creation of a new social justice thematic area. One of the purposes of the GPSA thematic areas is to encourage students to take courses outside of their disciplines or comfort zones in order to increase systemic thinking and interdisciplinarity. By adding a social justice thematic area, we hoped to encourage students who might not otherwise take courses in this area to do so, while also recognizing that this addition to the curriculum would legitimize the incorporation of social justice within our program's definition of sustainability.

We submitted a social justice thematic area proposal to the GPSA curriculum committee in Spring 2011, and they accepted it in Fall 2011. In April 2012, the learning outcomes⁷ for the thematic area were accepted and finalized by the curriculum committee (Appendix III). Additionally, a complete list of existing Social Justice courses from the Higher Education

⁷ Inspired by the Social Justice Certificate Program's learning outcomes

program, as well as several existing courses in Sociology, Women and Gender Studies, and Anthropology, were proposed to the curriculum committee for inclusion in the new thematic area. These were also approved. The benefit of these courses is that they are already offered on campus, which decreases the amount of administrative work in the logistics of course creation, eases the process of their facilitation, and does not present a funding challenge to GPSA. However, we acknowledge that incorporating courses from other departments might hinder GPSA from being proactive in creating its own courses incorporating GPSA faculty members' experiences and knowledge. Ideally, the GPSA faculty would teach or co-teach social justice-focused classes with SusAg course designations in order to fully integrate and institutionalize the thematic area within the program curriculum. The thematic area was ultimately approved by our GPSA coordinating council, the governing body of our program, in Spring 2012, and the approved courses were included in our revised Graduate Student Handbook in the fall of 2013.

A Reflective Conversation about Our Work

So, there are not many spaces to reflect about different topics and to question the system, and this is what we have been doing...to think about different things, including our own assumptions...and to reflect about different things...and to question the system. That is for me what really encourages me to be part of this. I consider this a great opportunity to participate in these meetings to talk about our own assumptions and to discuss the things we see every day and sometimes we don't question them. We take them for granted, including the academic content that we see in classes....also, the different hierarchy that exists within the academic institution like with our professors and other students.

-- Working Group Participant #3

An unintentional and very valuable benefit of our initiative was the creation of a safe space for us, the authors, to discuss the meaning of social justice and how it is part of the epistemological foundation of the sustainable agriculture movement. We were eager to share and exchange resources, reading lists, questions, and experiences with other social justice, student-led curriculum change efforts. Our working group continues to provide a support system and network for us today. Our successes were "not simply about what occurs on the micro level (i.e., in the classroom or program level) but also the changes that we hope to see at the department, college, and institutional level" (Osei-Kofi et al., 2010, p. 335).

We value the interdisciplinarity of GPSA, as it creates opportunities to learn and practice social justice through conversations about sustainability and systemic changes among students, faculty, and staff from the natural and social sciences. Yet, we have to do this by sharing what inspires us in our work, by practicing communion, cooperation, and dialogue through our research and study. Hopefully these actions will encourage learning about inclusiveness and liberation. Justice comes in relationship to the other, not by manipulating the other:

Education either functions as an instrument that is used to facilitate the integration of the younger generation into the logic of the present system and bring about conformity to it, *or* it becomes "the practice of freedom," the means by which men and women deal critically and creatively with reality and discover how to participate in the transformation of their world. (Freire, 2000, p. 34)

We realized that as students working to directly incorporate social justice within the GPSA curriculum, we have changed the way in which we approach social justice and educational institutions. This experience has given us the opportunity to "reflect on doing" (Freire 1998) and to create curriculum change in the context of higher education, enriching our formation as graduate students and future scholars as well as our growth as critical thinkers. We recommend that other students and scholars engage in similar endeavors to encourage commitment to social justice concerns and actions within their educational institutions.

Conclusions and Recommendations

The only thing I care about is that they understand that they can do the same thing. If there is something that they are super passionate about and they want to put the work in, then they can make the change. Because that is how this program has grown, which I think is awesome. I don't think that there are a lot of grad school programs at Iowa State or maybe anywhere that are *that* student-driven....from the get-go and the changes that have happened. I think that if somebody is just looking through programs, they might say, "Hey, this one has a social justice thematic area." That means that that matters there, and I think that people will come in with different expectations or they will have their expectations met in a different way then perhaps what we experienced.

