Design Through Collective Action/ Collective Action Through Design

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Insights

- Social design focuses on the creation of interactive systems meant to empower and support collective action.
- To support and empower meaningful collective action, designers need to attend to the relations that occur in civic life.
- "Publics" provide a conceptual frame, theorizing social design and structuring design interventions through issues, attachments, and infrastructures.

IMAGE BY ROMAN FEDIN

We take for granted that human-computer interaction focuses on the interfaces and experiences that people have with computing. It's built into the name of the field, rooted in the human factors and engineering psychology origins of building systems well suited to our perceptual and cognitive abilities. But as a field we've come to recognize that the experience of computing is so much more than information density and biomechanics. The interfaces we create might be between human and computer, but they are most often mediating and enabling human-to-human experiences of one kind or another. At times those human experiences might be plain to see—via social networking, online gaming, or coordinating calendars (for work or play). At others, the human experience is less prominent but no less there—generating data behind smart cities, participating in open source communities, or using computational tools to support political action. Underneath the differences in domain or application, each of these kinds of interactions prompts or supports different forms of collective action. Some of these forms of collective action result in personal benefit, such as staying

connected with friends and family; other forms might have commercial benefits, as the financial incentives around data collection, aggregation, and analysis in our current technology market continue to grow apace; still others may be aimed at forms of political action and social impact.

The diverse kinds of collective action captured by that last category are the focus of my new book [1], which takes on the topic of "social design." Just as we turn to "social justice" to encompass the many ways of helping those in need, those without voice, or those otherwise without the resources to act on their own, so too social design is meant to evoke a narrower set of actions we take through the creation of computing systems and interfaces that are meant to empower, support, and act as resources for individuals and groups for whom such things might not normally be available.

Social design focuses on the kinds of problems whose solutions require human relation and collective action. The intent here is to place primacy on the way design can bring people together to address issues, rather than on how to use design to further segment and isolate individuals for targeted consumption. This idea of social design arises out of a longer discourse within design practice and an aspiration that directs a withering eye at the application of design to the manufacture of demand instead of the manufacture of solutions to real problems. Starting with Papanek [2], and tracing through more recent design scholarship (see for example [3,4]), social design taps into a move to challenge the modernist vision of design and its roots in the manufacture of product and of the desire for product. This shift, as Dunne and Raby point out [3], brings into focus "other ways of managing our economic lives and the relationship among state, market, citizen, and consumer."

To reimagine these relations through design, we need to first understand how design can happen as a collective enterprise, to see design-by-committee as a resource rather than a hindrance to comprehensive solutions and inclusive practice. As a collective endeavor, social design requires a diffusion of common practices of problem setting and problem solving. It requires attending to new forms of participation and a recognition that collective contributions do not mean that everyone is a designer (the point where design-by-committee often gets lost in the woods), but rather that there are multiple kinds of knowledge that reside within different communities, and the work of social design is to sort through and integrate those ways of knowing by directly engaging with the people who know them.

Much of this raises familiar approaches, from participatory design to co-design to meta-design, each of which places a different emphasis on the role of designer, the embrace of (small-*p*) political interactions, and the kinds of outputs or products that might result. My sense of social design confronts design as an extractive process—soliciting and ferreting away expertise only to return with the final, "informed" artifact—and instead emphasizes the value of the process of designing within community settings as a kind of capacity building and empowerment.

This move toward social design raises two large questions: On the one hand, there is a question of how do we *theorize* social design—what traditions in philosophy, political science, psychology, and science and technology studies give us purchase to shift the terms of design from the modernist frame based in the transactions of production and product, to contemporary moves toward relations between people and communities? On the other hand, how do we *do* social design—what are the entry points and design approaches, and how do we assess the outcomes?

An answer to both of these questions can be found by returning to the philosophy of John Dewey and the framing of a public, which provides a vantage point from which to work through the theoretical and practical grounds of how and where design can intervene and operate as a form of collective action.

PUBLICS AND DESIGN

Dewey sought to define a public not as a single common mass of people, but rather as a specific configuration of individuals comprising individuals affected by a shared set of social issues [5]. Two things stand out in Dewey's definition. The first is that shared issues form the basis of a public's identity; the second is that the explicit cause of those issues may be well removed from those feeling its effects. These kinds of conditions are everywhere today—from the unsettling consequences of war, to systemic racism, to the long and slow recovery from economic collapse. These issues may result in violence or in standing in solidarity against violence, or they may lead to abrupt and unexpected political upheaval.

