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CONTEXTS

SYSTEMIC
DESIGN
ASSOCIATION

The Power and Place Collaborative: Participatory strategies for scaling

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Abstract

To challenge unidirectional, colonizing, and capitalist frameworks of scaling systems change, this article offers alternative strategies for design practitioners, educators, and researchers interested in diverse forms of scaling change across complex social systems. In particular, the article analyzes a participatory and transdisciplinary approach to systemic design practice and education that illustrates the process and benefits of scaling across, deep, in, scree, and long. The Power and Place Collaborative is a community-first, equity-centered, emergent, and situated educational approach to designing complex social systems change. An analysis of the Collaborative's dynamic processes, activities, and relationships provides a case study on the possibility of imagining, creating, and sustaining community partnerships that scale meaningful change at multiple levels and in diverse contexts. Drawing upon data collected from a mixed-method explanatory inquiry project, this article describes strategies for intentionally designing systems of change that can be scaled in multiple ways, including building relationships, transforming mental models, and co-creation of responses to complex problems. Design professionals seeking to develop assessment plans that capture the emergent, embodied, relational, and situated nature of systemic design and its outcomes will likely find this study's longitudinal, mixed methods research approach to be an instructive disruption of conventional inquiry processes.

Keywords: community engagement, higher education, participatory, place-based design, scale, systemic design

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Introduction

Over the past twenty years, practitioners and researchers from a diverse array of fields (including design, social innovation, systems thinking, management, policy, and more) have argued various forms of participatory and systemic design are valuable for cultivating social systems change *and* for fostering skills and mindsets for sustaining such practices (Borja de Mozota, 2011; Costanza-Chock 2020; Drayton, 2019; Junginger, 2014; Jaskyte & Liedtka, 2022; Liedtka & Bahr, 2019; Michlewski, 2008; Morelli et al., 2021; Sanoff, 2007; Vink et al., 2019; Wagoner, 2017). Research has also shown that participatory design processes support more inclusive and collaborative problem-solving, greater empathy across diverse communities, and outcomes that are more valued by those impacted (Neuhauser & Kreps, 2017; Jones, 2013; Tsekleves & Cooper, 2017). It is clear that systemic design efforts can and *have* reframed short-sighted, narrowly framed design interventions that exacerbate social injustice (Jones & van Ael, 2022; Monteiro, 2019; Vink, 2021).

While the field of systemic design is explicitly committed to cultivating social systems change through working in and with communities, its emphasis on scaling change out and up and its sustained commitments to institutions of higher education, large governmental organizations, and granting agencies have forestalled efforts towards engaging more directly with communities (Murphy, 2018). As many have noted, systemic design can and should do more to take into account the situated embodiment of diverse communities, their complex histories, and the potential long-term outcomes of its design interventions (Costanza-Chock, 2020; Escobar, 2017; Monteiro, 2019; Vink, 2021). Given the field's espoused commitment to co-creation (Banathy, 1996; Bijl-Brouwer & Malcolm, 2020; Jones, 2019; Jones & Kijima, 2019), as well as the need to collaboratively address large-scale wicked problems (Rittel & Webber, 1969), systemic design's lack of engagement with and critical assessment of emergent and participatory design processes is problematic.

The harmful consequences of limited community engagement in systemic design are well documented. Findings from the fields of systems thinking, design, and social innovation affirm that broad and enduring social transformations emerge from design interventions across social, organizational, and ideological boundaries that link diverse people to one another. A number of scholars have argued that cultivating systems-level change requires actors to be willing to *challenge* the system from within (la Paperson, 2017; Westley & Antadze, 2010), underscoring the importance of engagement in participatory systemic design. Intentional disruption can occur through shifting processes, resource flows, and power structures, as well as by changing the habituated actions and beliefs of diverse contributors (Kania et al., 2018). Others have shown that such efforts also tend to require a willingness to (a) seek out and leverage emergent opportunities (Brown, 2017; Obolensky, 2014; Westley & Antadze, 2010), (b) cultivate relational networks, 3) implement both "fast and slow variables," (c) work at different scales, and (d) account for discontinuities, setbacks, and deviations (Ruttonsha, 2018; Westley et al., 2011). Operationalizing these design characteristics is challenging, but not impossible.

This article argues that emerging scholarship on diverse forms of scale can create opportunities for more inclusive, participatory, and just forms of complex social systems

change. Drawing upon findings from a case study of the Power and Place Collaborative, an ongoing participatory, systemic design initiative, the article illustrates the potential for educational systemic design efforts that foster participatory and situated complex systems change through a more divergent approach to scaling. After reviewing the literature on systemic, participatory design and scaling complex social systems change, the article situates the Power and Place Collaborative for the reader, documents the methods of analysis, and outlines initial findings to research questions. In the end, limitations and recommendations for systemic design are offered.

