

Women taking action: Multisession learning circles, storytelling, and an ecosystem of relationships for conservation

L. Shenk, J. Eells, and W. Almitra

Abstract: Current conservation outreach largely focuses on single-day, presentation-heavy events typically addressed to farmers, mostly men. Our project created a multisession learning circle series for a cohort of women landowners that introduced conservation education through storytelling and a more conversation-driven format. Its objective was to build relationships that would empower women landowners to take action. Its outcomes, however, far exceeded expectations. The program's facilitators and the women landowner-participants not only built relationships of action but also developed a partnership that resembles what researchers call a cognitive ecology. This cognitive ecology involves collaboration among diverse and equal partners who expand each other's thinking and capacity, use tools and technologies to extend cognition (maps, soil tests, lease agreements, and simulation models), and interact with the environment. As a cognitive ecology, our group—facilitators and women landowners—produced this article together, as coauthors. Our collaboration offers a storytelling- and exchange-based framework to engage individuals whose needs have not been fully met through conventional programming. Our preliminary findings suggest that conservation programming might better empower a larger range of underinvolved stakeholders by offering multisession programming that builds an ecosystem of relationships for action.

Key words: cognitive ecology—conservation—relationships—storytelling—women landowners

Restoring land without restoring relationship is an empty exercise. It is relationship that will endure and relationship that will sustain the restored land. —Robin Wall Kimmerer, Indigenous author/scientist/scholar

I want to be able to tell a story about how this land became a meaningful place for more people than just our family. We love living here, and we don't take it for granted. But part of being a caretaker is also holding it with an open hand and allowing it to be a place for others too. —Diana, woman farmland owner

Ultimately I know that the land needs a voice, not just to be extracted from; it's an ecosystem of which the human is a part. This is what I need to be doing for the land and the climate crisis. —Irene, woman farmland owner

In conservation, the question has been asked with increasing urgency: how can we engage a larger range of stakeholders in agriculture? In response, conservationists have reached out to previously marginalized stakeholders across a larger swath of the farmland renter-owner spectrum (Masuda et al. 2021; Sawadgo et al. 2021); developed

events specifically for women (Druschke and Secchi 2014; Eells and Soulis 2013; Petrzelka et al. 2019, 2021; Wells and Eells 2011); and sought to honor and include Indigenous populations who place relationships and reciprocity at the core of stewarding the land (Johnson et al. 2021; Reid et al. 2020).

This recent work often seeks to move away from the traditional hierarchical model of academics-as-experts to acknowledge how knowledge shared by peers supports conservation action (Baumgart-Getz et al. 2012; Bregendahl et al. 2007; Druschke and Secchi 2014; McGuire et al. 2015). Perhaps most widespread in this shift is programming that involves social learning and situated learning theory where farmers who have developed expertise in a certain area share their knowledge with others to address a common problem (Bandura 1971; Cundill and Rodela 2012; Jadallah and Ballard 2021; Schusler et al. 2010; Steger et al. 2021). This approach is often included within extension-style, stand-alone events such as field days and meetings with presentations, and it has been effective for raising awareness and conveying information to the target audience represented in most of its outreach communication: male farmers (Fairchild and Petrzelka 2020).

This style of programming does not yet reach and represent a diverse enough audience. It is our premise that individuals who have remained outside the current system may be better engaged through cohort-based, sustained programming. This format addresses information in a way that also supports something deeper—a sense of connectedness and ability to put that information into practice. Though not true for everyone who has remained underengaged in conservation programming, some have remained on the periphery because of systemic marginalization. As Fairchild and Petrzelka (2022) have emphasized, researchers and practitioners have failed to address and counter inequities in the existing patriarchal (and Western-oriented) system of US agriculture. Our work suggests one path that can help address these failures.

This essay's first three authors designed and piloted a multisession learning circle to empower some of the potentially most powerful but underinvolved stakeholders in agricultural decision-making: women landowners. In Iowa alone, women landowners own or co-own nearly half of the 1.239×10^7 ha farmed in the state, representing nearly

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US\$112 billion in agricultural assets (Iowa State University Extension 2020; USDA 2019). Recognizing women landowners as a powerful but overlooked population, the Women, Food & Agriculture Network (WFAN) created its Women Caring for the Land (WCL) program 12 years ago. WCL's events typically involve single-day, learning-circle meetings that involve social learning, hands-on experience, conservation education, and a supportive atmosphere—a format that has met with success also by American Farmland Trust, Pheasants Forever, and others (Petrzelka et al. 2019; WFAN 2020).

Our multisession learning series—conducted as one of WFAN's WCL programs—involved a series of sessions with the same group of women landowners who, for this project, owned land in Iowa. The learning circle was designed with the following goals: (1) build ongoing and supportive relationships among them as a cohort; (2) allow each woman's knowledge to grow and evolve over time; (3) elevate the expertise they have already; and (4) assist them in taking conservation action on their land. To support these goals, the facilitators created the series to include not only conservation information but also attention to the relationship-to-action ties of social capital from the social sciences (Emery and Flora 2006; Floress et al. 2011; Shenk et al. 2019); a funding opportunity for each woman landowner to take conservation and relationship-building action on her land; as well as principles of storytelling and cognition from the humanities and Indigenous practices (Christensen 2012; Hirt 2018; Kimmerer 2013; Little and Froggett 2010; Popova 2015; Shenk and Gutowski 2022). Including storytelling was a particularly powerful addition because of how storytelling organizes personal experience, engages creativity that integrates new perspectives, fosters relationships, and bridges imagined to real-world action (Herman 2013; Hogan 2003; Simpson 2017; Sze et al. 2018; Whyte 2018a). In this essay, we will outline the sequence of activities in the learning-circle sessions that used conversation-focused presentations, storytelling, and informational tools often used in conservation (i.e., tests, maps, and a simulation model). For the Results and Discussion section, we will share our findings from the data collected through the storytelling-based activities (preseries storytelling responses, transcripts of storytelling sessions, and pre- and postaction project reports).

Through the project, all participants took conservation action on their land. What also happened, though, blew the facilitators' expectations out of the water. Our group, over time, did build relationships and take action, but we also became something more: we became a group of collaborating experts, what researchers now refer to as a cognitive ecology (Hutchins 2014; Newen et al. 2018). In a cognitive ecology, diverse experts work together as partners, using tools (such as watershed maps, data sets, and simulation models) to extend cognition, and, through interaction with each other, the larger community, and the natural world itself, expand each other's thinking and capacity for action. A cognitive ecology is like a community of practice (Fulgenzi et al. 2020; Wenger 2010), but it extends the latter's focus on people to pointedly encompass a larger ecosystem of connections. A cognitive ecology involves people learning from each other through their diversity of expertise (rather than a teacher-learner focus) in more panoramic approach that, much like Indigenous practices, has place for people, technologies, and the natural world itself.

As a cognitive ecology, our full group has produced this article as coauthors. Thus, the women landowners themselves are not just participants or research subjects, they are truly coauthors. As an initial component of this unconventional approach to authorship, the Methods section includes their voices as a prelude to outlining the learning circle sessions and their storytelling activities. The Results and Discussion section interweaves excerpts from the narratives that the women landowners shared in their storytelling with wisdom that emerged as coproduced knowledge. The coproduced knowledge sections emphasize that what would have been a theory of change related just to participants became a shift in the researchers/facilitators as well.

This project was small, involving three facilitators and seven women landowners total, so its results cannot be claimed to produce generalizable knowledge, but our preliminary findings suggest the potential for sustained and cohort-based programming to engage underrepresented groups as collaborating experts. Our group continues to meet now almost two years after the workshop series officially ended, and our continued collaboration as an evolving cognitive ecology provides strategies for restoring the land

through relationship, holding the land “with an open hand” for others, and supporting ecosystems (both human and natural) that have been silenced. This article is our group's coproduced story.

