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Jane Addams and Ecosystems Design: What might we learn?

Danielle Lake

This paper argues Jane Addams’s engaged philosophic activism offers insights into how systemic designers might engage with and communicate about wicked problems. I show how her participatory and situated approach to design traces complex histories and geographies, offering transdisciplinary strategies for designers addressing systemic crises. She is remembered as one of the most powerful social reformers of the twentieth century, contributing to the design of innumerable processes and systems to address labour rights, immigrant rights, women’s rights, and children’s rights, peace, food justice, and more. While her ecosystem design efforts have been recognized across a swath of fields and sectors, designers have yet to carefully examine how her approach to design might offer strategies for designing across complex, adaptive systems. After exploring the role of design in wicked problems, I explicate Addams’s approach to wicked problems and design, highlighting the essential roles of relational, historic, and geographic mapping, aesthetic disruption, reflexive feedback loops, and sustaining situated engagement across diverse communities. I conclude by suggesting the combined force of these practices can cultivate design pathways for transdisciplinary design efforts aimed at addressing wicked problems.

Keywords: Jane Addams, systems design, wicked problems, aesthetic disruption, relational revolution, historic and geographic mapping, transdisciplinarity

Wicked Problems by Design

“The world is on its way to ruin and it’s happening by design” (Monteiro 10).

The term “wicked problems” is not new to the Relating Systems Thinking and Design community. Coined in the 1970’s to convey a category of problems that moved beyond complexity, such problems abound and require design efforts that move beyond disciplinary-bound, technoscientific interventions. These problems can be witnessed through persistent and systemic racial oppression, global pandemics and epidemics, and limitless environmental crises. As large scale, interconnected social messes, such problems cannot be solved (Rittel & Webber, 1973; Brown & Lambert 2013). Indeed, the term ‘problem’ is misleading since such social messes transcend boundaries, are in constant flux, and are interpreted through divergent and conflicting worldviews.

As the spring 2021 issue of *Touchpoint* emphasizes, many dominant design tools and methods not only fail to address wicked problems, they also contribute to them. Design has been a catalyst and contributor to these crises. From colonial systems to systemic racism, public health, and our food and transportation systems, we have “designed the world to behave exactly as it’s behaving” (Monteiro 10). When understood as “an intentional world-making practice,” we see how design shapes both individuals and the environment (Vink 2021; Fry 2017). Current social technologies (i.e, Twitter and Facebook) are prime, modern examples of the powerful role such designs play in reshaping our inner and outer worlds. These innovations did not take into account the situated embodiment of diverse peoples living together across complex, evolving systems (Wetter-Edman et al., 2018). And while originally lauded for their value, they have led to incredible harm. In addition, dominant design narratives surrounding many innovations tend to hide the inherent tensions and failures within the process and its outcomes.

The design world is calling for a fundamental reimagining, demanding designers reconsider not only the theories and assumptions undergirding their work, but also that they seek out and integrate approaches and knowledge from other domains. Many practitioners and researchers are now arguing design efforts require more collaborative, context-sensitive, and far-sighted design efforts (Birgit 2021; Buchanan 1992; Brown & Lambert, 2013; Dixon, 2020; Grimes, Vink, Harvainen, Rittel & Webber 1973; Vink 2021). Ecosystems design, for instance, provides diverse communities with opportunities to cocreate situated responses to each unique situation (Vink, 2021; Duan et al., 2020; Ansari, 2016). Indeed, across design fields we see movement towards more liberatory, equity-centered, and ecosystems-aware design practices that seek to redress these problems by intentionally operating at different levels of scale (Anaissie, Cary, Clifford, Malarkey, & Wise, 2020; Culver, Harper, Kezar, 2021; Creative Reaction Lab, 2020; Constanza-Chock, 2020; Escobar 2017; Vink, 2021b). One of their first goals is to frame how design has shaped internalized mental models that feed into institutional rules, norms, and beliefs. These approaches visualize how institutional arrangements are created and sustained through “multi-actor exchange systems” (Vink et al. 2020, 2; Vargo and Lusch 2016) that operate to constrain and encourage certain ways of acting and being. The goal is to design internal and institutional structures and processes, so they support situated needs as they emerge over time.¹

Responding to this call, this paper argues Jane Addams’s engaged philosophic activism offers insights not yet fully explored by designers committed to engaging with wicked problems. I show how her participatory and situated approach to design traces complex histories and geographies, offering transdisciplinary strategies for designers addressing systemic crises.