Scaling Complex Social Systems Change

Although the concept of scaling is pivotal to the field of systems design, it is not a clearly defined or applied term. Colloquially, scaling is used as a shorthand for advancement, expansion, and growth, often referenced as an unqualified good and end goal. The term crops up across a number of fields, from physics to entrepreneurship, social innovation, and geography. Interestingly, scale (in its nominal rather than verbal form) is a central concept in geography, where its social construction has been shown to be deeply implicated within capitalist production, state-building, social reproduction, consumption, and social-spatial organization broadly (see Marston 2000). Within the relatively new, transdisciplinary field of systemic design, scale plays a crucial role in the creation, enactment, and assessment of efforts to disrupt and transform problematic processes within and across complex systems (Jones & Van Eel, 2022).

According to Geoffrey West, author of *Scale: The Universal Laws of Growth, Innovation, Sustainability, and the Pace of Life* (2017), scaling refers to any size change within a system (15). This open, simple definition is a striking contrast to popular notions of scale, which have largely emerged from colonial and capitalist commitments to consumption and growth. West's definition provides an opportunity to disrupt tendencies to value easily quantifiable expansion in systemic design and to reconsider commitments to scaling up (impacting more people within the system) and out (extending beyond the system).

Over the past decade, others have also advocated that systems designers reconsider what and how to scale complex social systems change. Riddell and Moore (2015), for instance, emphasize the need to scale deep (by transforming mental models and cultivating diverse relationships), and Tulloch (2018) emphasizes the value of scaling initial conditions (i.e., change in system conditions) and scaling scree (a commitment to many, small interventions). Mulder, Buckenmayer, and Murphy (2022) build on these efforts, arguing that there are additional valuable forms of scale, including scaling down and back (i.e., slowing down and reducing resources), scaling across (shifting where power lies), scaling in (sharing emerging knowledge across the system), and scaling long (intentionally designing changes that sustain overtime). The various forms of scale outlined in Table 1 expand the framework within which we might design, assess, and value complex social systems changes.

Table 1. Types of Scale

SCALE	DEFINITION
Up	Designs that impact more people and structures
Out	Designs that extend beyond the system to transform other systems
Deep	Transformation in mental models and cultivation of relationships over time
Initial Conditions	Change in systems conditions (i.e., shift in capital, influx of talent)
Scree	A commitment to implement many small interventions over time
Down and back	Slowing down and reducing resource investment
Across	A change in power structures and positions
In	The disbursement of new knowledge across the system
Long	Interventions designed to sustain over time

Visualizing and valuing diverse forms of scaling can help to reduce the possibilities of harm caused through narrow goals to scale up and out. This is because commitments to scale—as endless growth—encourage a capitalist and colonial replication of design interventions under the belief that expansion is an endless good. Coombes, Johnson, and Howitt (2014), for instance, warn against the desire for an "impact agenda" that outweighs a commitment to the authentic needs of local populations. They note that such goals can perpetuate colonizing practices (p. 847). A focus on scaling up and out has exacerbated many of our current problems. Modern social technologies are a prime example (i.e., Twitter and Facebook) of scaling complex changes without intersecting communities and systems in mind. Their designers did not take into account the situated embodiment of diverse communities, and they have caused a lot of harm (Wetter-Edman et al., 2018). This paper argues that diverse forms of scale (beyond scaling up and out) offer space to imagine, enact, and assess systemic design practices that are cultivated in and with communities over time. Additionally, it is an opportunity to advocate for social systems change efforts through more diverse, participatory pathways.

Adopting design goals that value diverse forms of scaling is not easy. As Buckenmayer et al. (2021) note, scaling out and scaling up are tempting in part because they "happen at the surface." They are "visible and tangible." In contrast, scaling deep is "intangible, invisible and hard to grasp" (p. 1), and scaling down, back, and long tends to be unsatisfying (slowing down, retreating, and waiting). In addition, efforts to scale scree and in are hard to track within complex, emergent systems. Despite these challenges, if we are going to shift cultural values, mindsets, and beliefs, then we must explore the process and value of scaling across, back, deep, in, and long.

Scaling deep, for instance, requires embracing the friction of conflicting points of view and the exploration of alignment across differences over time without "forcing perspectives" (Buckenmayer et al., 2018). It is supported by intentionally seeking to scale in and long. Scaling scree opens space for inclusive co-creation since it supports many small interventions that occur over time. Designs that scale scree can emerge from and respond to the unique complexities of the place and moment. They can "supply the larger system with a pluralistic menu of creative approaches, "put pressure on that system to be able to… support them," and, over time, "shift cultural norms and expectations because there are a lot more agents driving new visions" (Tulloch, 2018). Whereas pressure to measure success through scaling up and out can encourage top-down decision-making, efforts to scale in, deep, and long open space for building trust, cultivating relationships, and uncovering opportunities for inclusive co-creation. In alignment with scholarship on cultivating complex social change (Bailey et al., 2021; Fry, 2017; Jones, 2019; Westley & Antadze, 2010), efforts to scale scree value pluralistic, situated, and emergent ways of being and doing and thus shift focus away from efforts to replicate from the outside and work "on" others.