Materials and Methods

In our collaboration, we did not expect to become a cognitive ecology, but the choice to frame the series as a learning circle did hold that potential. In a learning circle, all individuals are contributing experts as well as learners. Learning circles have been used by cultures around the world for centuries, providing information-sharing and decision-making in community (Eells and Adock 2012; Nabigon et al. 1999). In this model, all involved *belong*. Many women landowners, however, often do not feel they belong in the current system. Aspects of one conversation our group had suggest some of the reasons and the importance of the learning circle's goals:

- I need to learn where to go for advice; I feel like I'm on an iceberg.
- As a woman, I have walked into that farm office, and it is packed with five or six men, and I am standing there in line, thinking “What am I doing here.” And they look at me like “Why are you here?”
- That moment is why we need to be getting together. We have all been in our little silos.
- These meetings bolster my confidence. Someone assumes that I don't know what I don't talk about. This is just wrong behavior. It gives me confidence to just keep asking the questions. It is a bigger problem that we are all working to change.
- I don't go into the office by myself.
- It drives me crazy that we have to do that—that we have to take someone else with us.
- These meetings are helping—sharing where to go for advice, hearing from someone who has done that.
- They give us confidence to keep asking questions.

These microstories—the sense of isolation, the scene in the farm office, the utility of taking someone with you, the perception of silence as ignorance, the need for a space to learn through questions—demonstrate barriers to feeling informed and encouraged to take action. These barriers were not news to WFAN: this organization has been surveying their participants for years and hearing simi-

lar experiences from what is now over 3,500 women (WFAN 2020).

Initially, the multisession learning circle was envisioned as a sequence of three, six-hour in-person meetings to occur between July and August of 2020 with meetings spaced typically two to three weeks apart and the option to do a final action project. Due to the COVID pandemic, however, the facilitators changed the venue to Zoom and reconfigured the format to involve four, two-hour group sessions; a two-hour individual storytelling session with a computer simulation model for each participant; and two opportunities to do project-funded action projects, with the activities now spanning five months. Participants were recruited first from lists provided by the watershed coordinators for the areas initially in focus. The WCL coordinator mailed these women a flyer describing the learning circle which was, at the time, planned as an in-person opportunity. Following the pivot to the online format, low registration numbers prompted facilitators to open the program by using other recruitment methods from WFAN's social media and lists. As a result, the group of participants varied in familiarity with WFAN and its programming; two of the women were completely new, three others had only a couple months of contact with WFAN, and two others had participated in several individual programs over at least the previous year. All individuals who wished to participate were allowed to do so.

All the women owned or co-owned land in the state of Iowa, self-identified as women, and committed to attending all sessions. Nine women landowners initially started the series, and seven completed it. Two did not complete the series due to scheduling. The shift to the online format and shorter sessions allowed a greater diversity of participants—two living out-of-state, some with parenting commitments, and all with full-time employment. The group included women who directly operate the land, some who live on a portion of the owned farmland, and others who do not live near the land they own. Six of the seven women had tenant-operators; one had land all in the Conservation Reserve Program (CRP). The group varied in involvement in day-to-day management, age, and occupation. Some women managed the operations on their land; some had professional managers. They had careers that spanned photogra-

phy, marketing, civic leadership, health care, and information technology. Some of them grew up on farms in Iowa; others grew up in urban areas, sometimes in Iowa, sometimes in other states.

Some had been involved in decision-making on their land for more than 10 years; many of them had less than 5 years. Some were completely new to conservation action (one emphasized that cover crops, soil health, and the range of conservation practices were all new to her). In many, many ways, their backgrounds were so different that they would have been engaged separately—as operators and nonoperators, as those who live in Iowa versus outside the state—because landowners in these different situations have very different needs and experiences. With our focus on a learning circle and the notion of a cognitive ecology, diversity of expertise and experience is seen as an integral benefit. Even we facilitators brought distinctly diverse expertise—a background in collaborative storytelling, cognition, and literature; program evaluation, adult education curriculum development, and conservation program delivery; and sustainable agriculture systems, women-specific outreach and program coordination, and environmental education.

However, we all had a connection to stewarding the land. True to the importance of environment in a cognitive ecology, it is the land that brought us together, and it is our diversity that kept us together because we each brought something different to our meetings. To establish the connection to the land and the natural world, the facilitators introduced storytelling—even before the series began.

Prior to Session 1: Storytelling and Initial Questions. One week before the start of the learning circle, the facilitators emailed the women three questions that involved a degree of storytelling. We asked them the following:

1. Describe a memory about the land that is important to your story—who you are, what you care about.
2. What is a story you would want to be able to tell about your land five years from now?
3. What about the land, water, weather (current or future), wildlife, community are you wondering about that might factor into your planning and goals for your land?

The women emailed their responses to the facilitators, and their stories provided a useful

glimpse into their values and needs, including their personal connection to land in general. Many nonoperators feel disconnected from their land, which further disempowers them and intensifies their feelings that they are not sufficiently involved, or knowledgeable, to make decisions about its stewardship (Carter 2017). Our approach drew out a relationship to the land that is not about ownership, but connection to place—an influence of place important in a cognitive ecology as well as central to Indigenous people's approach to restoring the land in relationships that include the natural world (Johnson et al. 2021; Kimmerer 2013; Whyte 2018b). Our use of storytelling places the woman landowner as the authority and as the one who recounts a memory that emphasizes her connection to land as having an embodied history, an aspect of physical connection and memory important to cognition (Garratt 2016; Newen et al. 2018).

The questions were also designed to ensure that the series addressed the women landowners' priorities: clean water, pollinator habitat, soil health, profitability/markets, estate planning, and available conservation programs. Having listened to the women's stories, we were then ready to begin the series as the second—not the first—sharers of knowledge.

Session 1: Introductions and the Relationship among Soil, Plant, and Water Health. Following the WCL's learning circle format, we began the first session with brief introductions using this prompt: "Please tell us about your land, where it's located, what is produced on it." Answering this question was low-risk and allowed participants to see what they had in common and how they differed in terms of ownership, relationships with tenants, land use, and community—aspects essential to further their conversations. The women got to know one another as landowners and as people—an integration that reflected the focus on individual and group learning that could meet their needs throughout the series. We believe this pragmatic focus within relationship-building would have emerged much more slowly, if at all, without the opening introductions.

The material for this first session involved discussing the relationships among soil health, soil stability, plant root systems, and water quality. The women also learned how to do the slake test, infiltration test, and nitrate (NO_3^-) water testing—components

of our already-developed curriculum (Eells and Adcock 2012). These activities using primarily simple household items demystified the science, allowed participants to see different conditions unfold, and were included within discussion to allow questions and observations. Through such exchange, learning happened as a shared process. Although in-person learning circles do not include the hierarchical use of projecting PowerPoint slides, the switch to virtual meeting necessitated the use of slides, videos of the demonstrations, and discussion to replicate the same interactions of cover crops and no-till practices for improving soil health.

For the final activity in this session, the women took the same principles of soil health, stability, and plant root systems to explore their interconnectedness on larger scales (field, series of fields, and watershed), using a simple computer simulation model called “Community Environment” (CE). The model simulates basic social-environmental interdependencies that include how varying amounts of rainfall (including the extremes of downpours and dry spells) and the placement of different land use practices affect soil stability and water quality (Shenk et al. 2021). Conservation practices that involve deep or year-round roots in the ground such as native prairie plants and the practice of cover crops are represented as purple cone-flowers. These practices successfully reduce erosion and improve water quality. The green areas depicted on CE’s interface represent shallow-rooted vegetation such as grass and seasonal row crops, and the grey shape, which can be different sizes, represent hard/impermeable surfaces such as end-rows or pavement. Hard surfaces worsen conditions, and these causations affect biodiversity. See figures 1 and 2. To encourage thinking about species that are smaller and yet crucial for environmental health, CE includes two species tied to water quality (mayflies and dragonflies, each with differing tolerances to sedimented and nutrient-laden water) as well as pollinators represented as monarch butterflies. See figure 3.

Based on how individuals adjust CE’s settings, rain falls on the land, replenishes some of the land but erodes less-stable soil. Run-off degrades the water, with approximated levels of degradation tracked in the graphs on the right. Conservation practices that are located higher up on the graphical interface, like upstream and uphill conservation action,

yield more benefit. See figure 1. The model includes additional settings related to personal agency (readiness) and a community’s collaborative ties (what social scientists refer to as social capital), which will be discussed later and have a profound impact on overall system health. But for this first session, the human readiness and social capital component was muted to focus on soil stability, water quality, weather conditions, and biodiversity.