-- Working Group Participant #2

The formal addition of a social justice thematic area acknowledges that social justice questions are integral to sustainable agriculture and emphasizes their importance to the GPSA curriculum. We hope that the inclusion of social justice within GPSA will provide pedagogical and epistemological content to education and foundations of sustainable agriculture, respectively. We strive to create safe spaces where we, as GPSA graduate students, can reflect on "the contradictory position [we] occupy within an institution that has historically served the status quo" (Osei-Kofi, 2010, p. 17). In these spaces, students should "be willing to ask questions about the methods and ethics of our struggle, including questions about what role, if any...[funding from big transnational agricultural companies] should play in this struggle" (Osei-Kofi, 2010, p. 18). A tension that remains is how to continue to engage our peers in a way that challenges our work and positionality without alienating one another.

In addition to pedagogical challenges as we tried to engage students, we also remain challenged in our outreach to faculty:

The SJ group is certainly connecting with the students, but not so much the faculty. If you want this to be an underlying, foundational principle of GPSA, then more faculty have to understand the concept. If you want social justice to be in all the classes, then the teaching faculty needs to be educated.

-- Professor 3

GPSA faculty often take on courses and commitments beyond their home departmental appointment, and so "professional development of faculty [may] be required because most were taught and...teach in a manner more closely linked to the traditional paradigm and therefore may have difficulty teaching in a more progressive fashion" (Parr et al., 2007, p. 531). Nevertheless, we want to recognize that some faculty members were willing to work with us in this effort and others significantly contributed to it.

Although resistance to implicating oneself or one's research within the dominant, conventional agricultural system may remain, we have witnessed the shifting of discourse in our program. In 2012, students began to volunteer at Food at First, a local non-profit engaging in food gleaning, a free food market, and a free meal program for those in need of food or company in our community. From this experience, several students began a community garden in the summer of 2013 to grow fresh food for the free food market and the community meal program. The first year of this project was successful and continues to grow. In 2014, the GPSA graduate student group earned the ISU Live Green! Excellence Award for their volunteer and outreach work with the Food at First program. We view this student-led outreach program addressing food insecurity in our community and the support of our GPSA students, faculty, and even the university itself as evidence of shifting discourse around social justice and agriculture at ISU.

Our initial concern about the social justice gaps within the GPSA curriculum inspired our subsequent organization and action. We hope that our efforts to further curriculum integration will impact GPSA's future and will attract students and faculty eager to explore questions of how we might create a more inclusive definition of a sustainable society – one in which social progress is not limited to economic indicators, and where social justice can recognize the needs of everyone. Through this more inclusive vision, we hope that more individuals will honor the environment's capacity to disperse, absorb, recycle or otherwise neutralize these needs' harmful effects to humans and the environment (Martin & Hall, 2002), recognizing ourselves as members of "bio-communities" (Leopold, 1989) rather than owners of them. The adoption of the curriculum changes facilitated the institutionalization of our work; however, curriculum change alone is not enough and much work remains. If we are to be effective agents of change in creating a more inclusive and just agricultural movement, we must continue to find ways to work together, share frameworks and tools, challenge assumptions, and contest hegemony within and beyond our academic programs. We hope that this case study will be of use and will

provide encouragement to others working to create change within their own academic programs or other institutions.

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Appendix I Required (core) courses within the Graduate Program in Sustainable Agriculture

Core	Title	Description	Our SJ	Timing
Course Listing			Integration Efforts	
SusAg 600	Sustainable Agriculture Colloquium	discussion of key issues in the field (GPSA 2011a): MS students must enroll	Coordinated three social justice-focused seminars	Fall 2011
SusAg 509	Agroecosystems Analysis	farms, production facilities, distributors at varying scales and understanding multiple perspectives within the agroecosystem; it is generally a student's first course in the	Provided suggested readings (2010, 2011) and a list of question prompts (2011)	
SusAg 610	Foundations of	fnrougn an interdisciplinary theoretical framework (GPSA, 2011a); it is generally taken during a student's first semester in	ANT DATCHICVA	Fall 2010, Fall 2011, Fall 2012

Appendix II

Summaries of participant evaluations of the social justice course module within SusAg 610 Course during fall 2010, 2011, and 2012.