Diverse forms of scaling offer a framework for assessing and articulating the value of emergent and participatory systems design processes. Research on how to cultivate (i.e., sustain and scale) this form of change is still emerging (Jones, 2019; Mahajan, Glew, Ryan, 2022; Mulder et al., 2022), especially within higher education (Kezar, 2018). Given the very recent efforts to encourage systemic designers to focus on scaling differently, there is also a need to study and analyze the value and challenges of this approach.

This article seeks to close gaps in the research on diverse forms of scale by analyzing an emergent and participatory design process through the lens of deep and scree scaling. Summarized next, the Power and Place Collaborative offers a potential model, a set of strategies, and an assessment framework for exploring the potential of systemic design educational efforts that seek participatory and situated complex systems change through scaling scree and deep.

Background

As an ongoing participatory, systemic design initiative, the Power and Place Collaborative (referred to as the Collaborative) aims to shift energy towards social design practices that map the complexities of change and require inclusive, relational processes of making, testing, and remaking (Diethelm, 2016; Dixon, 2020; Logue, 2020; Vink et al., 2021). Beginning in 2018 and formalized in the summer of 2020, the Collaborative emerged from a commitment to cultivate opportunities for examining the power-laden processes of place production across one county in the Southern United States and catalyze participatory practices of community co-creation. The Collaborative includes the county's African-American Cultural Arts and History Center, a Community Center, a Center for Design Thinking situated with a four-year private university, and a set of undergraduate and graduate courses housed in a range of academic disciplines (including introductory and advanced seminars in history and geography, human service studies, strategic communications, art administration, art history,

media studies, professional writing and rhetoric, television and cinema arts, education, and honors).

The Collaborative's participatory design efforts emerged through a commitment to support *community-identified goals* to record, preserve, and present untold stories that center narratives from the county's African American community. To date, few histories about this region of the United States have been gathered or publicly shared.

Table 2. Founding Collaborative Member Positions & Goals

Founding Collaborative Members	**Role**	**Initial Driving Goals**
African American Cultural Arts & History Center	Community liaison, project visioning, and review	Center mission to document histories of Black residents within the county.
Historic Community Center Director	Community liaison, project visioning, and review, event management	Preserve and share previously unrecorded stories from community members involved with this historically Black community center. Bridge gaps and bring the community together.
Director of the Center for Design Thinking	Participatory design lead, collaborative coordinator, facilitator, project management, instructor	Generate pathways for participatory, place-based design and cultivate student, faculty, and community capacity building for designerly approaches to living and learning.
Human Services Faculty Member	Critical service-learning specialist, instructor, project review	Support community storytelling. Help students learn how to ethically interview community members and codesign place-based interventions. Provide the community with outcomes they see as valuable.
Geography & History Faculty member	Oral history specialist, instructor, community liaison	Record and digitize oral histories for public display. Learn about place-based histories. Encourage ethical, participatory engagement in place. Sustain and expand mutually beneficial community-engaged partnerships.

Outlined in Table 2, the founding members of the collaborative shared overlapping goals to preserve and share untold histories of place from historically oppressed communities, build bridges across the community, and encourage more inclusive and ethical participatory placemaking opportunities.

Guided by the community goals of collecting and sharing the oral histories of Black community members, the project initially centered on matching university students in Collaborative-affiliated undergraduate courses with community storytellers. The students received guidance in conducting oral history interviews and digital storytelling and then worked collaboratively to produce digital stories that were publicly screened at community events and archived on the African American Cultural Arts and History Center website. The community storytelling project remains a central component of the Collaborative's efforts to engage in systemic design for change. Consistent with the transformational change literature that affirms the importance of establishing relationships between diverse individuals, the Collaborative consistently and intentionally includes storytellers from education, government, nonprofit, and business worlds, resulting in the collection and sharing of oral histories from local entrepreneurs, governmental officials, activists, artists, nonprofit leaders, recreation and parks staff, emergency workers, and religious leaders.

The work of the Collaborative has evolved over the last five years, encompassing an ever-increasing array of community partners, relationships, activities, and interventions that offer small moments of disruption and connection. To date, the Collaborative has encompassed over 50 storytellers, 18 university courses, hundreds of students, and over a dozen faculty. As to be expected with an emergent and participatory systemic design initiative, participation in the Collaborative is fluid, ebbing and flowing with the rhythms of community needs, academic calendars, resources, etc. The flexible nature of the Collaborative's structure and initiatives (documented in an evolving Collaborative Community Agreement) ensures that community needs remain at the center of all efforts.

Here are a few of the synergistic and spin-off initiatives that the Collaborative has sparked over the last five years:

- Intergenerational dialogues
- Social media campaigns across the county
- Community, government, and educational screenings and workshops
- Art exhibits
- Walking tours
- Book clubs
- An open-access virtual archive of materials
- Student internships and community service projects
- Support for two other campus/community oral history projects, one documenting the history of the predominantly Black First Baptist Church, and the other aimed at documenting memories of the predominantly Black community in an adjoining neighborhood

From its inception, the Collaborative intentionally invited storytellers and students to stay connected by taking on various roles that align with their passions and skill sets (scaling deep). Thus far, a number of students and community members have chosen to remain involved as community liaisons (conducting outreach to local businesses, community organizations, and schools), storytelling mentors (sharing their experience and advice with

upcoming storytellers and interviewers), workshop leaders, social media interns, teaching assistants and more.