The model’s simplicity makes it easy to use and allows individuals to create and explore multiple scenarios with each scenario taking only three to four minutes to run and allowing individuals to discuss causations as they unfold in real time. CE is profoundly simplistic—so simplistic that experts’ first reaction might be to indicate all the factors that have *not* been included or that require far more complexity. As has been discussed elsewhere, CE’s radically simple design is strategic. It has been designed using principles of cognitive narratology that use sketch-like simplicity to promote exploration and collaborative storytelling among participants (Shenk and Gutowski 2022; Shenk et al. forthcoming). It is a cognitive tool that encourages groups to think *with* each other. It does not follow a more traditional approach to computer simulation models as tools to think *for* individuals, providing answers rather than prompting collaborative conversation. The CE model would be used again as the focal tool in the individual storytelling sessions with the human and community collaboration features fully visible.

By integrating the CE activity with the principles at work in the slake test, the facilitators created a progressive sequence for the women themselves to be involved in examining the relationships among soil, water, and community at expanding scales. The women developed and practiced using a common language useful for their conversations with their tenants and members of their decision-making circle and, through discussion, became familiar with these causations that would be central to the remaining exchange-focused sessions with content experts.

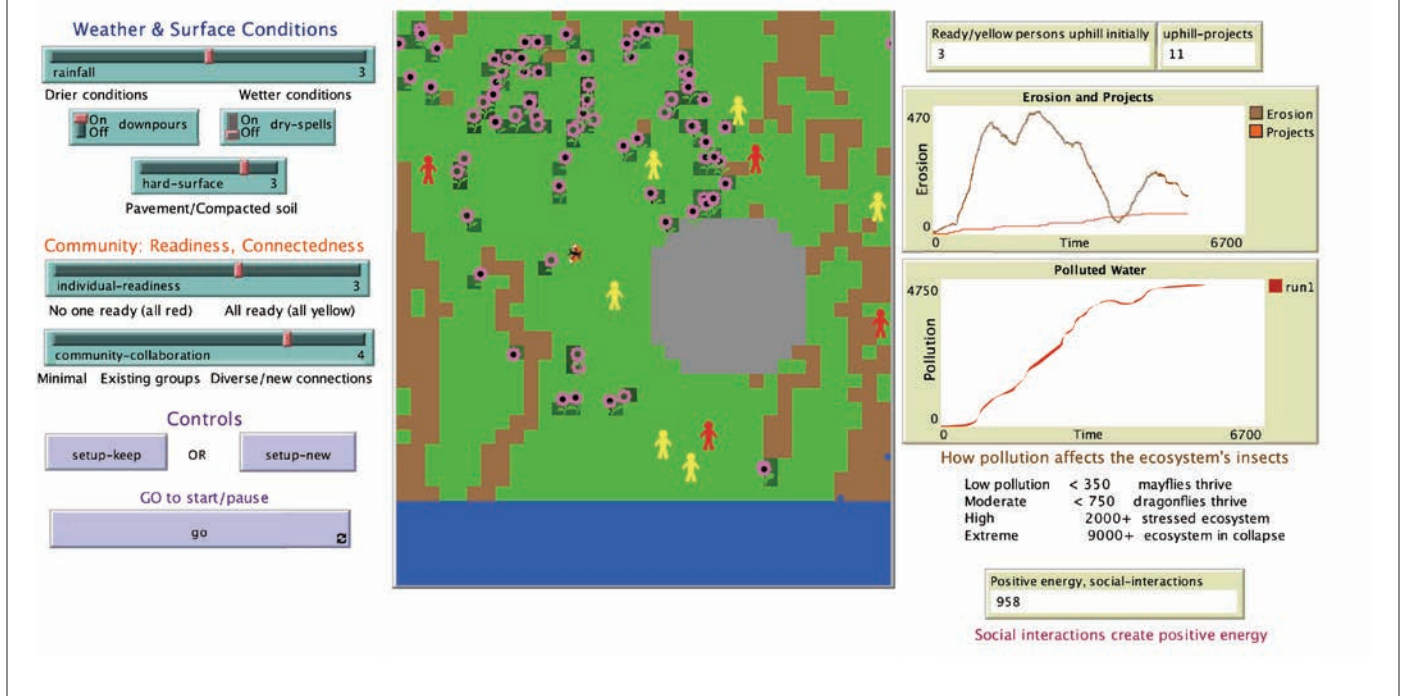
Sessions 2, 3, and 4 with Content Experts: Exchanges Through Questions. Each remaining planned session of the series introduced a different external content expert who built on the core topics of soil-water-plant ecosystems and human partnerships. Each successive session involved contexts that increased the level of challenge and risk in

decision-making with tenants and other family members—from countering arguments against trying conservation practices, to how to set rent, to navigating legal matters. Significantly, each context required integrating information within exchange and relationship—an outcome that, in part, prompted us to adopt an approach grounded in discussion and questions. To these ends, the facilitators asked each content expert *not* to prepare the traditional lecture/presentation they use in traditional conservation events but instead to talk more informally for about 20 minutes about what they do and to limit (or forgo) use of PowerPoint slides. This format seeded the conversation with information and allowed time (often 45 minutes to an hour) for the women landowners to ask questions and create discussion. When the content experts realized they were able to answer almost all participant questions off the top of their heads, they relaxed into the experience and often later described how their initial skepticism led to new insight about the effectiveness of this more conversational style. Questions as a pathway to knowledge and action allowed the women to direct their own learning and to develop familiarity and confidence in using the terminology. Question-asking, we have found, is crucial, especially for women and other marginalized stakeholders. For women, questioning as a strategy can backfire because of the unequal power relationship of tenant/landowner and men/women in farming. Sociolinguist Deborah Tannen (1994) gives an example of a possible outcome of this inequity through gendered difference related to question-asking. She describes the situation of a well-qualified medical intern who was passed over for recognition. When she later asked the supervising physician why she had not been recommended for advancement, he explained that he felt she did not know as much as the others because she asked more questions.

Such lack of communication because of differing discursive practices is one of many differences related to gender that sociolinguists have identified—differences that suggest why having all-women groups allow women to adopt their connection- and cooperation-focused practices (Kendall and Tannen 2001; Coates 2015). One of the women added another situation that reveals the miscommunication that can arise when a woman asks questions but a male tenant

Figure 1

Community Environment model. With the ready individuals implementing their conservation practices uphill/upstream, this moderately collaborative community got sufficient benefit from their well-placed efforts. They sufficiently stabilized the land and supported pollinators, although sufficient degradation still compromised the survival of the mayflies and dragonflies.



misinterprets her intent as critique: “Initially when I would ask him a question, he thought I was questioning him, or what he was doing, rather than just trying to understand better.” The significant pushback women landowners often experience makes it important to devote attention to strategies for asking questions based on how their queries might be perceived and the gendered power dynamics that might arise. By becoming more comfortable asking questions and using proper terminology, the women have a better chance navigating the difficult position of questions-as-lack-of-knowledge versus the silence that can lead to the assumption of “I don’t know what I don’t talk about.”

Learning circles can provide a low-risk, supportive venue for participants to test a response to their questions ahead of an anticipated objection or unintended challenge (hence our second session with an expert who could either counter or affirm objections to requesting tenants to try new farming practices). The sequence of content experts at Sessions 2, 3, and 4 moved into progressively more challenging and higher-risk contexts for these real-life conversations:

- Session 2 with an agronomist—Beginning initial conversations: This

session’s content expert was an agronomist who provided data about costs and sources for seed, details about farm machinery, and timing of management decisions to address the arguments tenants typically make when pushing back on landowners’ conservation requests. These scenarios were shared through brief storytelling of examples, and women landowners in the learning circle with some experience in this area were also encouraged to share their story. This session placed the soil-plant-water causations within the pragmatic contexts of how seed acquisition, machinery, and the management calendar support and/or limit how tenants might react to conservation requests.

