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## Public Action for Public Science: Re-imagining the Leopold Center for Sustainable Agriculture

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### ABSTRACT

In Iowa, the heart of the United States Corn Belt, a small, publicly funded research center has championed alternative agricultural practices and fostered the creation of a sustainable agricultural community over the past 30 years, but its future is now uncertain due to funding cuts and increased corporatization of the university. We share our engagement in a grassroots campaign to restore and, ultimately, to re-imagine the future for the Leopold Center for Sustainable Agriculture as an act of ecofeminist praxis. This process documents the beginnings of a transformative moment. We find opportunities to begin a new dialogue about the place of a sustainable agricultural center, the role of science created by and for the public, and a new relationality among scientists, farmers, animals, and the Earth.

**KEYWORDS** Public science; agriculture; land-grant university; ecofeminism; grassroots

In spring of 2017, the Iowa state legislature passed a bill to defund the Leopold Center for Sustainable Agriculture (Leopold Center). The cuts were a part of a broader round of austerity measures advanced by the 2017 Republican-controlled legislature, measures characteristic of the party's socially and fiscally conservative policy positions. Established with public funding from the state legislature in 1987, the Leopold Center has served for 30 years as a community-oriented agricultural science center housed at Iowa State University (ISU)—a land-grant university<sup>1</sup> in Ames, Iowa, United States. News of the cuts sent waves through the sustainable agricultural community and inspired a groundswell of support in Iowa and nationwide. We share our efforts as active participants in an ongoing grassroots campaign in partnership with

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<sup>1</sup>The 1862 Morrill Act established Iowa State University, originally founded in 1858, as the first land-grant university in the United States (Iowa State University, "History of Iowa State," n.d.). As a land-grant university, Iowa State's mission is to "create, share, and apply knowledge to, make Iowa and the world a better place" by "sharing knowledge beyond the campus borders" (Iowa State University, "Mission and Vision," n.d.).

community organizations to restore the Leopold Center and, ultimately, to reimagine the center's future as part of a decolonized food system.

The extractive industrial agriculture predominant in the U.S. Corn Belt relies upon increased industrialization of hog and poultry production in confinements, intensification of corn and soybean production, and concentration of land among descendants of white settlers, with extreme consequences upon the biophysical and social landscapes. The Leopold Center represents a counterweight to that model. Still, its situatedness within relations of colonial, patriarchal, and capitalist economies has challenged its ability to carry out its mission, and ultimately has threatened its very survival. Over its history, the Leopold Center has been unable to feasibly work outside of these relations on a broad scale, leading some of its supporters to question whether it has been the right vehicle to move Midwestern Corn Belt agriculture beyond extraction and toward regeneration.

We have wrestled with these concerns. We are each current or former graduate students of ISU's interdisciplinary Graduate Program in Sustainable Agriculture, where we shared a close partnership with the Leopold Center that has benefitted us in our scholarship. Each of us has either worked at the Leopold Center through graduate assistantships and/or received graduate research funding from it, including critical research on the construction of race and other forms of marginalization in local food systems and a women-led participatory research project in Iowa's most agriculturally polluted watershed.

For us and for many current and former students, researchers, community leaders, and farmers, the Leopold Center has been the heart of alternative agricultural visions in Iowa, offering an oasis that welcomed debate, dialogue, and creativity about agrifood systems transformation on a campus and within a state that readily advocate and embrace the mythology that corporate, monoculture agriculture feeds the world. Though the Leopold Center exists within a larger university with a history of perpetuating science as a colonizing practice, the center has nonetheless been a space welcoming of creativity and criticality about transformation toward an agriculture grounded in mutually beneficial relationships, care, and justice. Our current campaign for the Leopold Center's future places these tensions at the center of our work, and we recognize the challenge of rebuilding a new Leopold Center that leads in decolonizing science and agriculture.

## **Our Vision for a Decolonized Sustainable Agriculture**

Our campaign is inspired by our participation in the Women, Food and Agriculture Network (WFAN).<sup>2</sup> WFAN is a national nonprofit organization based

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<sup>2</sup>As of 12 November 2017, the Women, Food and Agriculture Network states on their website that their mission is "to engage women in building an ecological and just food and agricultural system through

in Iowa with ecofeminist roots, established in the early 1990s by organic farmers, food activists, and scholar-activists and currently the only U.S. non-profit organization with the explicit mission of serving women in sustainable agriculture. An ecofeminist care for othered others, built upon a foundation of non-dominance and interdependence, informs our work.