As a part of ongoing efforts to assess and refine its approach, as well as contribute to the knowledge and practice of participatory and equity-oriented systemic design, the Collaborative is also engaged in longitudinal, mixed-methods case study research. Next is an overview of the study's multifaceted design and data collection strategies, followed by a discussion of preliminary findings and implications for practice.

Methods

Research Design

In the interest of understanding the potential value of participatory, place-based social systems change processes through the lens of diverse forms of scaling, Collaborative stakeholders adopted a longitudinal, mixed methods research design and initiated data collection at the beginning of their community engagement efforts. The project is guided by numerous research aims, including a desire to understand how the Collaborative's form of participatory design has influenced stakeholders' sense of place and community, their engagement pathways, and the systems across which they operate. When framed and analyzed through the lens of scaling, data shed light on the ways in which the Collaborative has engaged in diverse forms of scaling.

The findings presented in this article address the following research questions: **To what extent and in what ways is the Power and Place Collaborative:**

- **Scaling in and across?** Generating new knowledge and influencing systems, pathways, and/or positions of power
- **Scaling deep?** Transforming mental models and cultivating diverse relational networks
- **Scaling long?** Fostering initiatives designed to sustain over time
- **Scaling scree?** Supporting opportunities for many small interventions emerging across time
- **Scaling up and out?** Impacting increasing numbers of people and structures in and outside the system

Given the temporal and spatial nature of scaling (i.e., it happens across time and can manifest in diverse ways and places), a longitudinal, mixed methods explanatory research design (Creswell & Clark 2018) was selected for this study. The intent is to capture descriptive, rich, and contextualized data from the full range of Collaborative stakeholders and initiatives. Although the full data set includes ethnographic observations, oral histories, and survey data, the analysis presented in this paper draws primarily upon data collected via document and media analysis (i.e., student assignments, written reflections) and semi-structured interviews with Collaborative stakeholders (including founding Collaborative members, teaching faculty, community storytellers, and students).

The cross-disciplinary research team includes two Collaborative founding members and three external faculty partners who are not involved with any of the Collaborative's community engagement efforts. Together, the team brings expertise from the fields of social geography and oral history, community-engaged learning, design and systems thinking, global studies, education, and public health. The transdisciplinary nature of the research team, along with the inclusion of both Collaborative members and external researchers, enhances the trustworthiness of the findings. Data and assertions presented in this paper have been filtered through multiple disciplinary perspectives, benefited from an emic understanding of the Collaborative, yet also reflect a check on the potential for confirmation bias (positive interpretation of data by Collaborative members).

Data Collection and Analysis

Given the fluid, situated, and embodied nature of the Collaborative's approach to systemic design and social transformation, the researchers developed a multifaceted, evolving, and contextualized data collection plan that reflects the Collaborative's deep commitment to drawing upon reflection and stories to advance understanding and change. Findings in this paper rely upon extensive document analysis of community projects, student-produced work, and semi-structured interviews with a diverse set of Collaborative stakeholders. Collectively these data sources weave a rich, detailed, yet dynamic portrait of the Collaborative's processes and outcomes.

Semi-structured, thirty-minute interviews with multiple stakeholders—students, faculty, community partners, and storytellers—were conducted by the three research team members not affiliated with the Collaborative. In the fall of 2022, former collaborative participants, including founding collaborative members, teaching faculty, former students, and community storytellers, were invited to participate in an interview via email or text. Interview guides were developed with research questions in mind and then adapted to fit the situated experience of each stakeholder. In general, interview guides asked participants to explain how and why they got involved with the collaborative, what stories about their experience stand out to them now, and what challenges they faced. Participants were also asked about how their Collaborative experiences have informed their subsequent civic, professional, and personal goals, reshaped their sense of place, and/or developed capacities for complex systems change.

Table 3 summarizes participation rates across all Collaborative stakeholder groups. Participation rates ranged from 20% to 100%. The researchers were particularly pleased with the high degree of participation by students who enrolled in the initial set of Collaborative-affiliated courses in 2020 and 2021. A number of these students have since graduated from the university, affording the opportunity to examine how students have translated and applied the insights gained from their engagement in participatory systemic design processes to diverse contexts beyond college.

Table 3. Study Participants

Group	Role	Total #	Percentage
2020 students	Students enrolled in courses supporting Collaborative projects	10/34	29%
2021 students	Students enrolled in courses supporting Collaborative projects	7/22	32%
2022 students	Students enrolled in courses supporting Collaborative projects	3/13	23%
Collaborative members	Founding Power and Place Collaborative Members	5/5	100%
Teaching Faculty	Faculty teaching courses supporting Collaborative Projects	5/9	55%
Community storytellers	Community members that have consented to share their stories via interviews, oral histories, digital stories, or community profiles	7/25	20%

Interviews were recorded via Zoom, and members of the research team took notes on each interview using a standard template. Zoom's transcription feature was used to generate verbatim transcripts, which were edited for accuracy by the interviewers. Researchers engaged in multiple rounds of open coding of interview transcripts and notes (Saldana, 2021) to identify key themes and label core concepts relevant to the research questions. The research team sought to strengthen the trustworthiness of findings through investigator triangulation (Jones, Torres, & Arminio, 2022). At least one other team member listened to the recorded interview and completed additional notes.

