

# The Need for Empowerment-based Design in Civic Technology

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In a June 2017 post, Mark Zuckerberg introduced a change in Facebook's mission from "make the world more open and connected" to "give people the power to build community and bring the world closer together." Facebook may not be able to give people power, but the goal of empowering people and building community is language familiar to civic engagement and participatory democracy, similar to the core idea of relational organizing—building interpersonal relationships that can be mobilized for collective action. In a February 2017 post, Zuckerberg first articulated this new thinking: "In times like these, the most important thing we at Facebook can do is develop the social infrastructure to give people the power to build a global community that works for all of us." Companies like Facebook often claim to serve the public good through their products; however, this particular language and the depth of explanation in Zuckerberg's posts imply a recognition of ethical responsibility and at least an intention to design for true citizen empowerment.

I believe it is fair to insist that if the creators of a technology platform seek to make claims about empowering users, they must set explicit design goals for citizen empowerment and evaluate their platform against those goals. Facebook continues to face steep challenges to providing equal access to its platform. To aim for communities that can be effective and serving the public good is an even loftier goal. How Facebook will know whether it is actually making progress on its mission remains to be seen. However, technology companies have a reputation for religiously articulating goals and measuring them empirically. In fact, one of the architects of the data science team at Facebook claims that they invented the term "data scientist" to describe this important role (Hammerbacher 2009).

Democracy that values citizen-centered governance requires citizen empowerment (sometimes called "civic agency"), and empowered citizens need certain skills, knowledge, attitudes, and habits that lead to effective civic engagement (Boyte 2009; Levinson 2012; Gibson and Levine 2003). Empowering experiences and learning opportunities can promote a virtuous cycle of reinforcing citizen empowerment and strengthening democracy. Spaces like town hall meetings, protest marches, the voting booth, and the civic education classroom traditionally represent where these experiences and opportunities take place. The emergence of networked digital

media have created new, pervasive civic spaces—the networked public sphere. Whereas public spaces offline have seen a decline (Zick 2009), their online replacements, largely private spaces like Facebook, have grown to astounding size and influence with limited accountability to governments and the public.

Social media platforms like Facebook, government communication tools like We the People, and smaller civic technology platforms like SeeClickFix are increasingly the spaces through which citizens seek empowerment in the form of direct response from their government on key issues. As important actors in U.S. democracy (as well as other polities), the creators of these spaces have a responsibility to design for citizen empowerment and ensure they are advancing empowering processes and outcomes for citizens by evaluating whether their platforms are actually serving this mission. These creators of digital technology used for civic engagement should be understood as stewards of democracy with an ethical obligation to serve the public good.

## Defining the Problem

Although Facebook was not built from the start as a tool for citizen empowerment, it espouses a civic mission and increasingly designs features explicitly for civic engagement, solidifying its place in the civic technology ecosystem and its responsibility for citizen empowerment. The problem of serving citizens and democracy through digital technology extends to tools and platforms with origins in public service as well. The White House petition platform We the People is an example of how even when a civic technology platform is designed and owned by a government institution with clear responsibility to serve the public it can miss the mark on empowering citizens.

## The Story of We the People

On September 22, 2011, the President Obama's White House team launched an online petition tool called "We the People," which allowed anyone to submit a petition after registering with an email address. If the submitter was able to get 150 people to sign the petition, it became searchable on the site, and if it collected 5,000 signatures within 30 days, the White House guaranteed a formal response from someone in the federal government (assuming it met the site's criteria as being within their jurisdiction and not impinging on the independence of law enforcement or the judiciary). The initial website included a quote from President Obama, "When I ran for this office, I pledged to make government more open and accountable to its citizens. That's what the new We the People feature on WhiteHouse.gov is all about—giving Americans a direct line to the White House on the issues and concerns that matter most to them."

Early critics worried that We the People would amount to little more than a short-lived public relations stunt and argued that there was no need for another way to petition the government,

especially when there was no promise to explore true policy change, just to respond to certain petitions (Judd 2011a). Tom Steinberg, who founded mySociety which helped build the similar Downing Street E-petitions system for Tony Blair's UK government, hoped the White House would learn from their experience by building a robust registration system and lining up staff who could write "good, constructive, engaged replies to the petitioners" (2011).