Jane Addams: A systems designer?

Jane Addams and Hull House are often remembered for their community organizing work in the late 1800s and early 1900s. Based in Chicago, their efforts crossed the United States and spanned the globe. They were instrumental in the design of labor rights, immigrant rights, women’s rights, and children’s rights within the United States as well as international peace and food justice efforts (Knight 2010; Seigfried 1996; Fischer 2013). Addams was the first woman to win the Nobel Peace Prize and an advisor to three US presidents. Her efforts and the efforts of Hull House have been studied and replicated across an impressive array of fields (including sociology, philosophy, education, political science, and a diverse array of service fields). Designers, however, have not yet closely examined her work.

Addams’s approach to design aligns with ecosystems design efforts. She authored narratives, speeches, and books and cultivated local, national, and international networks intentionally created to invite others into the iterative (re)design of social systems. As a part of the settlement movement, she also imagined and created Hull-House and its programs. Her efforts opened opportunities for situated, relational designs that sought to address the needs of diverse communities, leading to a swath of legislation and alternative institutional arrangements. In line with systems change models, her designs changed the flow of resources, transformed social practices and influenced government policies; they also cultivated relationships, shifted power dynamics, and disrupted mental models. Her goal was to spark and sustain opportunities for designs situated in and responsive to the needs of diverse communities. While her design efforts were instrumental across many social movements and have had lasting impacts across the world today, she has consistently been misread, and misinterpreted (Fischer, Lake, Whipps 2019). She has also been overlooked by design practitioners; overshadowed by the work of Pragmatists John Dewey, Charles Sanders Peirce, William James, and George Herbert Mead.

While John Dewey is especially given credit across the design field (Buchanan 1992, 2009; Dixon 2020; Vink 2021; Schön 1992; Wetter-Edman, Vink, & Blomkvist, 2018), historians, biographers, and philosophers studying Addams and Dewey have long noted that much of Dewey’s philosophy on design was informed by his relationship with Addams. Dewey’s private correspondence explicitly reveals how his philosophy was in truth cogenerated in dialogue with Addams. Scholars also note that much of his philosophy was informed by Hull House’s innovative social experiments (Knight 2005; Pratt, 2002; Siegfried, 1999; Stengel 2007). Whipps, in particular, has argued for the need to examine their contributions to social change in tandem in order to better uncover the value of their “innovative methods of democratic change” (2019, p. 314). Informed by Hull House’s design efforts, Dewey saw democracy as a continuous process of “social and political reconstruction.” He began in and with the

¹ In order to generate and sustain systems change, actors engage in “recursive feedback loops” (Vink et al., 2021a, 5, 8). Opportunities to “loop” emerge through generating awareness of embedded institutional arrangements, acting to shift problematic arrangements, and then observing, reflecting, and reconsidering the subsequent changes (Vink et al. 2020 8; Schön 1992).

commitment that we are situated, embodied, and fallible. He emphasized the role of aesthetic experience in imagining and designing our world and committed to iterative, melioristic interventions. As articulated by Dixon (2020), “Dewey sees inquiry—or, more particularly, the identification and resolution of problems—as a transformational act which reconfigures the world in which we find ourselves” (p. 25).

While Dewey’s value to the design world should not be dismissed, it is worthwhile to explore what we might have to learn from Addams.² Addams, for one, more directly engaged in ecosystems design efforts on the ground than did the founding pragmatists. As a white, educated, upper class woman of her time, she also held a complex array of privileged and oppressed social identities that provided unique design opportunities and problematic biases designers today can learn from.