Additional insights into the nature and outcomes of the Collaborative's participatory systemic design framework were drawn from document analysis (Merriam & Tisdell, 2015), primarily the examination of student-generated documents (e.g., assignments and written reflections) as well as the other Collaborative materials (digital stories, websites, social media posts, etc.). The process for securing approval to collect and analyze these documents is discussed in the following section on research ethics. The documents were a rich source of data, providing insights into the ways stakeholders were making meaning of their systemic design experiences and community partnerships, as well as the evolution of their thinking and actions across the span of the semester. Similar to the interview transcripts, members of the research team used open coding strategies to systematically analyze the documents, using researcher memos (Saldana, 2021) to note preliminary themes and reflect on connections to and/or contradictions with other data sources. The team met biweekly to compare notes, discuss themes, and analyze findings. After carefully examining the interview and document data sets, coded excerpts, and analytical memos, as well as revisiting extant

literature on scaling complex social systems change and participatory design, the research team generated thematic insights on the extent and nature of scaling within the Collaborative.

The aim of this multi-method and transdisciplinary approach to inquiry is to increase the strength of findings and reduce bias by triangulating findings through a review of multiple forms of data, methods, and perspectives (Onwuegbuzie & Collins, 2007). This approach aligns with design's commitment to improving our understanding of complex social phenomena via reflexive praxis in social research (Maxwell, 2004). More specifically, the longitudinal, mixed methods explanatory research framework is valuable for explicating less quantifiable and visible forms of scaling. Over the next three years, the research team plans to continue studying the initiative to see how the Collaborative's efforts have influenced mental models, built relationships, and shaped subsequent pathways through the community.

The Nature and Ethics of Consent in Participatory, Systemic Design

Consistent with the Collaborative's commitment to prioritize the needs and interests of community partners, the research team has carefully considered the ethical tensions and obligations embedded within efforts to study participatory, systemic design initiatives, striving to meet and exceed expectations for research best practice. For example, although the collection of oral histories and community member narratives are not considered formal research activities that require the oversight of Institutional Review Boards (Protection of Human Subjects, 2017), community storytellers invited to participate in Collaborative place-based storytelling projects receive a consent form guided by best practices in oral history collection and co-created by the Collaborative. The form documents the purpose of the project, its duration, their role as a storyteller, potential risks, and the goal to archive and share the transcript, story, and any images or additional documentation they choose to provide. Storytellers are invited to actively participate in creating their stories with students. They receive a digital copy of all materials, keep all rights to the materials, and can elect to retract their story in part or in full at any time. Although the findings presented in this paper do not draw directly upon oral history data, it is important to acknowledge the complex and scaffolded nature of research ethics and consent embedded within participatory systemic design. Given that the oral history initiative helped launch the Collaborative and has since sparked an ever-evolving set of new programs and partnerships, enacting the highest of ethical standards from the outset, even when not required, was imperative for fostering the trust and mutual respect needed to cultivate and sustain authentic, community-centered, equity-oriented relationships.

Ethical tensions are also embedded in efforts to collect data from students enrolled in Collaborative-affiliated courses. Care must be taken to avoid coercing participation by students who fear their grades will be affected if they opt out of the research study. To minimize this ethical concern, consent to participate in the study of Collaborative initiatives embedded in coursework is decoupled from course enrollment (in alignment with the university's IRB requirements). For instance, students enrolled in Collaborative-affiliated courses are invited to participate at the beginning of each course. Physical and virtual

consent forms are distributed, and details of the study are discussed in class, affording students opportunities to ask questions regarding the nature of participation and the consequences of opting out. Consent forms are then collected and sealed until after grades are submitted, ensuring that the instructors' assessment of student work is not influenced by knowledge of who has consented to participate in the project. Upon completion of the course, research team members pull and analyze project materials (e.g., assignments, written reflections, etc.) for those who consented to participate in the study. In addition, different informed consent processes are used to solicit participation in survey data collection as well as semi-structured interviews. This multi-phase approach to informed consent allows students to opt in and/or out of any stage of data collection rather than adopting an all-or-nothing participation paradigm.

Findings

Detailed next, the initial analysis of document and interview data has reinforced the merit of diverse approaches to scaling.