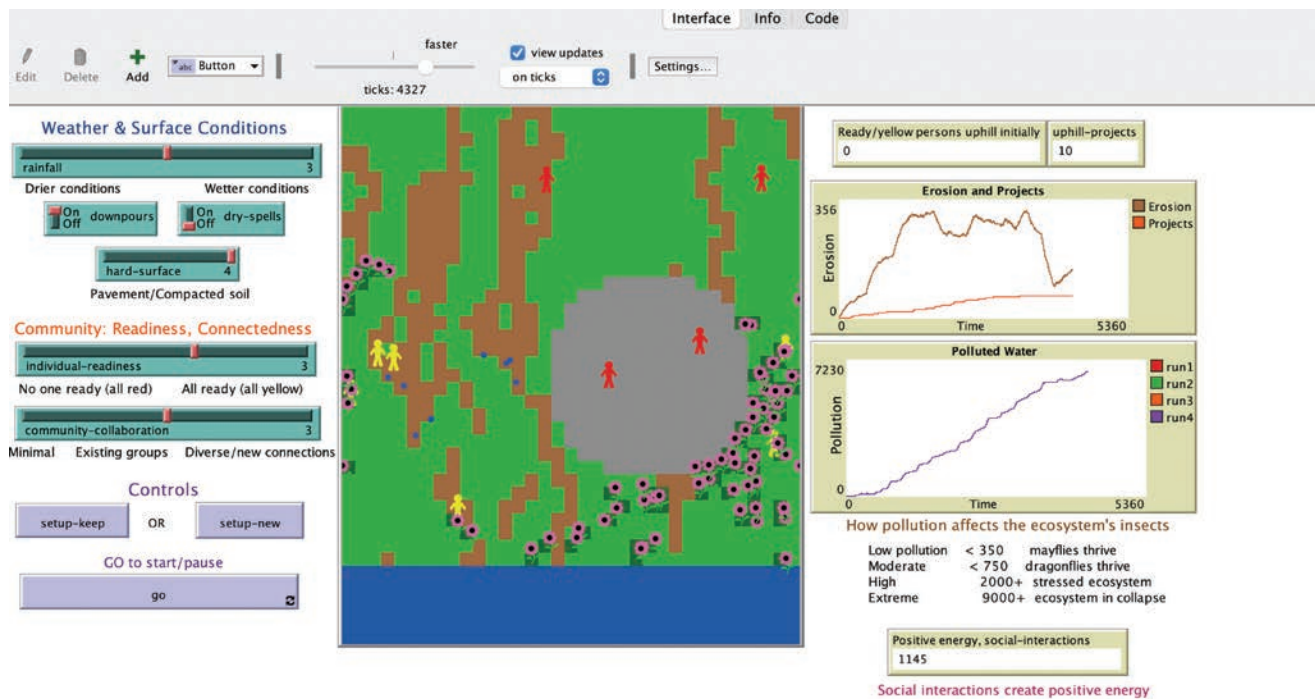
- Session 3 with a land management expert—Setting rent: Setting fair rental rates is challenging, and adding conservation to the lease adds questions that our land management expert helped answer. She provided links to publicly available resources for tools and methods that could assist landowners in fine-tuning rental rates on land with conservation practices. She addressed edge of field practices, profitability mapping, and long-

term losses due to erosion while also weaving into her discussion stories of her own experiences. This session addressed how soil-plant-water causations can support examining agriculture from the standpoint of profitability rather than just “yield.” The attention to profit within this more sensitive topic of rent was designed to support relationship-building between landowner and tenant through a priority where both might find common ground.

- Session 4 with a lawyer who had experience in both conservation and agriculture: There are legal considerations with conservation in leases. In previous meetings, we had discussed the benefits of having a written lease (a document that codifies the landowner-tenant relationship). For this last scheduled session, the lawyer described not only the differences between cash rent, flex rent, and crop share—the most common types of leases used in Iowa—but also kept conservation language and practices in focus. Through questions and discussion, women explored the benefit and challenges in the differing styles of leases, why they felt comfortable with one (or

Figure 2

Community Environment model. With the ready individuals implementing their conservation practices downhill/downstream and with a larger area of hard surface, this moderately collaborative community did not get sufficient benefit from their efforts. The same moderate rainfall and downpours as figure 1 now caused substantially degraded water and prolonged erosion.



were considering a change), and shared their own experiences and priorities.

In each of these sessions, the women not only customized their learning based on their needs, but also had time between sessions to take an action step—schedule a meeting with an agency, talk with a resource contact, open a conversation with family members or farm tenants. With the switch to Zoom for the format, we had the flexibility to space the sessions two to four weeks apart. This extended time was important in strengthening our relationships: we had a longer time to get to know each other and, because we started each session with “check-ins” where each woman talked about developments and new questions, they were able to share how their individual processes were evolving. They heard and learned from each other and watched things develop—all with growing knowledge and an uncovering of expertise.

Individual Storytelling Sessions. The final element in this increasing, customized knowledge that synthesized practice with information was the individual storytelling sessions. These sessions provided a structured format for both the women and the facilitators

to share narratives—the women about their land and relationships useful/needed in supporting action, the facilitators about the soil-water-watershed-weather narratives relevant to each woman landowner’s questions, goals, and strengths. The relationship-environment narratives enabled us to cocreate the knowledge that positioned each woman landowner to begin her action project and transformed the facilitators’ understanding of the needs and expertise each of us was bringing to what was becoming our cognitive ecology. The goals were to coproduce knowledge that would support action.

Each woman landowner had a two-hour storytelling session with the workshop facilitators. Usually she attended on her own, but some brought one or more family members. All seven of the women landowners took advantage of this activity. By the end of her session, each woman landowner had a sense of an action project to pursue. To receive funding for this project, the women would complete a simple, few-question application that involved describing what conservation action they wished to take, what the funds would pay for, and how this action project would help build relationships. As facilitators

we suggested examples of what projects might suit each woman landowner during her session, but we left the possibilities open to allow these projects to include aspects we had not considered.

Each of these sessions began with personal storytelling. The woman and her family members shared stories that included experiencing the land’s wildlife with their young children; a long-standing commitment to addressing food insecurity; a powerful and unexpected connection between the woman’s professional career and the family who used to own the land; childhood memories between sisters who grew up on the family’s century farm; shared groans over the drudgery of weeding; the first months of new ownership after a parent died and all the learning that needed to occur; and memories of a whole series of women family members who played key roles in helping with a family farm but who were literally “never in the picture” for all the family’s farming photos.

At the beginning of the storytelling session, facilitators would bring up the questions and interests each woman had expressed in their preseries storytelling, and often the session would begin with elaborating on these

ideas. Then, the facilitators would transition to work with the CE simulation model used in Session 1. The woman landowner would suggest how she wanted the settings configured for each run, often with some attention to the issues discussed in the opening storytelling. As each scenario was underway, she and the facilitator would talk about what was noticed or questions we had for each other. Sometimes the focus was on weather conditions such as the dry spell we were all experiencing at the time or on the nature of where to place conservation projects to maximize their benefit. Other times, CE's settings of "individual readiness" and "community collaboration" were the facets that evoked additional storytelling and conversation, providing a space for each woman to discuss social relationships and resources that had been the most supportive (or damaging) to their interest in stewarding their land. This session was rather free-form by design, and because CE includes a range of social and environmental elements, it evokes the stories that matter the most to each of the women. Through such openness, this work with CE

left open the possibilities for thoughts and connections the facilitators would never have thought to ask. The women's storytelling from these items in CE is a foundation of the Results and Discussion section.

The readiness and community collaboration settings in CE have a powerful effect on the strength of the social-environmental system. The readiness setting controls how many "ready" pixel people are depicted (in yellow, up to 10 maximum). Those ready individuals implement conservation projects on the land that can help mitigate unwanted conditions based on where and how much action they take. Those people who are "not ready" to take action (in red) move across the landscape but do nothing. How far each person can travel, interact with others, and enact change is based on the amount and diversity of a community's collaborative ties—ties that social scientists call social capital. Social capital involves the range of relationships that foster cooperation, trust, and collaborative action—from the close-knit, likeminded connections of bonding social capital (family, close friends, a faith community, or a club) to

the diversity of bridging social capital where individuals from various organizations, groups, and backgrounds work together. Bridging social capital is particularly crucial for resilience; these relationships involve multiple perspectives and allow the fullest range of community members to share and access information and resources (Adger 2003; Aldrich and Meyer 2015). In keeping with the research on social capital and resilience, in CE, the greater the diversity of social capital, the better the chance the environment overall will be resilient. See figures 3 and 4.