Addams’s efforts to address the sewage crisis within Chicago and across urban spaces serves as an initial and powerful illustration of the need to embrace evolving complexities, wrestle with tensions, and acknowledge nonideal tradeoffs throughout design processes. In *Twenty Years at Hull-House*, Addams documents the wicked dimensions of the situation: explicating the pain points she and fellow ward residents are confronted with because of gender discrimination, inadequate infrastructure, cultural norms, ineffective laws, inept services, and corruption. She also links these complexities to other systemic barriers emerging from housing and tenement practices, public health regulations and norms, transportation failures, educational practices, and labor policies, noting that it is the collection of these “subtle evils” that are “often most disastrous” (195). She notes how such conditions not only fueled a staggering high death rate in the ward, but also familial abuse, addiction, and crime.

She emphasizes the paradoxes within the situation as well, noting that the garbage boxes were simultaneously a site of horror and disgust to outside visitors, “the first objects a toddling child learned to climb,” and “the seats upon which entwined lovers sat.” Indeed, for long-time residents, it was all too easy to “forget the smells” and the scene (186).

In “Public Activities and Investigations,” she also visualizes irresolvable tensions by mapping the attitudes of city officials (resistance), diverse residents (a mixture of outrage, apathy, and loss), service providers (defensiveness), and those far removed from the daily realities (judgment, disdain, and indifference). The scene and smells, along with suffering and the resistance are emphasized, painting a multifaceted picture of both the devastating impacts and the banality of the situation.

Addams operates as a mediator, catalysing Hull-House and its’ residents to engage in ecosystems mapping in order to assess these complexities. In their first two months of their investigation, they found 1,037 violations of the law, ousted three city inspectors, moved violations into the court system for review, and successfully advocated for significant increases to garbage removal services (187-8). In partnership with researchers they were also able to draw out direct links between the ward’s horrifying death rate and the sewage. Despite these and many more “successful” interventions, she emphasizes how the situation was still dire after three years of effort. Addams documents innumerable challenges to their efforts to redesign services, including social norms (discouraging women from advocating for matters outside of the house), a commitment to narrowly framed, short-sighted solutions, a lack of transparency and oversight, indifference, resistance, and ineffective regulations (Alpaslan & Mitroff, 30-33). She also highlights the role of institutional lag and human tendencies to deny, simplify, and blame others, to move along the path of least resistance, showing how these situated realities exacerbate efforts to design ameliorative systems change.

While just one example, her efforts to map the challenges of garbage collection demonstrate her awareness of designing responses to wicked problems. As I document in the following sections, they also provide strategies for those interested in pursuing a more equity-focused ecosystems design approach. By further explicating the above

² On the other hand, unravelling the role of design in Addams’s work is complicated. While her writings consistently and vividly convey her awareness of wicked problems (Lake 2014), they do not clearly reveal systematic explanations of her approaches to addressing them. Thankfully, scholars across fields have been studying Addams’s pragmatist social change methods and exploring their relevance to current issues for quite some time (Fischer 2020; Whippis 2019; Deegan 2000; Knight 2005).

example alongside many others, I show how Addams acted as an ecosystems designer in order to ameliorate the wicked problems of her time and place.

Addams's Methods and Strategies

Frame & Reframe

Addams's approach to design embodies a lifelong commitment to critical reflexivity. Defined as the process of "cultivating an awareness of the multiplicity of social structures internalized by oneself and others," critical reflexivity is essential to an ecosystems design approach (Vink, 2021). As a commitment to iteratively frame and reframe situations, it requires one to seek out and stay within the doubt and uncertainty of the milieu, while holding on to critical hope. Doubt opens the door for feedback (i.e., to frame the situation), while critical hope generates the willingness to revise and redo, practices that are more likely to support and sustain institutional arrangements that redress situated social messes. For instance, while Addams was deeply committed to labor reform and played a critical role in reshaping labor practices, she also takes great pains to understand the impact such reforms have on others. She emphasizes the suffering these laws would cause to families desperately trying to make ends meet, saying the potential impact was "never absent" from her mind. She immersed herself in the situation, attending "as many mother's meetings and clubs among working women as" she could and reflecting that these spaces were essential for generating shared understanding (11).