Our ecofeminist vision of a relational agriculture originates in indigenous epistemologies, feminisms, and agricultural practices, drawing from LaDuke's (2017, xii) wisdom that: "Indigenous agriculture—based on biodiversity and the use of multiple locally adapted crops—is the real future for agriculture." We envision a biologically diverse agriculture, with care for plants, animals, biota, and climate. We envision a socially diverse agriculture in which people of color, poor people, indigenous people, queer people, women, and other marginalized people participate as equals, co-producing agricultural knowledge and practices. We envision a more economically diverse agriculture, experimenting in alternative and non-capitalist forms of communally nourishing one another. Finally, we envision an epistemologically diverse agriculture that respects a pluriverse of ideas, methods, research, and practices, and is founded upon principles of decolonization and care. It was and continues to be our belief that the Leopold Center could support agricultural research and community that—in its focus, its methods, and its public engagement—will bring us closer to creating this future together.

Our praxis is guided by an array of diverse yet interrelated feminist theoretical and methodological insights including ecofeminism (Shiva 2010), transnational and postcolonial feminisms (Alexander and Mohanty 2010; Smith 1999), political ecology (Harcourt, Nelson, and 2015; Rocheleau, Thomas-Slayter, and Wangari 1996), economic geography (Gibson-Graham 2008, 2011), and scholar-activism (Gilmore 2008; Nagar 2014). In our feminist engagement, we are committed to a public science based upon transparency, critical reflection, accountability to marginalized humans and other species, and diverse ontologies and epistemologies. However, we acknowledge the constraints of our feminist scholar-activism; as white women inheriting the culture of European settlers, we question issues of voice and locating ourselves within institutions of power through which we re-enact coloniality as we try to dismantle it.

Historically, the Leopold Center has not committed to an ecofeminist and decolonial agriculture, nor has it explicitly rejected these commitments. Its track record includes a long history of co-production of knowledge in the public's interest (albeit a public of predominately white, male farmers and

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individual and community power." The organization was born in 1994 when Denise O'Brien, an organic farmer from Iowa, and Kathy Lawrence, a food justice advocate from New York, organized a working group of women in agriculture to attend the United Nations 4th World Conference on Women in Beijing and today continues to organize women through programs offering on-farm mentorship experiences, political campaign training, and land management education.

landowners): the startup and funding of farmer-directed research projects, farmer-led research networks, and projects centering the experiences of immigrant, refugee, and women farmers that reach beyond the status quo. The Leopold Center was an early supporter of WFAN, providing funding for WFAN conference sponsorships and research projects. Even as the Leopold Center was constrained politically from being an explicit voice in support of systems change, it provided seed money and space for groups like WFAN and scholar-activists like ourselves to find, share, and create community to further the work of systemic change in the agrifood system.

When we learned of the funding cuts and began to organize a campaign, we assumed that our ecofeminist and decolonial visions would be dismissed as a lower priority than the agrarian visions of green growth promoted throughout the Leopold Center's history and by many of its supporters. However, we have found that the reactive energy created through the Leopold Center's defunding has created space to cultivate an alternative vision for the center as a leader for a new, transformative direction, one that prioritizes the health of communities over the profits of corporations, values social equity and biodiversity on the landscape, and prepares the next generation to address the pressing challenges posed by extractive agriculture. In the reactive moment of Leopold Center's defunding, we embraced the opportunity to challenge the status quo and to share ideas with other supporters who were ready to mobilize for change toward an ecofeminist future.

We have practiced an activism of alliance against the loss of public science, or publicly funded science which includes and benefits the public good, elevating a new vision for the Leopold Center and thereby a new vision for agriculture in Iowa. Our allied activism has included publicly speaking out against the government and private industry interests that orchestrated the Leopold Center's defunding and mobilizing other Leopold Center supporters to do the same. We have defended the center's past accomplishments as a significant step forward for Iowa agriculture. Even more importantly, now, in this time of increased attacks upon the public good, we advocate for a future-forward vision prioritizing the interconnected health of our communities.

In the remainder of this article, we first chart the colonial history of Iowa and Iowa's land-grant university as setting the stage for today's practices of industrial agriculture and colonized agricultural science. We consider this historical context in tandem with the creation and dismantling of the Leopold Center, placing the center simultaneously in connection and in tension with its embeddedness in the land-grant university system. We trace the Leopold Center's defunding as one of many instances of colonized science dominating spaces that should belong to a decolonized public science. Paradoxically, in that act of colonization, we simultaneously found an opportunity for a praxis of decolonization—for joint efforts with allied activists to advocate for a newly imagined and re-oriented Leopold Center. In the final section, we

examine the extent to which our allied activism and public engagement show promise of an ecofeminist future—where we have seen hopeful signs of transformation and where our collective efforts have fallen short.