Scaling In & Across: Generating New Knowledge & Changing Power Structures and Positions

Collaborative projects have generated new knowledge and influenced power positions and pathways within and across both educational and community systems. The interviewing and storytelling process, combined with walking tours of diverse places in the region, created opportunities for community members, faculty, center directors, and students to contribute to this place and its communities in a number of ways (i.e., to scale in by sharing emerging knowledge across the system). For instance, community member digital stories have been shared via community screenings and workshops, assigned as course content in university and K12 courses, and integrated into nonprofit meetings. With the emergence of a diverse array of alternative social designs, one year into this partnership, the African American History and Cultural Arts Center was able to broaden its public engagement through a new physical location, as well as a revamped website and social media channels, generating new structures of power and opening opportunities to create and share knowledge. The Collaborative's efforts have also contributed to a slow, but broad shift toward community-based learning and away from paternalistic models of service-based learning. As evidence, the Collaborative members have been called to consult on other community-based oral history projects, community memory work, and community-based learning initiatives.

The projects have also shifted traditional positions of power in a number of ways. For instance, consent forms and ownership of materials center power with community storytellers. To take another example, graduate students in a media design program co-created informational posters with the African American Cultural Arts and History Center. The posters visualized historical stories of African Americans living in the county, integrating traditional graphic design strategies with information design to tell stories about African American education in the county, the significant history of local activists, specific neighborhoods in the area, and the race riots of 1969. By centering community storytellers and students as creators of knowledge (i.e., placing them in positions of power), this process

shifted traditional, hierarchical knowledge creation and dissemination practices still common within educational settings.

The Collaborative has also cultivated positions for community storytellers and former students. Some community storytellers have acted as guest lecturers, community tour guides, and formal presenters at both academic and community events. Students have taken on post-semester opportunities to act as special project leads. One student operated as a teaching assistant, two have taken on special projects to produce additional digital stories and video vignettes, three have cultivated connections to various local K-12 schools (creating lessons plans and assignments designed to extend local histories and storytelling efforts to youth), and yet others have completed marketing and media internships and presented at academic conferences.

Scaling Deep: Transforming Mental Models and Cultivating Relational Networks

Collaborative interventions have created places for "fruitful friction" between conflicting points of view, the building of trust, the exploration of alignment across differences, and the transformation of mental models (i.e., for scaling deep). Indeed, relationship building is a core commitment of the Collaborative. As a founding Collaborative member noted, what is most important is to "bridge gaps and bring people together… This is a mutually beneficial relationship, and we are here to build community."

In a final reflection, one student wrote that this project "allowed me to not only learn about the history of the county but really understand that systemic oppression shaped the way that the county functions as a community today." Yet another wrote that they particularly valued breaking "the narrative of discussing Black geographies as placeless." It was essential that these stories did not attempt to present placed narratives within a "context of suppression and loss" and instead engaged "big thematic questions about race and the County" while "celebrating the lives" of others. This relational and narrative approach to systemic change created opportunities for learning about and engaging with communities at the local scale, but also for thinking critically about broader-scale issues of racial justice.

A review of place mental-mapping activities (an activity embedded within many Collaborative-affiliated courses) visually depicted transformations in students' sense of place and identity over the course of the project. Walking tours with local historians and city planners alongside conversations with governmental leaders and community members were consistently noted as most valuable in reshaping their sense of, and connection to, this place. As one student wrote,

> It wasn't till we drew a personal map of the county in class that this hole that exists between [X] Street and [Y] Avenue first appeared to me. I think that was the most impactful exercise we did the entire semester because a few weeks later, that hole was filled in for me when I had to go there. There is a there *there*.

Initial findings indicate that these efforts may be leading to deep scaling not just for students, but also for storytellers, faculty, and collaborative partners, shifting cultural values,

mindsets, and beliefs. Community story posters placed at public libraries, local schools, community centers, local restaurants, and across both the neighboring community college and participating university have opened up opportunities for connection and reflection on place. In one interview, a community storyteller noted that "people have been coming up to me and saying, 'Hey, was that your face on that poster at the restaurant?' And then I share about the Power and Place Collaborative work." Yet another storyteller said this project "changed the way I think of things… I really did not see that there were many activists in this community… when I go back and watch the videos and when I interact with people that walk in and see the posters… and they say, 'hey, that is my grandparent on the wall…' I get to hear their stories. It makes you feel like you are connected."

Community partners have also consistently demonstrated that many of their own values, mindsets, and beliefs have shifted. When asked if insights and strategies from the Collaborative have filtered into other aspects of her life, a Collaborative founding member and county recreational director said,

> The way we are learning about how people connect to place; I am now thinking about that in every area of my work… I am thinking about how this type of work impacts young people, which is the majority of my work in recreation… How do they visualize their stories, and what does this mean to them? It is making me think deeper about the significance of even small things.

Another collaborative partner and local teacher noted that the intergenerational partnership "allowed my [high school] students to get away from grading as the goal of an assignment and delve into a hands-on learning experience."

These initial findings support Buckenmayer et al.'s recommendations to pursue deep scaling as a valuable internal and social process that changes "relationships and cultural roots" and "builds trust for productive long-term collaborations."

Scaling Long: Designing Interventions Intended to Sustain Overtime

Efforts to design and assess social systems changes over the long term are inherently challenged by what are often narrow, artificial deadlines and demands for short-term results. However, some findings on scaling long can be noted since the visioning of this work in 2018.