Indeed, a review of her work clearly demonstrates how she sought to design across complex, intersecting and evolving systems through creating and leveraging "embedded feedback loops of reflexivity and reformation." Such loops require a keen awareness of the situation, one's situatedness within the milieu, and a willingness to return and redo (Vink, 2020, 8). *Twenty Years at Hull-House* can be read as a recounting of the evolving complexities, tensions, and nonideal tradeoffs, and setbacks inherent to an ecosystems design approach. Returning to the example of sewage and public health, for instance, she emphasized the challenges women in the neighborhood faced in mapping the garbage and sewage violations. The work was physically grueling, culturally frowned upon, and an addition to their already heavy labor and familial commitments. She highlights how these mapping efforts led to the removal of three city inspectors within the first few months and yet also notes how the conditions in the ward seemed largely unchanged even years later (188). The goal is to work with residents of the ward, city officials, researchers, policy makers, and outside constituents in order to shift mental models, to "make room for other ways of knowing and being" (Vink 2021).

In general, she sought to generate accountability for the wicked problems of the time by facilitating "a constant unsettling among those implicated." To take a separate example, Addams sought to shift the dominant narrative around political corruption in Chicago by resituating the issue. The dominant narrative of the time centered blame for corruption on the willingness of many to receive bribes. Addams pointed out how privilege isolated a few from the need to accept bribes and made it all too easy to assign blame (110). By prompting privileged community members to situate themselves, explore the complexities, and then reconsider their position, she was generating aesthetic disruption in order to "reconceptualize and relocate" the problem (111). While these design efforts begin with aesthetic disruption, they also require a willingness to explore the relational, historic, and geographic dimensions.

Exploring through historic, geographic, & Relational Processes

Addams's ecosystem design approach was informed by her deep commitment to engage across political, institutional, and regional boundaries. She was willing to situate herself in relationships, to see and listen. Along with a nuanced awareness of the particularities on the ground, her efforts were also deeply infused with a complex understanding of the situation, specifically the tracing of both the historical roots of situations and their current manifestations.

Addams argued that we cannot design effective responses to social challenges until we figure out "what the people want and how they want it" ("Subjective Necessity" 22). The initial placement and design of Hull-House was an invitation to members of diverse communities to come together in "fellowship," to create "simple human relationship[s]" with others ("Subjective Necessity" 16). She emphasizes the need for a sustained being-with across differences. She intentionally finds a location for Hull-House that is between Italian, German, Polish, Russian, Canadian-French and Irish immigrant communities, describing it as the creation of a place for "ongoing negotiations" between "heterogeneous groups."

In place of isolation and simplification, her efforts were informed by an abiding commitment to attend meeting after meeting across coalitions. She saw these efforts as essential for designing ways for diverse people to live and work with one another, writing that such embedded "daily living... is of infinitely more value than many talks on civics for, after all, we credit most easily that which we see" (Addams 190). Addams not only took this approach in her own philosophic-activist commitments, she also consistently warns readers about the dangers of designing in isolation from others. She writes about the Pullman Strike, for instance, noting that Pullman's efforts to build an entire town for his employees fueled "cruel misunderstandings," drove even greater divides, and generated unnecessary suffering (Democracy and Social Ethics 68-70). This focus on being with and coming to know others is combined with the need for a "humility of spirit and a willingness to reconsider existing institutions" as essential for designs that moves us towards peace (1932/2003, p. 339).

Addams's efforts to explore the complexities of each situation did not only rely on understanding the lived experience of diverse others, they also sought to orient the issue within its place. Hull-House generated and sustained space for a diverse community. By situating itself along dividing lines, it operated as "an ongoing space for cultivating humility and reflexivity across difference." For instance, Addams brings trained Russian-Jewish cloakmakers and untrained American-Irish young women who usurped their positions for less wages to Hull-House to design a way forward together. She emphasizes the strong separations between the two groups, the devastation to their livelihoods, and the very real need for employment as well as their opposing commitments to individualism and socialism. She writes that "these two sets of people were separated by strong racial differences, by language, by nationality, by religion, by mode of life, by every possible social distinction." The only thread of connection between the groups was the enormous "pressure upon their trade" ("Settlement as a Factor" 51). Hull-House becomes not only the place they meet; it acts as an interpreter between the two. Within the pressures and tensions of this situation, she saw an opportunity to find "the moral question involved" ("Settlement as a Factor" 53) and design a way forward. This form of mediation can unveil hidden tensions and pain points and help designers resist simplistic responses to complex social challenges.