## Monoculture and Extractive Economies of Production

Iowa's landscape reflects a history of colonization, maintenance of white supremacy, and heteropatriarchy.<sup>3</sup> Today in Iowa 99.8 percent of principal farm operators are white and 92 percent of principal farm operators are men (USDA NASS 2016). The first official European settlement in Iowa was founded in 1833, following the Black Hawk Purchase. Not a purchase at all, the federal government forced the Sauk and Meskwaki people to relinquish a portion of land in eastern Iowa as punishment for resisting an 1829 federal government requirement to vacate the land in western Illinois (Harlan 1931). The Sauk and Meskwaki eventually complied, but only after the significant loss of life via the Black Hawk War. Soon after the war, with the invention of John Deere's steel moldboard plow, European-American settlers began to till the prairies and establish farms.

The land where ISU sits today was colonized and tilled, and federal legislation established a college specializing in the proliferation of colonization and tillage in a span of three decades. ISU was first founded as the State Agricultural College and Model Farm in 1858. It became a land-grant college in 1864, when Iowa became the first state to accept the Morrill Act, federal legislation which granted federally owned land to states for colleges focusing on the teaching of practical agriculture, science, and engineering in partnership with farmers and rural communities (Food and Water Watch 2012; Iowa State University, n.d.). As thousands of settler-colonizers poured into the state and white men established claims to the land as private property, railroads were constructed and farms began to industrialize to meet demands for growing regional agricultural economies. To facilitate the cultivation of row crops, they altered Iowa's original prairies and wetlands through subsurface tile drainage.

Today farming remains central to Iowa's economy and cultural identity, and farming practices continue to prioritize profit over the well-being of the biotic community. Iowa is second in the United States only to California for the value of agricultural goods exported, and first in total exports of grains (corn and soybeans) (USDA NASS 2016). The high rate of grain production

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<sup>3</sup>We appreciate a reviewer's comment about the importance of a critical perspective in regards to inter-species relationality and the exploitation of animals in all agricultural systems, not only industrialized, corporatized models of agriculture. We use the term "colonization" to mean the colonization of the biotic community, inclusive of land, people, and animals, and agree that we must be intentional—even in our nascent re-imagining of new systems—if we are to avoid the replication of existing systems of power and oppression within agricultural systems.

makes Iowa well-suited for efficient livestock production. There are just over three million people live in Iowa (US Census 2017), but each year Iowa produces 22.4 million hogs and 60 million chickens (IDALS 2017). Iowa is first in the nation in the export of hogs, pigs, layers, and pullets (USDA NASS 2016). This productivity comes at the expense of community well-being and at significant cost to resources considered public goods, such as the quality of air, soil, and water.

“Industrialized agriculture is toxic, and it is also unsustainable,” writes LaDuke (2017, xii), and Iowa is perfect case study. As farms increase productivity, Iowa’s soil erodes away at the rate of tons per acre, and agricultural run-off increasingly pollutes waterways (Cox, Hug, and Bruzelius 2011; Naidenko, Cox, and Bruzelius 2012). Marginal lands that otherwise may have been placed into federal conservation programs have been cultivated during recent years of high market prices for corn and soybeans (Alexander et al. 2008), exacerbating the problems. In 2016, the Iowa Department of Natural Resources listed 608 of 1378 assessed waterbodies on the federal 303(d) list of impaired waters, meaning they were out of compliance with the federal Clean Water Act (DNR 2016). The most frequently cited impairments (84 percent) were high rates of *E. coli* bacteria, biological indicators, and fish kills (DNR 2016). The health risk posed by this high rate of water pollution inspired a federal lawsuit against agricultural drainage districts brought forward by Des Moines Water Works in 2015, the water utility providing drinking water to half a million Iowans (Kardas-Nelson 2015). Though the lawsuit was dismissed in 2017, Iowa’s water quality continues to be debated in the state legislature (Eller 2017). Only weeks after the lawsuit’s dismissal, Republicans in the state legislature proposed defunding the Leopold Center, suspicious timing that one Leopold Center staffer said “has led to many Iowans scratching their heads” (Collins 2017).

Iowa is a political powerhouse when it comes to agricultural practices and policies in the United States and abroad. President Trump appointed former Governor Branstad as Ambassador to China, where Iowa exports an increasing amount of pork and soybeans (Eller 2016). Iowan agricultural leaders have twice served as Secretary of Agriculture. Former Governor Vilsack served as Secretary of Agriculture under President Obama from 2009 to 2017, and Henry A. Wallace—founder of the Hi-Bred Corn Company (now known as Dow Dupont Pioneer)—served as Secretary of Agriculture from 1933 to 1940 before becoming vice president under President Roosevelt. These leaders have positioned the Iowa landscape as best used for the industrial-scale production of monocropped commodities, and ISU continues to play a critical role in the proliferation of this system.