The emergent, community-first, and transdisciplinary design of the Collaborative offers opportunities for scaling long by disrupting standard teaching, research, and service conventions that privilege academic calendars, grant guidelines, disciplinary silos, and institutional boundaries (Hartmann, 2020; Paperson, 2017). The Collaborative has acted as a bridging force between courses, projects, and semesters, harnessing lessons learned towards future endeavors, keeping participants involved, and inviting in additional interested stakeholders. Evidence has shown this approach has and can create opportunities for scaling long. For instance, one instructor noted that many of her students are planning to attend future Collaborative and Center events with their families and pursue Collaborative internships so they can stay involved. Indeed, this teacher ended her interview by saying she

had decided to "push back [moving away] … because I really see the value" of continuing this collaboration. A community storyteller, when asked what they felt was *most* beneficial about the Collaborative, said, "what is really nice about Power and Place is the longevity of it." They went on to emphasize the value of relational connections in sustaining emergent change efforts, saying, "I ran into [x storyteller] while out and about, and he was excited to be asked back to speak… You never know where that one connection will take you. Every connection is important."

Many of the Collaborative's projects are intentionally designed to scale long. For instance, the creation of an openly accessible and searchable online platform for storing materials (including oral history transcripts, digital stories, community profiles, and other memorabilia) preserves projects and creates space for community members and students to pursue future projects.

The focus on deep, intergenerational histories that reveal sometimes slow, sometimes sudden, but always contingent and fragile progresses of change have, in turn, inspired participants to take the long view on this work. Speaking to this effort, a 2022 student participant reflected, "I previously felt that social change is nearly impossible… After hearing the stories from my peers and the community members, I quickly realized this is not the case. This class has inspired me and given me hope for the future of the world." This quote eloquently captures the potential for scaling long *by* scaling deep.

Nevertheless, efforts to scale long have been stymied by narrow and time-bound grant deadlines, semester and course boundaries, and community partner/faculty workloads.

Scaling Scree: Supporting Many Small Interventions

The initial set of collaborative projects supported efforts to scale scree by fostering connections, creating space to sustain these relationships, and offering a range of additional projects to continue efforts in and with the community. As noted, these efforts have extended into community story poster projects, community reading dialogues, youth-focused storytelling curriculum and workshops, and an intergenerational night of storytelling.

The Collaborative's early community-curricular partnerships inspired faculty from diverse disciplines to redesign their courses and create project-based opportunities that respond to community-identified goals. A number of these faculty have elected to stay involved over subsequent semesters. For instance, after hearing about the Collaborative, one faculty member was inspired to redesign their Art Administration Senior Seminar in partnership with the African American Cultural Arts & History Center. Students in the course learned about equity-centered design thinking, leadership theories, and arts-based nonprofit administration efforts by completing a consulting report and an AACAHC board handbook. The director used these materials to educate new board members about organizational responsibilities and offer resources they can use in their board meetings. This example illustrates the concept of scaling scree as the Collaborative has established an infrastructure that can nurture new interventions (even if temporary) by matching community needs and stakeholder resources, resulting in small-scale changes that have a lasting impact.

Additionally, while the full oral history interviews have been archived for posterity, the digital stories were produced to foster opportunities to scale scree (i.e., for a broader audience to access online, in museum digital displays, and through community screenings). In 2021 and 2022, these stories were shared in community events with over 120 diverse community members, faculty, staff, students, and administrators. The size and success of the event and the high quality of the digital stories screened, and discussion elicited, represent a new level of achievement in an ongoing process of relationship building and community learning that participating faculty and project partners have invested in since 2018. With this third iteration of the course project, students have conducted 39 oral history interviews and produced a like number of digital stories.

Scaling Up & Out: Impacting More People and Structures in and beyond the System

Standard service learning and community-engagement projects emerging from institutions of higher education are almost exclusively isolated endeavors, bound by individual courses, a solitary instructor, and semesterly timelines. These limitations typically mean community-based projects intended to support community goals often end prematurely, consuming limited community resources and failing to yield tangible benefits. Community-led initiatives also often start and end within the bounds of city budgetary constraints, artificial grant deadlines, and high levels of attrition in staff. In contrast, the Collaborative has catalyzed a wide array of new course partnerships, faculty collaborations, and community projects and events. For instance, the 2020 formal collaboration–involving two courses, a university center, two community centers, and a dozen oral histories–has extended into partner projects with two local K-12 schools, the local public libraries, a community book club, local faith communities, and summer youth recreational camps. As noted, it has also led to a swath of additional course partnerships from the Media, Art History, English, Core Curriculum, and Design programs. These additional collaborations have cultivated emergent project-based opportunities that evolve over time, impacting more people and institutions. In addition, the Collaborative supports trans-local learning through engagement with guest speakers, both from the surrounding region and further afield, who shared insights from place-making initiatives in their communities and subsequently heard about and learned from the projects unfolding here.