The challenge here is not in identifying a set of issues around which people may join together, but rather in finding ways of acting to resolve those issues. The disaffection for public life that seems to pervade the popular assessment of Western life is not due to a lack of motivating shared issues, but instead to a sense of helplessness in our ability—individually or collectively—to address those issues. In fact, social media and the Internet have only made it easier to identify issues across any scale we might imagine: From place-based sites like Nextdoor to place-less sites like Twitter, we have access to and can choose from any number of issues facing local, national, and global communities, each of which might be mobilized into

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a Deweyian public.

Herein lies the opportunity and challenge when deploying design in the context of a public: As the ability to identify and express issues is made more accessible, we also need to create mechanisms for connecting those affected by an issue to means of taking action to address that issue. Projects of social design provide an opportunity to create tools that both amplify the ability to identify and articulate issues and empower action in response. This is, in short, a path to solving the problem of Dewey's public, of reconnecting the citizens with institutional entities who might redress a particular issue. Or, more radically, of enabling citizens to wrest control over the resolution of issues from institutions that no longer act as effective intermediaries.

Harold Sackman made this very point when he suggested that real-time computing could be the tipping point for supporting and instigating public action [6]. Asserted in light of the command and control systems of the mid-1960s, Sackman's vision of the critical role of computing in shaping public action is still relevant (and unfolding): Publics can be constituted and supported with technologies that enable access to information, provide means of distributed information production, and include social mechanisms to identify and sustain individual members to mobilize and organize others around common issues. It is this idea that has brought publics to the fore as interest in social movements and political action has grown in contemporary design (e.g., [4,7]). This is, undoubtedly, an optimistic position to hold. It is important to simultaneously point out that the optimism does not derive from the mere presence or application of computing, but rather from the inventive responses to issues that might come through social design. These include the *application* of computing to present and new forms of advocacy and activism, and the diffusion of alternative forms of democratic participation.

Even though social design need not be limited to human-computer interaction, it is a vibrant design space for thinking about how to reconfigure relations and collective action that might happen across different spheres of influence. But what does that design space look like and how do we begin to make inroads to build out interactive systems that address the present social challenges facing communities around the world? This is where the frame of publics can provide a road map for how to enter a design space—through the issues themselves, through the relationships people have to those issues, or through the infrastructures people use to address those issues.

COMMUNITY ENGAGEMENT

A good place to start is the broad category of community engagement and the relations people have to shared issues and to each other. As a set of activities that engender and invite different publics to interact, the ways in which individuals and groups mingle and confront each other over the day-to-day issues of living in close proximity provides a rich space for working through social design. Community engagement also holds a useful parallel to interaction design in that engagement is to civic encounters what user experience is to human-computer interaction: It signifies a large and multifaceted category that simultaneously speaks to general qualities of interaction and to specific ways of doing that interaction. While everyone can agree to wanting good community engagement, the precise processes by which that happens varies with constraints that can be both principled and pragmatic. Similarly, as interaction designers, we strive for good user experiences but may take many different roads in order to arrive at that destination.

For community engagement, there are different points of entry that a social design intervention might take. One entry might be through the kinds of issues around which a public forms, attending to the ways in which we might resolve short- and long-term needs of communities to build

COMMUNITY ENGAGEMENT PLAYBOOK

The Community Engagement Playbook project was a collaboration between residents of five historically Black neighborhoods in Atlanta, the City of Atlanta, and several other major stakeholders. Supported by the Living Cities: City Accelerator program, the goal of the project was to work to address longstanding distrust and the erosion of meaningful engagement between the City and residents of the designated neighborhoods. Led by members of the Participatory Publics Lab at Georgia Tech, the coalition of stakeholders designed the playbook with a generous definition of community engagement in mind—one that derived from the experiences and desires of community members and that addressed interactions with elected officials, municipal departments, public agencies, nonprofit service providers, as well as community associations and resident-led civic organizations.

The playbook we developed, and the collaborative process by which it came to be, provides a roadmap for thinking through the kinds of systems that might populate the design space of city-scale digital civics. It gives both community associations and municipal officials a guide to building their own engagement practices and a tool for holding each other accountable through transparency on a shared commitment to practicing intentional engagement. While the principles and actions outlined in the playbook provide specific steps toward implementing community engagement, they do so through a focus on the relationships between and among residents, community associations, and municipal entities. It is through these relations that engagement occurs. Building and strengthening the ties across different boundaries was a core initial motivation for the project.

http://ourcommunity.is/engaged

ACTIVIST TECHNOLOGIES

Activists work in severe contingency and need to remain nimble when responding to acute events, while also managing long-term campaigns. Through a series of design workshops, Mariam Asad has been working with activists working toward social, economic, and racial justice in the Atlanta area to better understand how the issues they are confronting confound their use of different mobile and social technologies.