State and federal public funding historically provided the impetus for collaboration and innovation at ISU and other land-grant universities in the United States. However, beginning in 1982, with the passage Bayh-Dole

Act, public science has come under threat as land-grant universities were encouraged to partner with private partners to develop patented products and public funding for public research began to decline (Food and Water Watch 2012). As state funding to the university decreased, researchers and their departments looked to the private sector for funding or, in some cases, ceased to exist (Food and Water Watch 2012).

The agricultural private sector in Iowa is comprised of corporations such as Monsanto, Syngenta, and DuPont Pioneer. As an example of agribusiness-university partnerships, Monsanto alone has provided ISU more than \$2 million in research grants, including support for research on High-Beta Carotene Maize, and \$2.4 million in gifts, including mass spectrometers valued at over \$1 million to the Plant Sciences Institute (Iowa State University Foundation, n.d.). The Leopold Center's offices sat at the end of a long, nondescript hallway in ISU's Curtiss Hall above a newly remodeled Monsanto Student Services and the Bruce Rastetter Center for Agricultural Entrepreneurship, named for one of ISU's private donors whose company's partnerships with the university have included a questionable agricultural development project in Tanzania deemed by many to be a land grab (Oakland Institute 2011). The juxtaposition evident here is not unique to ISU. Today land-grant universities' research is heavily privatized, funded by corporate sponsors and private endowments (Food and Water Watch 2012). ISU's leaders defend these relationships; when an undergraduate student questioned the relationship between Monsanto and the university, the then-dean of the ISU College of Agriculture and Life Sciences responded to the student with a personal attack (see Walsh 2008; Wintersteen 2008).

Between 2006 and 2010 ISU's agronomy department received \$19.5 million in research grants from private-sector donors, which comprised 48 percent of the department's grant funding (Food and Water Watch 2012). We fear that extent of private-sector support for research has had a significant influence on the questions (not) researched by university researchers, privileging those that further the advancement of an extractive rather than regenerative agriculture. As Patricia Allen (2004) explains, governmental agricultural institutions and land-grant universities in the United States perpetuate a "common sense" of the agrifood system that becomes hegemonic, limiting possibilities for greater inclusivity and diversity in research and practice of agricultural science. ISU's focus has been on "feeding the world"<sup>4</sup> through input-intensive, industrialized agriculture, even as research increasingly finds that small-scale, agroecological farming is what actually feeds the world (Ahmed 2014; GRAIN 2014). The explicit and implicit impacts of these funding changes come at great cost to the public good:

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<sup>4</sup>See the ISU-CALS Feeding the World Seminar Series <http://www.ans.iastate.edu/feeding-world-seminar-series-fall-2016>.



The power of epistemology—the process through which people come to know their world—is that it can limit the ways in which solutions are derived, which options are considered available and appropriate, and what types of changes are likely to take place. (Allen 2004, 90)

Epistemological constraints at the university limit practices on the ground, resulting in a monoculture of thought and practices (Shiva 2015). It was of little surprise, then, that even as ISU broke their own record for external funding in the fiscal year 2016 (Krapfl 2016), they have not—to date—initiated a fundraising campaign to refund the Leopold Center.

We take seriously the Morrill Act's legislated commitment to public science while acknowledging the consequences of the land-grant university upon contested lands with contested funding sources. We call into question the inescapable history and present-day continuation of land ownership and land granting as colonial practices that have dominated marginalized peoples, diverse life forms, and diverse practices.

### **In the Belly of The Beast: The Leopold Center's Evolution**

The Leopold Center was founded at a pivotal moment in Iowa's agricultural history. Rural and farming communities were decimated by the 1980s Farm Crisis when thousands of farm families lost their livelihoods as interest rates skyrocketed and grain prices plummeted. Meanwhile, increasing mono-cropping took a toll on Iowa's soil and water quality. Across rural Iowa, families abandoned their communities to find work elsewhere. With the state's agricultural identity threatened, the Leopold Center offered a publicly funded glimmer of hope.