Crucial for how CE promotes storytelling, the model does not specify what supports or prompts people to be ready to take action and what "existing" and "diverse/new" ties of collaboration (bonding and bridging social capital respectively) have been helpful or would be useful to foster. The answers to those questions arise during the storytelling and conversation, with each woman landowner having her own story and contexts that matter most to her. She tells us what allows her or others she knows to be ready and/or what situations might prompt other

Figure 3

Community Environment model. This strongly collaborative and ready community (with little hard surface) was able to deal with moderate rainfall and some downpours and implemented widespread conservation practices to support a thriving and biodiverse environment.

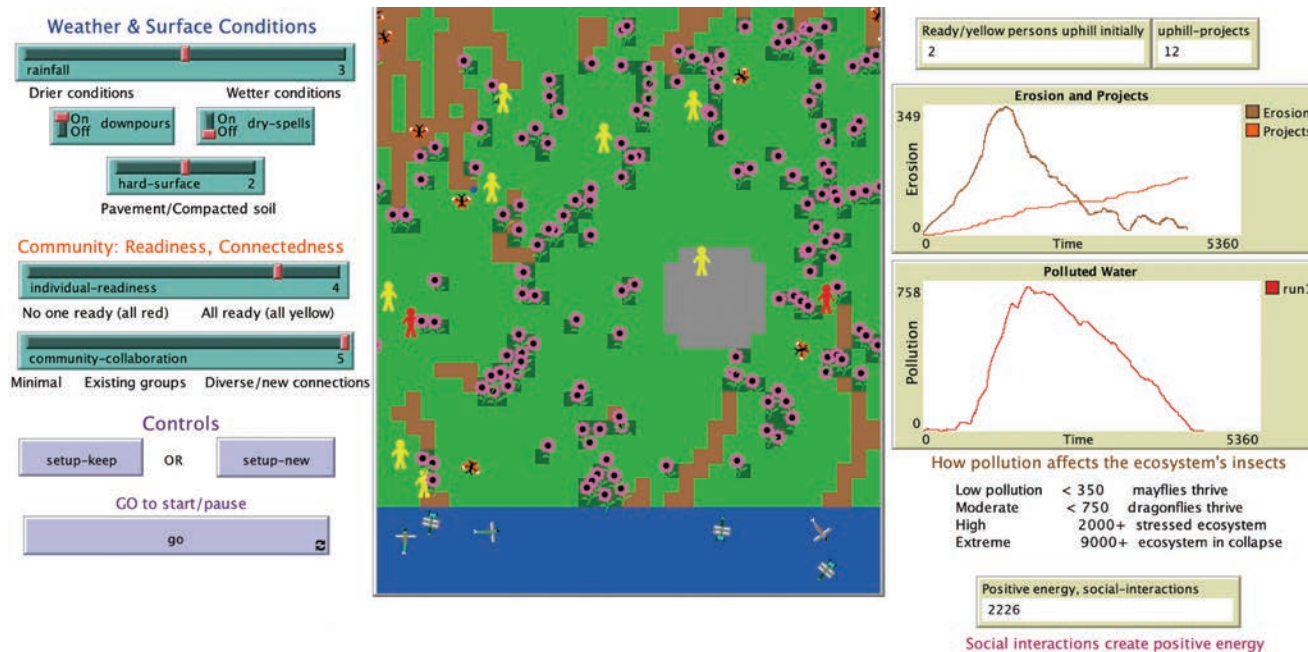
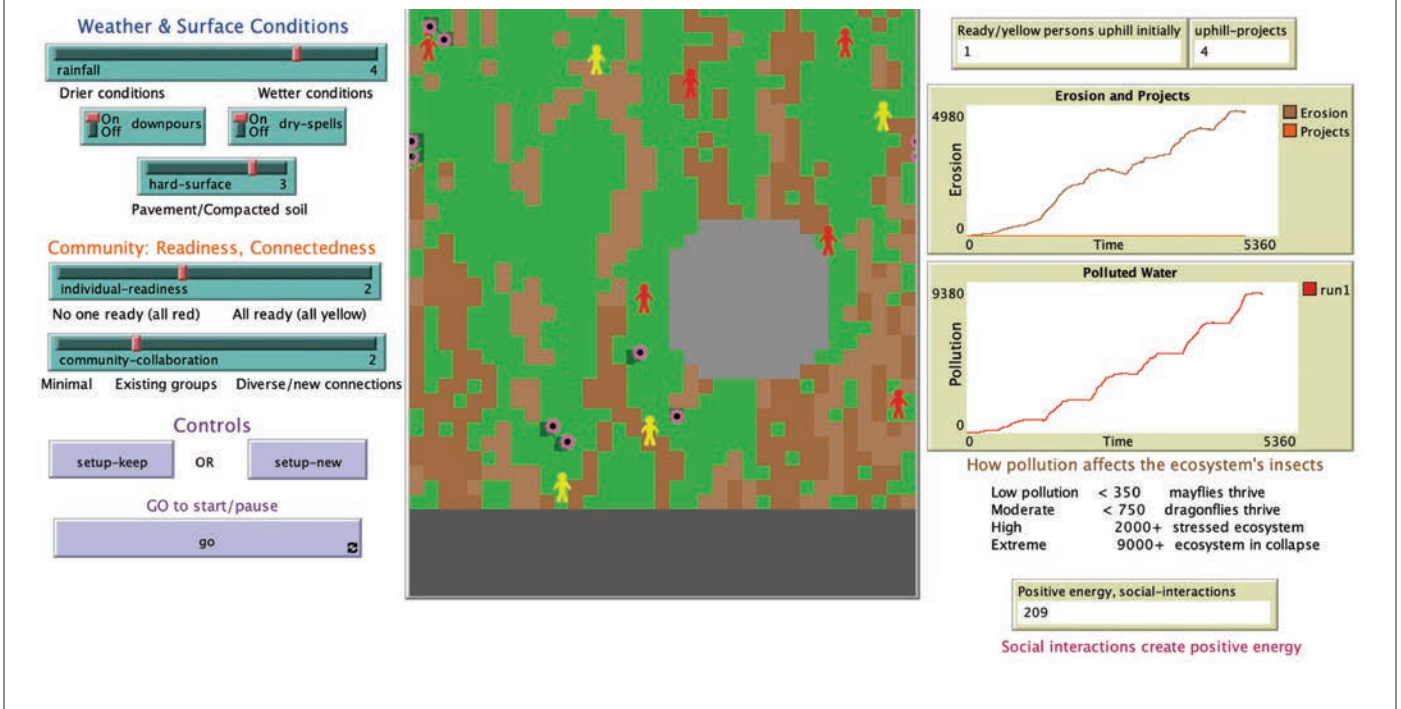


Figure 4

Community Environment model. Experiencing both dry and wet extremes with low collaboration, this community's environment went into collapse.



to be “not ready.” Intentionally, CE connects action to the idea of readiness, which not only avoids judgment but also acknowledges that lack of action does not always stem from lack of interest or willingness but sometimes from other barriers (possibly financial or cultural) that need to be addressed.

In the last half an hour or so of the storytelling session, the facilitators would ensure that the discussion began to shift toward creating/refining ideas for what action project the woman landowner might like to do with her project funding. There was no narrow list of what actions could qualify—only the requirement that the action supported each woman in taking her step of conservation action that would also have a component of relationship building. And the storytelling with CE opened up possibilities of what mattered most to each woman landowner and how her own specific needs and talents were all a part of what that project might be. Thus, the storytelling session involved each woman connecting her personal context with the larger ecosystem of people, tools/technologies, and the land itself. Now with next steps and key relationships identified, she would devise an action project, complete the brief application to receive funding, and afterwards, provide a brief report of its outcomes.

In this next section, we include excerpts from the storytelling components of the learning circle: the preseries questions, the discussion and sharing during the session with CE, the action project applications, and postproject reports. What emerged was an ecosystem of relationships useful for supporting conservation action, including the relationships formed amongst us as a group.