In some ways, designing systems to support activism poses challenges similar to designing for traditional office work: Practices are dynamic and emergent, environments are contingent, and plans must be tailored to the specificities of each use case. However, it is not enough to design a system that addresses these challenges through the revelation of information. Information about the present social issue does not merely exist; it must be assembled and contextualized so that members of the group can begin to mobilize. Additionally, activist work relies on ad hoc practices and quick responses. This environment of unpredictability refuses system designs that rely on stability and persistency. It is with these realities in mind that Asad's work has begun to focus on composable pieces that do some of the connective and contextualizing work for activists.

This design work builds on things like the Stay Woke bot but extends the connection across multiple computational tools to support in-the-moment activist work.

and sustain social capital, economic vibrancy, and resiliency of place through the preservation of cultural heritage and social legacy. While issues are ever present, a design entry more aligned with the goals of community engagement would focus on the relations—or attachments—between different kinds of civic actors, from municipal authorities, to community associations, to faith-based organizations. These attachments form the backbone of community engagement, as they become the points of contact when injustices need to be resolved or when visions of the future need to be negotiated. In this case, the point of entry is in looking at the shared dependencies and commitments that circulate through different publics, seeking out ways to build bridges where engagement is not happening, and amplifying outcomes where it is (see Community Engagement Playbook sidebar).

It is precisely the relational interactions enacted through attachments to everyday civic life that Matthias Korn and Amy Voida animate in their outline for friction as an important design principle for civic systems [8]. Instead of focusing on the privileged moments—voting, council meetings, public hearings—they bring our attention to the ways in which community-engagement practices cross different publics in mundane daily encounters. Importantly, these points of intersection go beyond the kinds of deliberative systems that have traditionally populated the landscape of digital democracy and e-government. Not all civic encounters are deliberative, and not all good community engagement requires working persuasively to arrive at consensus. As policy scholars will point out, the most engaged communities are those contesting injustice, and persuasion—and the consensus borne of deliberation—is the enemy of participation. A persuaded public is a passive public [9].

The focus of social design then is not the resolution of a problem—as deliberative systems might imagine—but rather the brokering of the shared dependencies and commitments that define relations within and amid different publics. These relations create the space for collective action through coproduction, building out new capacities to act through the design process and through participation within a public.

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ACTIVISM

If civic relations describe the space for social design and community engagement, issues—the bedrock of a public—describe the space for social design and activism. Building directly on community engagement, activism takes on a particular kind of confrontation with entrenched powers to bring visibility and resolution to social injustices. We are in an interesting moment where mass communication platforms like Twitter and social media sites like Facebook are providing novel ways for issues to travel across different publics. The connective action these transmission networks enable contextualizes information and facilitates the creation of publics around issues both local and global [10].

Yet these same networks provide unique challenges to social design, as individuals seek out information that reinforces their views, serving to simply affirm a persuaded public's understanding of a given issue. Confronting this challenge is precisely the motivation behind efforts like the Stay Woke bot—a

creative intervention to maintain active engagement on Twitter. The bot helps solve a problem for activists in the Black Lives Matter movement by automating some forms of information sharing while providing a kind of social support to enable activists to stay engaged and empowered. It handles the work of persuading newcomers in search of basic information and keeps the old guard invigorated through affirmation and cultural reinforcement. By providing both the connective action of contextualizing information about the issues motivating the movement and the relational support of keeping activists engaged, the bot becomes a useful tool in the moment-to-moment challenges of running campaigns, planning specific actions, and responding to the contingencies of activist labor (see Activist Technology sidebar).

Even with broad agreement about the nature and scope of a given issue within activist movements, what constitutes knowledge about an issue is contestable and can be interpreted to have different implications for how people organize. With this in mind, social design needs to go beyond simply designing for the discovery or recuperation of information: It needs to address the shifting challenge of assembling and contextualizing that information. The opportunity for design in this case is that the issues around which a public forms need to be made and re-made relevant, to be placed into conversation with the social and cultural realities of those affected. This is ever more tricky as a problem for design; conveying an issue, like establishing relations for engagement, may not be reduced to rational decision making and deliberative exchange. Different infrastructures are needed—infrastructures that tap into affective responses to place, history, and culture.

THE SMART CITY

Turning to infrastructures, social design plays an important role within a public that goes beyond the development of interactive tools to support local action. Just as social media is an interesting site for understanding activism, smart cities provide an opportunity for new infrastructure designs that enable different publics to take action on issues of concern. Here, the role of social design is to create these new infrastructures by bridging social and technical capacities for action.