The Leopold Center is named for Aldo Leopold, born in Burlington, Iowa in 1887. His *Sand County Almanac* (Leopold 1989) advocates for humans to co-exist with nature as a member, rather than conqueror, of the biotic community. The Leopold Center's founding through the 1987 Iowa Groundwater Protection Act was an innovative and future-forward act of bipartisan policy-making. The act established a tax on nitrogen fertilizer sales, a portion of which was allocated to the Leopold Center for sustainable agriculture research, education, and outreach, with a specific emphasis on agricultural conservation to preserve water quality. The Leopold Center's founding provided communities an opportunity to partner with social and biological scientists in developing an alternative trajectory for Iowa—a future where farms thrive, water is clean, and communities lead and benefit from their agricultural economies.

Additionally, its founding provided continued public agricultural science at a time when the legacy of the land-grant university was being increasingly challenged by the defunding of higher education and by corporatization of science. Even as ISU focused on expert-driven, large-scale mono-cropping,

the Leopold Center advocated for alternative agricultural research led in partnership with farmers and rural communities. It championed innovative research topics rarely studied or funded at the university: integration of perennial and native species within agricultural systems, hoop barns for alternative hog production, tools for creating more inclusive food systems, value-added agriculture programs, organic crops research, and methods of participatory conservation and food systems research. This work has supported local and statewide food systems groups, regional food hubs, and the work of non-profit organizations. Since 1998 its projects established conservation practices on over an estimated 22,500 agricultural acres, helping to diminish nitrate runoff and soil erosion (LCSA 2017).

Though the legislators' move to defund the Leopold Center in 2017 was unexpected, the center had been under pressure for nearly a decade. Agribusiness interference resulted in a failed 2010 search for a new Leopold Center director, documented by national media (Bartlett 2010). Then-ISU President Geoffrey stressed that the Leopold Center director should "walk the middle ground" between agribusiness groups and sustainable agriculture advocates (Bartlett 2010). The center's mission to address the harms caused by industrialized agriculture challenged the status quo and left the center vulnerable to attack even as it attempted to occupy middle ground. In 2015, the Leopold Center's local foods team moved to University Extension, further diminishing the staffing capacity of the Leopold Center (ISU Extension and Outreach, n.d.).

Despite pressures and changes, the Leopold Center has accomplished a significant body of work in support of sustainable agriculture:

The Leopold Center has a national reputation for how it had supported cutting-edge research which has led to significant dividends for Iowa—cleaner water, better conservation of natural resources, and greater agricultural vitality ... Between 1998 and 2017, the Leopold Center awarded more than 500 competitive grants coming from every Iowa county. These awards often acted as seed money to leverage other funding for research and demonstration projects, education, or planning and capacity-building efforts, aimed at developing profitable and sustainable farming systems for Iowa. The work of the Leopold Center has made a difference in Iowa and beyond. (LCSA n.d. ["About"])

Some have theorized that it was this continued work examining and questioning the status quo of agriculture that made the Leopold Center a target for state legislators (Collins 2017).

In April of 2017, Iowa's Republican-controlled state legislature approved legislation to defund and close the center, and to redirect its funding to the more narrowly focused Iowa Nutrient Research Center housed at ISU (Collins 2017). The Iowa Nutrient Research Center began in 2013 in response to Iowa's 2008 Nutrient Reduction Strategy, a plan to reduce phosphorus and nitrogen pollution in Iowa's waters and, eventually, Iowa's contribution to the

Gulf of Mexico dead zone, by engaging farmers in specific voluntary conservation practices (DNR 2013; LCSA, n.d. ["Managing Nutrients"]). While we agree with the importance of water quality issues, we underscore the need for public science, especially including transparency in funding allocation decisions and greater accountability in disseminating and communicating results to the public. With the Leopold Center being defunded, the public has lost a research center that used a transparent review process for grants, had an advisory board comprised of stakeholders from various sectors of Iowa agriculture with attention paid to nonprofit groups and farmers, and was closely connected to the Graduate Program in Sustainable Agriculture, which critically examined agriculture's status quo.

In losing the Leopold Center's research we are concerned by a return to narrow research agendas limited to technological fixes to corn and soybean systems, solutions which do not inspire systems transformation nor challenge the business models long held by agribusiness in Iowa. Emphasizing a narrow technological fix approach, the Nutrient Research Center's appointed interim director, Hongwei Xin, is well published in science specifically concerned with the increased efficiency of poultry and swine confined feeding operations. We argue that this type of narrowly focused research conflicts with the broad community-based and ecologically based perspectives that underlie sustainable agricultural research and ecofeminist practices of agriculture (Allen 2004; Shiva 2010).