Results and Discussion

This Results and Discussion is divided into subsections based on the five types of relationship-building that emerged as an important ecosystem for supporting women in taking conservation action. The following are the five types:

- relationships among the learning circle's group members
- relationships each woman had in her individual decision-making networks
- relationships with conservation tools as allies for action
- conservation action as relationship-building (with project funding)
- relationships that draw the circle wider for others to join the community of conservation

In each subsection for these different relationships, we adopt a structure that begins with excerpts from the women's individual stories

and thoughts. We then conclude each subsection with a group statement of our coproduced knowledge. This two-part structure keeps in the forefront our cognitive ecology of joined perspectives and expertise. As a group, we have discussed, revised, and sharpened the statements of coproduced knowledge.

Relationship-Building Within Our Learning Circle. In our first online gathering after the scheduled sessions of learning circle ended, we reflected, in conversation together, on what made our group dynamics so important and valuable that we wanted to continue meeting. The women expressed the following reflections:

- This experience has been a positive, bonding experience for all of us. We have helped each other grow, and the diversity of backgrounds and approaches to things has been important in how we support each other and sometimes in how we ask questions of each other that offer a different perspective. The make-up of the group and our various, sometimes differing, perspectives will also really help us talk with our farmers.
- I feel like I'm coming home or am with my sisters at these meetings. There's no judgment, no “us versus them.” They feel like extended family, all learning together.

It's a great feeling, and I know my farm business is better because of it.

- Our group has had such a magic because of our diversity: our lands are different; our backgrounds are different; we are at different stages of experience. ... I think these differences allow us to learn more from each other. ... Yes, like cross-pollination...
- Having a series of meetings and the relationships that emerged allowed me to stay in the learning cycle longer, giving me time, first, to learn about a practice and then ask progressively different questions as I synthesized what putting that practice into action on my land with my specific renter would entail. I am in this situation for the long-haul, not just season-by-season, and my questions change over time. Being able to ask multiple and changing questions in a safe and supportive space was crucial.
- In my mind, this group is a group of women who I think are really interesting and who are doing interesting things and asking good questions. And I look forward to talking with all of you each month just to see what's new, what's going on. The questions that you're asking are either things that maybe I've asked and don't know the answers to or I haven't even thought about those questions, and so I'm curious about where you're going with it.

Our group discovered that it was the diversity of our backgrounds and experiences as well as the relationships of connecting with each other's evolving story that made the difference. Firstly, the facilitators' original plan for the three days of in-person, six-hour group sessions would not have been enough to create the connections we have. The shorter length (two hours) and larger number (five) of sessions spaced out over a few months gave us a foundation for wanting to continue, but our cognitive ecology took longer to evolve as we continued meeting monthly. Getting individuals to sign up for year-long learning circles is likely not feasible, but having thinking (and funding) in place to allow for a second phase would allow the group to continue meeting, if useful. Secondly, incorporating storytelling into the series fostered relationships and uncovered the diverse gifts each of us brought to the group.

The learning and relationship-building in these sessions was multidirectional and gave

facilitators powerful general ideas to share with the group about the gifts, expertise, and ideas we learned. Brief personal storytelling became part of our group's culture as we continued to meet. During "check-ins" in these subsequent meetings, individuals shared the stories of their evolving action projects and relationships—a duality of social and environmental connections that supported our cognitive ecology with each other and with individuals in our larger decision-making circles.

Relationships in One's Individual Decision-Making Network. The CE model's element of "individual readiness" and scale of "community collaboration" (social capital) brought out the microstories that revealed key individuals and moments in each woman landowner's path to action and decision-making. Their narratives involved the following key relationships and instances in their larger decision-making networks:

Families supporting each other in taking conservation action together:

My husband and I recognize as we mature in age that significant physical labor is required to maintain and improve the quality of care of our land. We include our two sons in the labor and decision-making because our goal is continuity of care to preserve and improve the quality of our land, sharing with our sons that they will be the decision makers in the future. Communicating our appreciation of their commitment to conservation emphasizes the importance that our family has placed to restore and create an organic natural prairie.

Ties between mothers and daughters:

I was also fortunate that along the way my daughter was very much interested in farming and food. It is now her chosen profession. As I was taking farm-related seminars, she was doing her coursework. She had years of me sharing the stories of my family and its agricultural history as well as including her in my love of the environment. I also learned from her—not only about what she was studying but also how she is able to speak out and express her ideas and concerns. I'm still learning how to speak out. Something that has been important to both of us is exploring the thread of strong women in farming who came before us in our family—a lineage that extends back five generations. This

discovery fascinated us because these women were long-term farm widows and landowners who successfully managed the farm operations and supported their families—even during The Great Depression. But ironically, none of them would have identified themselves as "farmers," and their contributions to our family agricultural history have gone unrecognized. Even we women in the family hadn't given our mothers the credit they were due.

Neighboring farmers:

There is in a different field that I had done a bigger project, and one of the neighbors said this to me. He had brought his mom back out to the farm [his farm] to show her a few things and talk about a few things that were going on. So they have to drive by my place, and she said, "Oh, what's [name deleted] doing," and he told me that he told her: "What the rest of us need to do: you take on a project each year to help improve the farm." ... It is also nice to not feel like you're the only one doing things or that has a mindset like this or that kind of thing too, so that was nice just to kind of feel like you're not out doing this alone.

A staff member at the conservation agency office:

It was one of the first times that I had to go into that office, and the lady was throwing all this jargon at me, and I just felt like I'm not understanding anything; you could have been telling me this in German, and it made as much sense, and I just looked straight at her, and I said, "You need to talk to me like I'm stupid because I am," and I don't remember if she said a few other things and she had to get another piece of paper, and then one of the other people that I know that's in the office—I know her, and she has kids right around my girls' age and things, and she came over and she said, "You are not stupid, and you need to just take this one step at a time."

Renters:

I make time to ride in the tractors/com-bines (I am lucky to have this opportunity to do this with my renters), and it is the conversation during these times that gives me credibility when I work with them. It's like that old saying, "I don't care how much you know until I know

how much you care.” These conversations and the questions I ask are the ways my renters know I care. I try to interact with my renters throughout the growing season and at a year-end meeting. I usually start the meeting with: “I believe in continuous improvement.” I then ask these four questions: What needs to be done to improve the farm? How should we prioritize improvements? How do we budget for those improvements? What is something new you would like to try? ... These questions and the time it takes to talk through them (sometimes several times) really show not only how much I care about what they are doing but also how much I want them to own the decision, too. It becomes about how I am supporting them.

On one level, the personal storytelling brought out narratives revealing the importance of a range of relationships and the power of small, often incremental elements. Like the preseries questions that balanced memory with imagining one’s land in five years, storytelling’s component of time also elevated the way our work comes out of years of embodied personal history and has motivations in the present that expand to the future. For individuals who might have felt disconnected from their owned land or silenced by a larger system, making more visible how they connect with the environment and those who support them is powerful. What also emerged is perhaps even more profound: although information transfer is important, what mattered most was exchanges and relationships that make individuals feel that they *belong*, that they were part of a cognitive ecology in their own lives—not just interlopers or individuals “on an iceberg.” They are part of the cognitive ecology with a *right* to be in the conservation office, in the family farming photos, in the family work to restore a prairie and prepare for the future, in the combine discussing next steps for improvement. A cognitive ecology is a useful image for this notion of belonging because it allows for that belonging to come from a place of diversity, rather than require homogeneity as the path to belonging. A sole focus on relationships-for-information keeps attention on an insider-outsider mentality. Our collaborative findings suggest the need to focus also on relationships that support belonging within diversity.

Relationships with Tools of Conservation: Allies for Action. In conservation and agriculture, we use such tools as data sets, maps, simulation models, and soil tests to offload some of the cognitive process onto something else—a process that cognitive researchers describe as “extending” cognition (Newen et al. 2018). For example, we use a watershed map to offload some of the cognitive load of visualizing spatial relationships. Tools are objects, technologies. When the women described the importance of incorporating cognitive tools into negotiations and their decision-making, the tools seemed to become like another human presence in the relationship process. These tools became an authority who would join them as “back up” in negotiating their action, a document that could give someone the right to be “at the table”:

Conservation plans:

I’m really trying to find somebody to help me draw up a plan. Because I know it’s going to be baby steps. Maybe some people would say, go see my NRCS [USDA Natural Resources Conservation Service] guy. I don’t think I’m ready for that. ... Because wouldn’t you think that if I had a plan all done up, all drawn up, it’d be so much easier to show my tenant that plan. It’s like, someone else has this idea; it’s not just me. So I have, you know, some credibility.