In addition to initiating codesign efforts between constituencies, Hull-House also played a primary role in mapping the complexities of its surrounding region (Kish 1991). These efforts included careful study, data collection, analysis, and photography. Hull-House residents created social surveys that visualized the conditions of the communities around the settlement and prompted timely policy changes. These mapping efforts were essential to reform efforts. As Whipps writes in this volume, almost every successful reform initiative at the time was undergirded by these participatory mapping efforts (2021). Referring to only one example, Addams's commitment to relational and geographic mapping was instrumental to the City Homes Association. The association involved an incredible array of diverse people and organizations, generating an incredible amount of reform (Twenty Years at Hull House, 171).

Addams's commitment to mapping included tracing the complex histories that led to the current situation. While exploring the role that residents played in the city's garbage and sewage challenges, she documents the cultural traditions and practices residents brought to an incredibly congested housing crisis. While outside visitors were appalled that residents were permitted to sustain cultural traditions that exacerbated the situation, Addams and Hull House were "nested in realms of experience," able to perceive the challenges from "the inside out," and thus reframe them (Diethelm, p. 169). She employs this same approach when addressing the problems of domestic service: She maps the histories and complexities of these institutional arrangements in order to highlight how the situation fundamentally "belongs to the community as a whole" and thus must be addressed by "members of the community together" (Fischer, 2019, 76).

This form of participatory ecosystem design aligns with current advocacy work across design fields to situate oneself in place in order to generate ethical and viable designs that respond to the complexities of the situation.³ They press back against design frameworks that dismiss the designs of Indigenous communities and women (Tunstall, 2013; Vink 2021). They incorporate a form of empathy that moves beyond awareness and the arousing of an emotional response, towards a relational, embodied, and action-oriented form of empathy (Jamal et al. 2021).

³ As Diethelm points out, design requires one move beyond scientific research; it mandates "a unique, socially constructed, culturally complex perception" (169).

Generate and Prototype

Addams's approach to creative generation within complex, living systems harnessed relational, historic, and geographic immersion, but also "synthetic imagination" (Fischer, 2020, 64). Immersion remains necessary for seeing the interdependencies and evolving complexities within the systems; synthetic imagination is necessary for integrating insights across diverse domains and generating a vision. Synthesis is, in fact, described as one her greatest gifts (Knight, 2010, 93).

Systems thinkers and design practitioners may value exploring the role of synthetic imagination in the *process* by which she designed and in her *designs* themselves. Her narratives, for instance, are designed through synthetic imagination and to prompt it in others (i.e., they generate reflexivity and open opportunities for reformation).⁴ As the details outlined above highlight, she wrote to prompt her reader to reconsider how they think, feel, and respond to these situations. Hull-House also emerged through these processes and operated to encourage synthetic imagination in others. Opening in 1889, it consistently designed and prototyped institutional arrangements to support situated, relational generation and action. In Addams's own words, it generated "*unexpected*" and "*romantic... discoveries in actual life*" (202). It was also the creation of a place to design and prototype more embodied and imaginative "habits of caring" across differences in order to design a better society (Hamington 2004, 92-93). With neighborhood residents, Hull-House codesigned incredibly experimental *and* more common institutional arrangements, including dozens of classes, but also an open-air school, a reading room, an interpretation bureau, a post office, public bathrooms, a labor museum and more (Addams 2002: 26). Institutional arrangements at Hull-House were emergent, fluid, and experimental. The goal was to "co-create context-sensitive knowledge... into effective interventions" (Lake, 2020, 44).⁵ *Twenty Years at Hull House* showcases examples of how such places can design collaborative efforts among diverse community members, various organizations, and surrounding locations.