These concerns are shared by Kamyar Enshayan, a former Leopold Center advisory board member and director of University of Northern Iowa's Center for Energy and Environmental Education, who argued in a statewide newspaper that redirecting the funding from the Leopold Center to the Nutrient Research Center would downplay Iowa's environmental problems, treating symptoms of the modern agricultural system (the nutrients polluting the waterways) rather than transforming the agricultural system itself:

That leaky cropping system has been planned and incentivized by federal programs, shaped by global grain merchants who also happen to control grain markets as well as seeds and inputs. It is well-documented that it is this system, this colonizing economy, that continues to lead to rural decline. (Enshayan 2017)

Specifically, Enshayan (2017) called into question the Nutrient Research Center's existence:

It was a big mistake to create the "Iowa Nutrient Research Center." It renamed the tragedy of industrial agriculture (soil erosion, water pollution, deliberate evading of public health and labor laws by multinational meat packing plants or absentee owned egg factories, public health threats from massive hog confinement operations, pesticides and fertilizer in drinking water, manure spills, etc.) as simply a "nutrient" problem.

Kathleen Delate, a professor of organic agriculture at ISU, shared similar concerns about the transfer of funding from the Leopold Center to the Nutrient Management Center:

I conduct research, supported by the Leopold Center, to strengthen the agricultural economy of Iowa by finding practices that will reduce our dependence on petrochemicals. These include best practices for manure management, identifying new crops and crop rotations, and determining if resistant varieties and biological control can be replacements for pesticides that harm pollinators. These efforts are not duplicative with any other center. The Nutrient Research Center focuses solely on ways to reduce nitrogen runoff or leaching, and not on issues of pest management or alternative crops. (LCSA Alumni Statements, n.d.)

Yet, in April 2017, Republican legislators argued that the Leopold Center had “achieved its mission” (Obradovich 2017), despite concurrent headlines in Iowa’s newspapers reporting that over half of the state’s waterways were polluted (Jordan 2017). Thanks to public outcry organized through our grassroots efforts to preserve the Leopold Center, Iowa’s Governor Branstad used a line-item veto in May 2017 to eliminate language closing the Leopold Center, while, unfortunately, maintaining the legislation as written that redirected all of the Leopold Center’s public funding to the Nutrient Research Center (Charis-Carlson 2017).

As we write this in Fall 2017, the future of the defunded Leopold Center is uncertain. A volunteer task force is in the process of leading vision sessions across the state to hear ideas from the public about how the Leopold Center should move forward. The university has devoted little staff time or budget to organizing and advertising the vision sessions and, unsurprisingly, they have been poorly attended. Though director Mark Rasmussen is hopeful, he reported in August of 2017 that he had no reliable leads for alternative sources of financial support for the Leopold Center (Charis-Carlson 2017).

### **A New Path Forward: Re-imagining the Future of the Leopold Center**

Since receiving news of the Leopold Center’s impending funding cuts in late March 2017, we have engaged in a campaign in partnership with grassroots statewide and regional agricultural and environmental organizations including the Iowa Farmers Union, WFAN, Iowa Environmental Council, Center for Rural Affairs, Iowa Policy Project, and Practical Farmers of Iowa. The defunding of the Leopold Center presented an opportunity within the sustainable agricultural community, one that we were able to leverage for ecofeminist intervention. As has been documented elsewhere in the coalescence and transformation of environmental movements (see Ordner 2017), the threat of loss can encourage communities to create new collaborations and raise new concerns, as unlikely partners strategize together to enact a different future. We

attempted to elevate such a reactive moment as an opportunity for transformation.

As part of a core group of current students and alumni, we worked to quickly connect supporters of the Leopold Center and align our work with the work of different nonprofit agricultural organizations. Within 48 hours of the news of the Leopold Center's potential closure, we launched a petition that had national reach with over 600 signatories in its first weekend and created a website to share press and details about the legislation.<sup>5</sup> Former students and community members were quick to offer support by way of signatures, statements, and phone calls to legislators, many viewing the proposed cuts as part of the continued prioritization of production over community, as expressed by Leigh-Ann Long, an ISU graduate and researcher studying conservation. She stressed the need to bring in "diversity to Iowa's agricultural system" rather than continue to elevate industrial agriculture in Iowa that "needs fewer and fewer people to produce more and more corn, soybeans, and hogs" (LCSA Alumni Statements).