Data from soil/water tests:

I’m going to carve out some time to go to do some of the soil tests like what you’ve done, [name deleted], in different parts, because I have a feeling that because of some of the different practices that have been done, the water isn’t absorbing into the ground as well, and so then it’s just running off really fast and just taking more of that dirt with it. So yeah, I want to do it on my own, and then I think that will just kind of help me as I’m talking with this particular renter and be my backup of “this is why we really need to do this.”

Contracts that codify partnership:

I put a great deal of thought into coming up with a good contract; it has the clarity of having things documented—an agreement that documents what my renter and I have signed off on. Farming is a business. This is important to my renters, too—the business, and the contract makes clear,

essentially, how my renters and I are business partners. With that said, I suspect my renters don’t spend that much time looking carefully at my contracts before they sign them. Bet you didn’t expect that part? I actually think the relationship and the conversations I have with them are what is hugely important.

Tax laws and estate planning—the right to a “voice”:

So many women don’t realize their legal rights and what information should be made available to them in important matters such as estate planning. The common question families with farmland face in estate planning is “Do we sell the land to the next generation and pay capital gains tax, gift it, or wait and let it be passed at death and receive a stepped-up basis?” These different approaches have different tax consequences and need to be discussed with professionals throughout the estate planning process, and everyone in the family needs to have their own financial advisor rather than everyone in the family using the same advisor. Unfortunately, this is a place where the woman often goes along with her husband or family (sometimes her parents or sibling) and does not have her own advisor and her own seat at the table. Sometimes, others make the decisions for her out of loving concern; other times, they disagree with her on matters because she does have her own ideas (such as about conservation), and they try to rein her in. Either way, she is being controlled. She does not have a voice. I find that so frustrating, and I’ve heard it so many times. It always comes in small snippets, buried in family histories and stories. The bottom line is if women had known more, they would have often done things differently.

Trusts:

When my parents set up a trust, they didn’t know they would have two children living in the area at their time of death. Until our second parent died, we had very little input in the trust even though we were farming some of the land. I recommend educating oneself about trusts if that is appropriate. It’s another area where women could be helped—how to have a voice with a trust.

These tools are tools—still objects, but they have relationship-value with a function similar to the diversity and authority of the ties of bridging and linking social capital. Preparing these documents with an expert first in a lower-stakes environment allows these items to have a bridging and linking social capital-like function. They become essentially a stand-in for the expert, an ally that goes with them into higher-stakes conversations and negotiations. They may also offload the need for direct, in-the-moment negotiation. The tenant signs the partnership document without needing to look at it too carefully (thus the business partnership-part can happen on the page and allow the face-to-face interaction to remain personal). A conservation plan conveys that an individual's vision for the land is shared and can be implemented. An estate planning document places a seat at the table for the woman landowner without her personally needing to negotiate for that right. Recognizing that such documents act somewhat as in-the-room mentors who offload some of the cognitive and negotiating work from individuals is crucial. It allows more energy to be devoted to articulating the ideas for action.

Conservation Action as Relationship-Building (with Project Funding). All seven women landowners in our group took conservation action. Their projects involved adding or increasing the use and diversity of cover crops (sometimes for the first time with a tenant); planting trees and meeting local vendors; planting native prairie plants with family; paying for conservation planning to use in discussion with others involved in decision-making; repairing culverts to improve water flow; and hosting neighborhood get-togethers to involve a wider community in conservation education. Each woman landowner had access to a modest amount of funding from the project's budget. To receive funding, each participant provided a pre- and postproject description of the project, the rationale, as well as the relationships the action created or strengthened. These two simple documents, which were also used for data collection, had a storytelling element. Together, they traced the story of the project in its ecosystem of connections—interaction with the land, relationships with others. They had the freedom to devise a project that matched their needs and values. The following are excerpts from how they

described their projects—the action taken and the relationships involved:

- And it was helpful in getting cover crops on a piece of land that has had some erosion issues that have not been solved with other practices at this time, including waterways, no till, crop rotations, reshaping twice. It has helped to initiate some conversations as well as fund the seeding for a field that has many needs. I know that this tenant did also try cover crops on other areas of his land as well, not just my field. I'm very hopeful that it will help decrease the erosion immensely, time will tell if it also helps with production. I think that's one of the harder things with cover crops as it will take some time to see the end results, there is a cost to everything we do, but doing nothing has a cost as well. This will always be a learning process and having support financially as well as logistics and education has been very beneficial to me and helped me grow as a landowner.
- Doing the tree planting project was really important to me in establishing myself in Iowa and knowing local vendors.... What also happened was something I hadn't expected. There is this one redwing who loves that little red oak, and it sits in the branches everyday and sings and sings. I never thought about how having these trees so close to the house gives places for nature to come and perch and be. The pheasants, the toads... Having more habitat brings the whole ecosystem with all its sound to be all around me.
- The smaller seeding projects are completed by involving the members of our family. My husband and I participate in planting and seeding Echinacea plants, Black Cherry and Shagbark Hickory trees to mitigate soil erosion. One of our sons participated in the fire burning of the land. His knowledge of horticulture and his brother's willingness to coach and participate motivate my husband and me. These activities serve as learning experiences and enhance respect, continuity of care and future decision making highlighting the accountability and responsibility to preserve and promote conservation.
- Backhoe rental to repair the culvert and the dam of the pond that collects water from the fields: This type of regular maintenance repairing drainage, erosion and culverts goes a long way in keeping posi-

tive relationships with the farmer renting the land. It's showing that we're willing to continue to invest in the property and take care of little problems while they're still small, rather than deferring maintenance and creating huge problems that can majorly impact the renter.

- Garden tools to involve their children in caring for the land: Two sets of kid-sized garden tools made with metal parts so they are truly tools and not toys. ... As we work on our land, bringing our kids along in the process is very important to me. We want them to participate and learn what we're doing, why we're doing it, and—hopefully—to instill the same value of hard work and caring for the land which will stay with them into adulthood. Having the right tools for them to fully participate is an important component. These tools will also help foster experiences and conversations with the many friends (and their kids) who come out to visit our farm for social gatherings.
- Landscaping around home with native plants to involve others locally who are new to the role of native plants in soil health and water quality: I have used my landscaping project to initiate discussions about the impact of plant choices in our environment. There are people driving or bicycling by my home who will stop when they see the native plantings in my front yard. ... The funds will pay for landscaping with native plants which demonstrate concepts that I discuss when giving programs. The [large lake nearby] has ongoing challenges maintaining good water quality. Runoff from farming and home landscaping choices impacts the water quality at the lake where I live. This is an extension of work that has been underway, but I am bringing some new things into my existing project. Specifically, I am adding two forms of green mulch—wild strawberries for the butterfly garden and common violets for a walkway that I installed near the prairie planting in the front yard. I have also added two forms of water filtering plants—wild iris and marsh marigolds. There are some issues with water runoff into [the lake] and these are part of a buffer I am establishing to filter the water and slow down erosion.

Action projects are not simply “outcomes” or “deliverables”; they build relationships and support agency. And they do not always need to be large in scale or neatly quantifiable. We discovered that smaller projects (costing only a few hundred US dollars each) can be powerful; they build the confidence and relationships needed for taking on larger-scale projects over time, letting an individual test an idea first or expand a practice incrementally. For these more customized and nuanced projects, facilitators and each landowner would brainstorm possibilities together, allowing the project to be tailored to the individual woman landowner’s needs and strengths.

We urge funding agencies and university budget systems to allow researchers to offer such smaller-scale and open-ended funding opportunities for community/stakeholder-derived projects. Programs such as the National Science Foundation’s Civic Innovation Challenge (CIVIC) and the National Oceanic and Atmospheric Administration’s Climate Adaptation Partnerships (CAP) programs are moving in this direction, prioritizing on-the-ground action. Agriculture conservation groups tasked with outreach could earmark funds to support not only smaller projects but also those that may not translate into standard, quantifiable units such as “acres in CRP.” Currently, our systems are better geared to offer compensation for survey-taking, which is useful, but surveys are more information-extractive, benefitting researchers first and, possibly but not assuredly, survey participants at some later point.