Much of the smart-cities agenda focuses on the development and deployment of sensor networks and less on the ways in which urban residents might become involved in the production and consumption of different forms of data. The former vision is one of city as service, and the efficiencies enabled by instrumentation are part of improving that service delivery. The latter emphasizes that cities are made of people not services, and so smarter cities need, as a first step, empowered residents who produce and make use of instrumented data in ways that reflect the city they would like to inhabit (see Cycle Atlanta sidebar).

In this context, the intersection of publics and social design champions a modest reframing of design activities. Building on recent shifts within participatory design [11], the shift in framing is to approach the design process as one of capacity building within the chosen community setting. This is what Pelle Ehn and others in the Scandinavian participatory design tradition call infrastructuring through design [12]. The idea of infrastructuring through design turns on the distinction between design-for-use, which is centered on end products, and design-for-future-use, which is intended to empower sustainable community capacities beyond the development and deployment of any one specific artifact. It is not so much the product itself that matters, but rather the development of shared design practices and ways of framing issues and articulating relations to those issues that position social design as a tool for building sustainable infrastructures of civic and community engagement.

Each of these areas—attachments, issues, and infrastructures—are interwoven recursively. As issues evolve, so too do the attachments that individuals and groups have to them; as infrastructures are created, issues and attachments shift—perhaps becoming resolved or changing in scope as a local focus gives way to a global focus, or a global concern resolves

CYCLE ATLANTA

The Cycle Atlanta project is a multi-year collaboration between members of the Participatory Publics Lab, headed by me and the Urban Transportation Information Lab, headed by Dr. Kari Watkins of Civil and Environmental Engineering at Georgia Tech. In 2012 we released a smartphone app that enabled cyclists to record their rides and provide that data to regional and city planners. At the time, Atlanta was embarking on a thorough revitalization of its urban infrastructure as part of a Livable Center Initiative. The goal was to connect residential, commercial, and cultural centers with multimodal transportation options—including pedestrian (by way of the Beltline: http://www.nytimes.com/2016/09/12/us/atlanta-beltline.html), cycling, and a street car.

The Cycle Atlanta app played a unique role in this larger initiative. The City commissioned the work and envisioned that the app would simultaneously collect a novel form of data that had been previously unavailable to planners—the traces of rides through the city—and serve as an experiment to enable more people to participate in the planning process via that contributed data. By creating a new way of providing input into the planning process, Cycle Atlanta became a tool for civic engagement. It is not simply sensing and reporting conditions, collecting data that reflects the world as it is. By recording their rides and sharing that data with the City, Atlanta cyclists are participating in a new form of civic advocacy. The data that cyclists are producing with the app makes claims about how the world ought to be: The recorded data of many cyclists on a given Atlanta road is not validation of adequate bike lanes and safe facilities, but rather an activist's claim of "We are here!" This data, and the mobile computing that enables its collection, becomes part of the civic infrastructure that enables the cycling public to weigh in on where and how resources should be directed to ensure safe connections across the city.

into a local issue. Each area provides different entry points for social design to find footing when working within a community setting and seeking to support collective action.

COLLECTIVE ACTION AND AN EMERGING DIGITAL CIVICS

By focusing on forms of collective action through design, I am interested in working through the ways in which design can be used to draw people together to affirm or resist particular outcomes with respect to shared social issues—to participate in the improvement of both their individual conditions and the conditions of their community. The frame of publics that has emerged in human-computer interaction over the past few years offers both an analysis of how these collectives come to be and an account of the ways they mobilize and act in the world.

Turning to design to work through contemporary social, political, and economic issues requires new ways of constituting collective action, ways that actively seek to engage participation through multiple subjectivities, not simply through the standard human-centered position of the user. In fact, it may be that we need to more radically decenter the human and consider objects' roles within publics and within the frame of civic entanglements [13,14]. Just as McCarthy and Wright argue that participation in co-design projects is not about turning everyone into a designer [15], but rather about incorporating and empowering multiple subjectivities to participate equally in a project of design, considering how computing encounters the world through a plurality of subjectivities—human and non-human—may reveal "user" to be the least important of these subjectivities.

Human-computer interaction has always had an interest in relations, just as it has long been concerned with the ways in which computing can improve the lives of people—first in the workplace, then in the home, and now in all of the many spaces in between. To varying degrees, this has placed social design as an important current within the field since its inception. What lies ahead is a continued evolution toward identifying and designing for collective encounters with the social and cultural and political contours of life. In the end, social design and the work of designing for collective action is primarily a humanist endeavor. It is a turn to focusing on the attachments between publics and issues and the infrastructures that we create to enable those relations.

ENDNOTES

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