2010 Social Justice Module Evaluation Responses

Please indicate to what degree you agree or disagree with the following statements (1 = strongly disagree, 5= strongly agree). n=8 2 3 4 5 N/A 1 25.0% 0.0% This course made me think about my work 12.5 12.5 50.0% 0.0% differently. % % (4) (0) (2) (0) (1) (1) 0.0% I think that social justice is an important issue 12.5 0.0% 0.0% 87.5% 0.0% when thinking about sustainable agriculture. % (0) (0) (0) (0) (7) (1) I feel empowered by what I learned in this 25.0 12.5 25.0% 37.5% 0.0% 0.0% module. % % (3) (0) (0) (2) (2) (1) This module left me with lots of questions. 0.0% 12.5 12.5% 62.5% 0.0% 12.5% (0) % (1) (5) (0) (1) (1) 25.0 12.5 0.0% 37.5% 25.0% 0.0% I want to learn more about social justice. % (2) % (0) (3) (0) (2) (1)I want to learn more about social justice in the 12.5 25.0% 37.5% 12.5% 12.5 0.0% context of sustainable agriculture. % % (0) (2) (3) (1) (1) (1) I want to learn more about social justice in the 12.5 12.5 0.0% 25.0% 37.5% (3) 12.5% context of sustainable agriculture. % (1) % (1) (0) (2) (1)

Please indicate to what degree you agree	e or disagre	e with th	ne follov	ving stat	ements (1 =	
strongly disagree, 5 = strongly agree). n=	=8					
	1	2	3	4	5	NA
This module made me think about my	0.0%	12.5%	37.5%	50.0%	0.0%	0.0%
work differently.	(0)	(1)	(3)	(4)	(0)	(0)
I think that social justice is an important	0.0%	0.0%	0.0%	25.0%	75.0%	0.0%
issue when thinking about sustainable	(0)	(0)	(0)	(2)	(6)	(0)
agriculture.						
I feel empowered by what I learned in	0.0%	0.0%	25.0%	50.0%	25.0%	0.0%
this module.	(0)	(0)	(2)	(4)	(2)	(0)
This module left me with lots of	0.0%	0.0%	0.0%	50.0%	50.0%	0.0%
questions.	(0)	(0)	(0)	(4)	(4)	(0)
I want to learn more about social justice.	0.0%	0.0%	12.5%	37.5%	50.0%	0.0%
	(0)	(0)	(1)	(3)	(4)	(0)
I want to learn more about social justice	0.0%	0.0%	12.5%	12.5%	75.0%	0.0%
in the context of sustainable agriculture.	(0)	(0)	(1)	(1)	(6)	(0)
2012 Social Justice Module Evaluation	n Resnonse		•			

2011 Social Justice Module Evaluation Responses

2012 Social Justice Module Evaluation Responses

Please indicate to what degree you agree or disagree with the following statements (1 = strongly disagree, 5 = strongly agree). (n=13)

strongly disagree, 5 = strongly agree). (n	=13)					
		2	3	4	5	NA
This module made me think about my	0.0%	30.8%	23.1%	30.8%	7.7%	0.0%
work differently.	(0)	(4)	(3)	(4)	(1)	(0)
I think that social justice is an important	0.0%	0.0%	7.7%	7.7%	84.6%	0.0%
issue when thinking about sustainable	(0)	(0)	(1)	(1)	(11)	(0)
agriculture.						
I feel empowered by what I learned in	7.7%	30.8%	38.5%	23.1%	0.0%	0.0%
this module.	(1)	(4)	(5)	(3)	(0)	(0)
This module left me with lots of	15.4%	23.1%	38.5%	7.7%	15.4%	0.0%
questions.	(2)	(3)	(5)	(1)	(2)	(0)
I want to learn more about social justice.	7.7%	0.0%	23.1%	38.5%	30.8%	0.0%
	(1)	(0)	(3)	(5)	(4)	(0)
I want to learn more about social justice	0.0%	7.7%	23.1%	38.5%	30.8%	0.0%
in the context of sustainable agriculture.	(0)	(1)	(3)	(5)	(4)	(0)

Appendix III

GPSA - Social Justice Thematic Area Outcomes

Students will be able to . . .

Apply concepts and theories of social justice at macro-, meso-, and micro-level issues within agricultural institutions and explain the role of these institutions within the larger social structure. Articulate the dynamics of privilege and oppression (including the dynamics of dominant and subordinated groups) at individual, group, and systems levels in terms of impact on agricultural and food systems and resources.

Recognize multiple ways of knowing, foreground subjugated knowledges, and exercise critical consciousness to create a more ecological and sustainable world.

Implement strategies for creating sustainable food systems based on social justice and democratic decision-making that sustain human communities and environments. Work with diverse stakeholders (communities, agencies, institutions) to address and solve

social justice problems in food systems.