To include action as part of the evolving collaborative process, it is important to fund smaller, often *incremental* action projects that can be sprinkled throughout multiple months, even years. Because facilitators left open-ended the nature of what these projects could entail and brainstormed possibilities with each woman landowner, the projects were as unique as each of the women. At the beginning of our learning circle, we never would have imagined that, within a few months, our projects would span home garden to field applications, next-door neighbors to watershed neighbors. They would involve trees, cover crop seed, ice cream socials, planting sessions with family waist-high in prairie, first cover crop conversations in the combine, and the songs

of a redwing that deepen our connection to the land.

Relationships that Draw the Circle Wider for Others to Join the Conservation Community. During their individual storytelling sessions and for some with their action projects, the women landowners often discussed, or were inspired by, the model’s inclusion of community collaborations (i.e., social capital). The depth and range of the collaborative work they had previously done or planned to do as an action project were, frankly, staggering. The women already had pre-existing commitment to drawing the circle of partnerships wider, often in conservation, food-systems, and/or education. They have been involved in, and often led, projects such as the following:

Involving local community college students in environmental planning:

One of the instructors there, we talked with him and he said, “What we’d really like to do is drive the students to these land areas. Let them look at the land and make suggestions about what they would do with it.” So the horticulture design class—or landscape design class—came over and they were there during the time the people with bulldozers were there. I arranged that. And so they talked with the guy who was doing the planning—how do we take out these trees? The culvert was already in. And what else do we need to do with this? And that was good for the students.

Reaching out to the broader public to introduce information about native plants and water quality:

I’ve hosted three events for groups at my home in the last year talking about the benefits of native plants and especially linking it to water quality since we are here on the lake. The groups I’ve hosted at my house have all been women’s organizations and included the soil health tests I learned from Jean that demonstrate filtration and slaking. I also especially like to share a poster Linda sent showing the roots on native prairie plants. I have many of those plants in my yard. Local people always like to talk about “what the farmers need to do,” but I believe it’s important for each of us to understand and put into practice what we each can do—whatever the scale is that we’re working on. ...

When I do programs about native plants at my home and do conservation practices on my land, it’s all part of the same concept. I think I’m trying to find a big enough umbrella to get everyone under it. I hope I am increasing understanding, which enables more people to engage in the conversation. So it’s like I multiply myself like the saying “each one, teach one.” (She hosted another event as part of her action project.)

Creating community with neighbors that allows for conversation about conservation (done as an action project):

There are approximately 25 households within three-quarters of a mile of my house, all are farms or acreages (mostly acreages). We know a handful of these neighbors already, have briefly met another handful, and more than half of them are perfect strangers (to us)! ...Our neighborhood is at the top of our watershed, and right next to [a major river], just below [a nearby] dam. Also most of the land bordering the south edge of the outline is nature preserve or park land. ... My biggest “aha” moment of Linda’s simulation was the importance of community in caring for the land. We want to create an opportunity to build these relationships in our neighborhood.

Part of leadership in planning an economic development project that brought together conservation groups and farmers to develop a plan:

We had about 26 people together, and as you can imagine, we have a diverse community, so we work very hard to get people equally from our community to come in, and we did a facilitated couple days over a time period to come up with a plan. ... It was a mechanism to get people together in the room that would normally not be together. So to see one of our traditional farmers talking with one of our local food, smaller manufacturers—this was worth the whole year long just to see these two people talk.

Supporting other women landowners:

I am a widowed landowner, and I care about leaving the land in better condition than when we purchased it to pass along to my children. I took a back seat on the management of the farm when my hus-

band was alive, but now I am front and center. I have worked very hard in the past few years to learn more and to make a variety of improvements. I have asked a lot of questions, and had some success and learned a lot as well. I want to encourage landowners, especially women to keep asking questions and seek out those that will support your learning as you go. I want to help women landowners to feel confident in asking questions and to have enough knowledge base to be able to form questions. I recall not feeling I even knew enough information to know what to ask. ... I am a registered dietitian nutritionist and learning to be a dirt-tition nutritionist!

Teaching young children about organic gardening:

[Before inheriting my family's land,] I'd been taking horticulture classes, and I'd also been teaching gardening to four-to-six year-olds in Life Lab on my organic farm across the street from where I live.

Hosting a field day:

There was a field day [on her farm] about two years ago where WFAN, the Xerces Society as well as Pheasants Forever all collaborated to do catering, bring in speakers, do a tour of the farm, all through, like, this local winery where we had a lecture, introduced ourselves. It was all women from around the area, you know, and we ate together, passed around different kinds of insects, and went out to the farm. ... It was awesome, because it was three of my favorite agencies that I work with did that.

Significantly, these women engage groups that draw the circle wider, involving new populations of potential stewards of the land—other women landowners, children, residents in town, and neighbors with farms or acreages at the top of a watershed. They offer clear pathways to involve others in conservation. Significantly, however, their gifts in relationship-building are often not recognized as important in fostering a wider community of stakeholders for the entire field of conservation. When we focus on landowners and other underengaged stakeholders, the tendency is to focus on what is needed to teach them. By coproducing knowledge, we all begin to understand the larger ways these individuals are fellow experts in ecosystem-building in their own

right—truly members of a cognitive ecology. We already saw women landowners as a significant opportunity for conservationists based on the amount of land they own and what we have seen as a deep commitment to the land. In collaborating together and sharing stories, we have come to see ourselves as a group of women who are powerful, but often unacknowledged, builders of cognitive ecologies—and ones that, in this spirit, foster equity-in-diversity, use of tools and technology, and a connection with the natural world.

Summary and Conclusions

So how do we expand the range of stakeholders involved in conservation? What we have learned from each other as a cohort prompts us to suggest several possibilities that merit further study to confirm efficacy. We offer these preliminary takeaways for others to consider, as this project's facilitators also continue exploring and offering more cohort-based programming in the style of what we began with this project. A multi-session learning circle fosters supportive relationships, particularly if its sessions can span a few months and if it includes storytelling and conversation-based exchange. It is important to give attention in the series to supporting each individual's relationships with others in their own larger decision-making networks—with family members, with tenants, with farm office staff, etc. Providing familiarity with and access to tools, even such simple tools as a watershed map and a demonstration of how to do the slake test with common household items, is powerful. Providing funding (even modest funding) for individuals to take initial action steps is powerful. We cannot stress enough how important it is for conservation researchers and practitioners to fund beginning steps of action. This support is not just about having outcomes that can be documented for funding entities—the very process of embodied action itself is part of producing knowledge that begets more knowledge and more action. Finally, approach stakeholders new to conservation not as those in greater need of being taught but as expert partners whose barriers *and gifts* can transform how conservation outreach and action advance. Including them as partners is part of the groundswell of research calling for researchers to coproduce knowledge with stakeholders (Irwin et al. 2018; Norström et al. 2020).

All these strategies offer the potential to reframe and expand who and what matter in conservation. They open the story to new possibilities that can reset and restore what have often been unwelcoming relationships. Whyte (2019) discusses the time and effort required to repair trust and injustice in relationships, most notably among Indigenous peoples and government institutions. He talks about what it means when we cross “relational tipping points,” not just environmental ones. Similar discussions are taking place in conservation circles regarding other marginalized populations and the need to acknowledge values and approaches of reciprocity across social and environmental systems—reciprocities that Indigenous communities have practiced for centuries (Fairchild and Petzelka 2022, 2020; Green et al. 2015; Johnson 2021; Liu et al. 2007; Quintas-Soriano et al. 2022; Saif et al. 2022; Shenk et al. 2022; Tschakert et al. 2017). Our group's evolving collaboration offers preliminary suggestions that bring together well-established conservation information and tools with more relational approaches to conservation. This more holistic view calls for expanding our focus in conservation agriculture beyond “roots in the ground” to focus on a larger ecosystem of relationships that supports those roots. To do this, we need to turn to those stakeholders who have been outside our more Western, patriarchal approaches and, like the women landowners who have coauthored this paper, hold the land with an open hand, honor the power of relationships, and welcome wisdom from diverse voices and ways of knowing.

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