Collaborative participants, including community members, storytellers, and students, consistently express a desire to see this work further scaled up and out by increasing community events, the number of oral histories captured, and through replicating these efforts in other counties across the state. Indeed, when asked why she got involved, one storyteller said, “it was easy to say yes. We do not have a lot of communication among residents in an organized way, and I wanted to participate in anything that would increase conversations among people that do not normally communicate.” While scaling up and out should not be the only driving force behind design projects, assessment of the Collaborative shows that participatory social systems change efforts can be cultivated through design projects that seek to open and sustain opportunities for engagement with greater numbers of people across systems.

Discussed next, it is also radically different from dominant educational and design efforts, yet incredibly pragmatic.

Discussion

Radical, yet Pragmatic & Incremental, yet Paradigm-shifting

Initial assessment efforts show the Collaborative's place-based, participatory, and emergent design efforts can scale systems changes in a variety of ways: building relationships, transforming mental models, and providing diverse communities with opportunities to co-create responses to unique situations (Ansari, 2016; Costanza-Chock, 2020; Duan et al., 2020; Fry, 2017; Vink, 2021). Findings, for instance, show projects have prompted opportunities to reflexively remake external and internal structures across diverse relationships (Bailey et al., 2021; Tonkinwise, 2019). This approach aligns with research in organizational theory (Kania et al., 2018), social innovation (Westley, Antadze, Riddell, Robinson, & Geobey, 2014; Westley & Antadze, 2010), and higher education (Klein, 2019), indicating inclusive and equitable systemic change requires a range of flexible, transdisciplinary strategies and tactics.

While emergent, place-based, participatory design efforts do not automatically eliminate challenges posed by institutional structures and processes (i.e., standard IRB practices, grant guidelines, educational structures, etc.), assessing such efforts via diverse forms of scale reveals that they can cultivate a variety of system-level changes. For instance, pragmatic and incremental designs intended to scale across and scree support efforts to navigate systems challenges and manage risk. Design projects that scale in, deep, and long offer opportunities for cultivating radical and paradigm-shifting changes. This form of assessment can also help reduce risk, negotiate power, and navigate barriers. For instance, by assessing projects from a variety of perspectives and materials as they evolve over time, system designers can identify and respond to challenges at each stage of the process. Negotiating these risks and challenges requires ongoing, robust dialogues across institutional divides.

Limitations and Future Directions

This initial analysis is limited by the relatively new nature of the collaborative, three years of documented research, and the need for ongoing analysis of project materials, including surveys, ethnographic observational data, and ongoing participant interviews. Initial findings are also tentative, limited by a still-emerging research framework for diverse forms of scaling social change. In addition, the study design most directly aims to capture a deep understanding of the change processes spurred on by participatory community-based learning partnerships. It does not directly aim to compare findings to more traditional forms of complex social systems change or service-learning projects.

Given findings and limitations, the next steps could include more efforts to design and assess participatory social system change efforts along a variety of scales and with diverse stakeholders. Systemic designers, for example, can shift much of their design and assessment practices towards cultivating more diverse and situated outcomes that include generating

power for community members, shifting practices and policies, building relationships, and transforming mindsets. Long-term collaborative partnerships and research projects embedded in diverse communities and across disciplines/institutions are needed. In addition, more efforts to study diverse forms of scale are needed. For instance, tracing historical examples of participatory social system changes through these forms of scaling is likely to yield valuable insights for participatory design efforts today.

Conclusion

This article makes a number of contributions to the field of systemic design. First, the article challenges core assumptions informing the dominant gaze of systems design by bringing emerging scholarship on diverse forms of scale into the center for critical examination. Second, by providing a case study analysis of a living (and evolving) participatory, place-based systemic design initiative, it also demonstrates the potential power of applying these concepts to systemic change efforts. Third, the article offers more inclusive and just methodological strategies for analyzing the value of systemic change efforts. Taken together, the article offers practical instruction about how to achieve diverse forms of scale via more participatory systemic design practices.

While the recommendations are incredibly pragmatic, they are also paradigm-shifting: What is systemic design intended to "do"? From within the discipline, the focus has been on efforts to make design "more systemic." From the community's perspective, what does systemicity matter? Efforts to carve out the legitimacy of the field and advocate for its relevance (i.e., to scale up and out) have consumed energy that could be directed towards designing and assessing transdisciplinary, participatory design projects that cultivate situated systemic change *with* and *for* those most impacted. In the end, a "systems-level" approach should emphasize the need for designs that emerge through participatory, situated engagements that evolve over time (scaling in, deep, scree, across, and long). This reframing shifts a tendency towards unidirectional and unidimensional conceptualizations of scale as "a ladder to climb." In place of a flattened, 2-d framework, the Power and Place Collaborative offers a conceptualization of scaling as a meshy, stretchy place of emergence. As Tulloch (2018) writes, "a sociocultural landslide is not about the few boulders loosened down a gorge, it is about the millions of stones that sweep down like a tide and transfigure the landscape." In the end, the Power and Place Collective offers one humble source of inspiration and strategies for those interested in collective, situated, and emergent transfiguration of our landscapes.

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