We collectively drafted memos and press releases compiling the petition signatories and testimony for the state legislators and press, emphasizing the importance of the continued funding and transparency of the Leopold Center's science. These materials included comments from Leopold Center grant recipients and former ISU students about Iowa's continued need for a Leopold Center that funded research that challenges the status quo (LCSA Alumni Statements). Jessica Soulis, Farm Marketing Specialist at Lutheran Services of Iowa's Global Greens refugee farmer program in Des Moines, shared that the Leopold Center's funding for research is "innovative and vital to the land, water, and people of Iowa," and paramount to the creation of community and change for current and future generations of those engaged in sustainable agriculture (LCSA Alumni Statements). We posted these materials online and began to organize turnout for the eventual state legislative budget hearing. Though ISU's Alliance for Iowa State did eventually issue an action alert, urging Iowans to contact their legislators in support of the Leopold Center, the initial delay of an immediate response from ISU leadership provided us the opportunity to frame the issue.

Our initial efforts culminated on 13 April 2017 at the state capitol when those testifying to the importance of the Leopold Center filled an overflowing public budget hearing. University leaders attended but did not speak at the hearing. Farmers and community leaders, such as Aaron Lehman, who identified himself as a 5th-generation family farmer and president of Iowa Farmers Union, shared personal stories about the importance of the Leopold Center that emphasized health of future generations: "[W]e need more innovation, not less. We need to build on our wise investments toward sustainability.

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<sup>5</sup>See <http://iowasustainableag.com/>.

And for this generation and the next, we need the Leopold Center more than ever” (Iowa Farmers Union 2017). Such comments stressed identification with settler narratives (e.g. 5th-generation family farmer). Indeed, the public engaged by the Leopold Center largely reflects colonial legacies of land access and distribution—leading us to problematize who the “public” in the “public science” excludes. Yet in the comments made by Lehman and others in our alliance, we identified an acknowledgment of systemic failures and call for systemic changes toward a more just agricultural system, one welcoming of diversification both in farmers and practices. Their testimonies and the subsequent organizing and advocacy around a much different future for the Leopold Center demonstrate engagement and openness to new ideas and new conversations about agricultural sustainability.

Following the hearing, the legislation to defund and close the center passed swiftly in the Republican-controlled legislature. In response, we organized a nationwide call-in to the Governor’s office and letters to the editor demanding he veto the legislation. To better shape the public narrative about the Leopold Center’s future, current, and former students collaboratively authored several op-eds over the subsequent weeks that specifically identified the danger of corporate overreach, while also lifting up a vision for the Leopold Center valuing future generations and emphasizing a more holistic public science:

Leopold described Iowa not as a food factory but as a living, working landscape in which farmers and citizens share in the abundance of its natural richness. The gift of fertile soils and fresh water can continue to shape the prosperity of the state. Yet seemingly overnight, a small group of politicians decided on the fate of a state-cherished, nationally recognized research institution without consulting the farmers, communities, students, and researchers who rely upon the Center as a key partner. This partisan politicking denigrates the spirit of Leopold himself and makes the shared goal of safeguarding our landscape for this and future generations less possible by the day. (Basche et al. 2017)

Further, these editorials identified the shortcomings of the Leopold Center in its current form and called for a better future:

[W]e envision a Leopold Center that is supported in a creative, scientific pursuit of holistic and interdisciplinary strategies to address the challenges of climate change, soil erosion, water pollution, rural exodus, land transition and food justice in our state and in our agricultural system at large. The center’s history of collaboration and its state and national support position it well to lead this overdue work.

We know that now is the time for a bold new Leopold Center that builds upon the work of the last 30 years to pursue research that partners with a variety of communities long into the future. (Basche et al. 2017)

The feedback in response to these letters—from the general public, Leopold Center’s current and former staff, and the center’s stakeholders—was overwhelmingly positive.

While our efforts to save the Leopold Center's funding were unsuccessful, the Governor vetoed the Leopold Center's closure in May 2017 (Miller 2017). This was a small victory; the Leopold Center was retained in name only, but with the transfer of all public funding to the Nutrient Research Center. This inspired some to call publicly for a new accountability to and prioritization of public health in the land-grant mission (Carter et al. 2017; Enshayan 2017). As conversations about the Leopold Center's future continue, Paul Johnson, a farmer, former chief of the U.S. Soil Conservation Service (now Natural Resources Conservation Service), and one of the Iowa state legislators who authored the historic Groundwater Protection Act creating the Leopold Center, reminded supporters of the importance that the center be *at* the university but not *of* the university. Debate continues about the home of the Leopold Center and if it is to continue to exist in some form at ISU or elsewhere. With an ecofeminist lens, we will contribute to the debate by underscoring the need for a decolonized public science.