Generation of alternative institutional arrangements through synthetic imagination and collective-action is often a slow, messy process. Addams's warns of this throughout her work, noting as well that the outcomes of our designs cannot be seen in advance and are most often nonideal. She was consistently aware that her "best efforts were most inadequate" (Twenty Years, p. 259). She designed with "human capabilities and frailties" in mind, believing that "incremental alterations in moral sensibilities and imagination" were essential for prompting and sustaining valued change (Fischer, 2019, 12-13). Given that design thinking research is showing prototyping, testing, and iterating are underutilized aspects of the process, this aspect of her work is particularly worthy of closer analysis (Liedtka & Bahr, 2020). This approach reminds us that inclusive and sustainable innovation tends to come from the "adjacent possible," from creative, but also viable possible futures that hover at the edge of current systems (Johnson, 2010, 31). Her efforts to design with-and-across through iterative prototyping are also essential for addressing the limitations of implicit bias, cultural tropes, and individual habitudes.

Returning to Hull-House's efforts to get the garbage collected illustrates the need for--and value of--iterative prototyping, testing, and revising. Addams readily admits that their initial efforts only "slightly modified the worst conditions" (187). However, reflexive feedback loops led Hull-House to conduct systematic investigations across the ward and with diverse stakeholders (187). They launched a swath of prototypes over a decade in order to disrupt and create institutional arrangements that improved conditions; they cultivated relationships both across the ward and from farther afield; they also successfully shifted power structures; designed and prototyped new positions, mapped housing and sewage challenges, generated resource flows, and shifted mental models, launching a swath of comprehensive reforms. Their designs ultimately helped to lower the death rate of the ward from third in the city to seventh.

⁴ Addams's writings can also help systems thinking and design practitioners reconsider communication strategies as design interventions that can foster transdisciplinary collaboration on wicked problems.

⁵ According to Addams, "the only thing to be dreaded in a Settlement is that it lose its flexibility, its power of quick adaptation, its readiness to change its methods as its environment may demand. It must be open to conviction and must have a deep abiding sense of tolerance. It must be hospitable and ready for experimentation" ("Subjective Necessity for Social Settlements, p. 22-23).

Conclusion: Cultivating Change

According to systems designers, cultivating valued systems change requires sustaining reflexive feedback loops that move designers through framing, listening, and understanding systems as well as defining, exploring and intervening (Jones & Van Ael, 2021). More participatory, situated, and emergent processes are still needed. Addams offers a vision and a set of strategies for shifting design practices. She reminds designers that the systemic redesign of institutional arrangements emerges in part through “intimate knowledge of the experiences of the beneficiaries.” Cultivation requires a “long residence among;” it requires time to develop relationships and explore the tensions from a variety of angles (Addams, 1910, 10).

Researchers of complex systems change and innovation agree. They emphasize that valuable design interventions require a willingness to sustain relationships across differences in order to cultivate trust and a shared vision across constituencies (Centola, 2021 83; Burns, Machado, and Corte 2015; Cattani, Ferriani, and Colucci 2015; Johnson 2010). Creative action requires a willingness to wade into uncertainty (Menger 2001), engage in conflict, collaborate across difference, step outside of dominant norms, risk making mistakes, and adjust decisions based on the outcomes of such actions (Farrell 2001; Liedtka and Bahr 2019; Parker and Hackett 2012). As we have seen, Addams, Hull-House, and its residents lived these practices out. Hull-House efforts were also focused on cultivating a “sensitivity to interrelatedness” and “a respect for thresholds” (Vink 69). Addams’s design efforts ultimately led to generations of social change activism as well as the successful implementation of labor laws, women’s rights, immense educational reform, and more. The brief vignettes highlighted above demonstrate that cultivation requires boundary spanning designers and institutions.

Addams designed places, processes, and opportunities to prompt situated social change. She sought to uncover the complexities of each situation in relationship with others and pursued relational-iterative action. In many ways, she was a master of sparking and sustaining disruption (Seigfried 45). According to Vink (2021), Addams’s approach is valuable “for the project of redesigning design,” because it emphasizes the need to “cocreate lasting infrastructure that supports ongoing collective reflexivity amid plurality.” In contrast to dominant design efforts, she was also very much aware of the limitations of our designs. Rereading Addams as an “ecosystem” designer relevant to our design efforts today offers those interested in resituating design a more embodied, emergent and situated approach.

Thus, designers and changemakers might value exploring both her design process *and* her design artifacts as they seek to themselves engage ecosystems design processes and create designs that cross boundaries and alleviate wicked problems.

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