Since the Leopold Center's defunding, our grassroots alliance has independently initiated a project to re-imagine the Leopold Center's future. In October 2017, we—the authors—applied to and were awarded a small grant from the Union of Concerned Scientists Public Science for Public Good campaign to create a series of short advocacy videos highlighting the testimony and emergent momentum we have witnessed during the past six months in support of the Leopold Center. In continued collaboration with nonprofit and grassroots partners, we have begun to plan a larger and continued campaign demanding the restoration of the Leopold Center's public funding and emphasizing the need for an institutional home that supports, rather than compromises, the Leopold Center's future as a leader toward a more just agricultural system.

It is not enough to save or restore the Leopold Center. The Center's supporters call for a new path forward. In October 2017, we facilitated a brainstorming session among the grassroots group to outline what sort of work we envisioned a transformed and rebuilt Leopold Center leading in Iowa. We followed this with a campaign strategy call in November to plan the launch of a larger, public-facing campaign. These meetings were well attended, including staff of Center for Rural Affairs and Iowa Farmers Union, board members of WFAN, members of Practical Farmers of Iowa, current and former ISU students, community leaders, former legislators, farmers, and supporters. We asked the group to respond to the following prompts: "Iowa needs a Leopold Center that ..." and "The Leopold Center supports work that ..." The statements shared by the grassroots group reflected elements of an ecofeminist, anti-capitalist, anti-colonial, and future-oriented agricultural system, including phrases such as "farming in harmony with nature," "community-led," "those growing, working with, and consuming food lead the direction," "regenerative system grounded in



relationships,” “care,” “justice,” “a place for experimentation with innovative and creative solutions to current agricultural problems,” “support for diversified land use, diversified rural economies, and diverse communities.” The group emphasized that Iowa’s agricultural future must not look like its past if we are to preserve the health of soil and water while sustaining diversity within our communities. One group member specified that the goal should not be to make the current agricultural system “a little less bad,” but to create a new system.

The grassroots alliance’s collaboration inspired seven former students to draft a new vision for the land-grant university led by the Leopold Center—to “honor and celebrate diversity of landscapes and communities, putting diversity into practice and action” through a new land-grant mission that partners “science with art, research with outreach, practicality with vision, and utility with love” (Carter et al. 2017). Central to this new vision is a “well-funded, fully staffed” Leopold Center that is “championed by ISU’s leadership as a transformative agent of change on campus and beyond” (Carter et al. 2017).

Our shared work to rebuild the Leopold Center extends beyond Iowa’s agricultural and political landscape to contribute to resistance against the growing corporatization of public science within the public university and greenwashing of sustainable agricultural movements. Through our efforts, we attempt to challenge the “monoculture of the mind” that constrains imagination and change in our practice of science (Shiva 2015). The privatization of knowledge and resources detracts from the world we are working to together, a world in which agriculture nourishes people, communities, and the planet. We share the story of this grassroots campaign to encourage others to use moments of reaction as momentum for collectively enacting new futures.

## **Reclaiming the Public in Public Science**

Our grassroots alliance continues to be proactive in restructuring our relationships with the land and one another, though often we are left reacting to changes such as the center’s defunding. We continue to use the campaign to rebuild the Leopold Center as an opportunity to make visible how corporate interests and reductive science have worked against a public science that reclaims and protects the commons. Further, we rewrite what might be possible not only for the Leopold Center, but for a new vision for sustainable agriculture in Iowa and beyond. In emphasizing the multitude of voices of those who cared about the Leopold Center and the new vision for its future, we work to move beyond defeatism by elevating the public’s concerns and care for agricultural change in our state. We pressured the governor to use his power through line-item veto to maintain the Leopold Center, if in name only. We were successful in creating a debate where there was none and in engaging



a public who had seemingly given up on holding the land-grant university accountable to its mission. Now we continue to actively maintain a space for proactive re-visioning of the Leopold Center and its future.

We have yet to see if the process of the statewide vision sessions will be co-opted or lead to the possibility of new collaborations or the remaking of the center at ISU or elsewhere. It is amidst this uncertainty that we keep working to move beyond the limitations of the land-grant university in order to build a home for inclusive and diverse agricultural visions, practices, and practitioners. We are excited to see where our vision leads and what the Leopold Center will become—a multi-university consortium boldly renamed the Leopold Center for Naturecultures (see Haraway 2016; Puig de la Bellacasa 2010, 2015) would easily be within grasp. Our campaign continues to be an opportunity for ecofeminist praxis as we work to create a new system even while constrained within and reacting to the old. We are reminded that this is a process, and one that is long. In making visible what is compromised, missing, or colonized in the land-grant university's vision for agricultural landscape change, we must also continue to collaborate with the public in imagining a new vision for a public science mission that is participatory, just, and transformative.

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