A month after the launch, the White House published its first response from education advisor Roberto Rodriguez announcing a new education policy initiative he claimed was influenced by a petition on We the People. Macon Phillips, the White House official in charge of We the People, blogged about how it was fulfilling the reason for its launch, "to bring the voices of Americans around the country into our government" (2011a). However, new criticisms painted a different picture: the registration system was unreliable and the entire site suffered numerous outages, meaning those trying to create or sign petitions were turned away at key times, perhaps disenfranchising those users unlikely to try again (Snider 2011). In addition, commenters like TechPresident's Nick Judd argued that petitioners were at a disadvantage if they were less skilled at organizing online and using social media efficaciously:

"On the social front, the platform doesn't connect petitioners to each other — if they want to find each other by cause or petition, they'd have to hunt around for one another on social networks, or have the foresight to link in their petition to a website or hashtag where they could go to find each other. One stated goal here is to start civil conversations about policy, which makes this a bit of a missed opportunity." (2011b)

An analysis of Downing Street E-petitions found that the most successful petitions came from individuals who appeared to be adept at courting media coverage and attracting the support of traditional advocacy organizations or prominent personalities (Wright 2015).

We the People's early popularity also prompted a sudden site policy change to increase the required signature count to 25,000, making it harder to receive a response. In a blog post touting the growth of the platform in terms of registration and participation statistics, such as average signatures and new users per minute, the White House said the increased threshold would allow them to be "able to offer timely and meaningful response to petitions in the long term" (Phillips 2011a). The signature threshold would be increased again in January 2013 to 100,000. Another blog post with statistics on the explosive growth in participation accompanied that policy change and defended the decision on the grounds of ensuring the White House could "continue to give the most popular ideas the time they deserve" (Phillips 2013).

In the meantime, the White House tried to assure petitioners that they were having a real impact on policy and they were addressing the technical issues (Phillips 2011b). In a response to the snarky petition "Actually take these petitions seriously instead of just using them as an excuse to pretend you are listening," Phillips listed a few high profile responses and provided a video that interviewed senior White House staff about how top petitions were discussed at weekly meetings and generally valued (Phillips 2012a; The Obama White House 2012). When they

reached three million signatures, Phillips published a blog post with an infographic arguing We the People was effective at engaging citizens and impacting policy (2012b). They highlighted total user growth and total signatures. They also started offering outcome and efficacy measures: how many petitions had achieved the threshold, how many had been responded to (100 of 112), and the number of agencies who have authored a response. Survey measures of petitioners reported that they generally felt that the responses they received were helpful (78%), that they often learned something new (50%), and that they were likely to create or sign another petition (89%). In the post announcing the new 100,000 signature threshold, they updated these statistics (Phillips 2013). Gone was the ratio of responses to qualifying petitions (perhaps to avoid publicly measuring inefficacy). Survey measures of petitioners saw slight declines, though they still generally felt the responses they received were helpful (66%), learned something new (50%), and they were likely to create or sign another petition (86%). Despite technical challenges and confusion among petitioners about whether their submissions would make an impact, the White House was clearly interested in communicating that their intention in We the People's design was empowerment.

Another way to measure whether the platform was achieving its goals is to look at who was not participating. An analysis by Nextgov of the policy content of the earliest petitions to pass the 150 signature threshold indicated greater use among liberals than conservatives, and topics like marijuana legalization and animal cruelty were unusually common (Marks 2011b). America Speaks's David Stern believed We the People would be unlikely to produce major policy change but could have an effect "by bringing up an issue for which the administration didn't realize there was a strong constituency" (Marks 2011a). The early petition trends pose questions about who felt welcome to use the site and who believed that they would have a receptive audience in the federal government. Certainly, the marijuana legalization community saw an opportunity here, but conservatives addressing questions like fiscal responsibility did not see themselves empowered by the site—few economic concerns were voiced at all early on (Marks 2011b).

In late 2012 and early 2013, We the People received a new wave of criticism following the popularity of several facetious or strange petitions about deporting a talk show host, states wishing to secede from the union, and most notoriously "Secure resources and funding, and begin construction of a Death Star by 2016" (Flock 2012, Cushing 2012, Garber 2013, Hartmann 2013). Although many applauded the White House's humorous response to the Death Star petition (Shawcross 2013), it provided a perfect example for many critics of how the White House seemed to be responding selectively to popular petitions of "dubious import," or where the administration could rely on "canned administration talking points," some of these did not even hit the signature threshold (Cushing 2012). In contrast the most popular petition in the site's history, "Legally recognize Westboro Baptist Church as a hate group" (367,180) languished without a response until well after the new 100,000 signature threshold came into effect.

We the People's struggles were due in part to the constraints of it being hosted by the federal government. As Dave Karpf wrote in 2014, explaining why the site "became a virtual

ghost-town," two design principles put in practice by the independent e-petition sites on Change.org and MoveOn.org were not available to the White House creators: 1) "static homepages don't draw traffic" and 2) "vibrant online publics have to be curated and supported." No longer able to rely on the novelty of the "promise of a more open, responsive government," slow and selective replies coupled with a 100,000 signature threshold that is unrealistic for "genuinely new, substantive citizen proposals" meant petitioners did not see a reason to return (Karpf 2014). Change.org and MoveOn.org could address these problems by devoting staff and resources toward actively promoting petitions on social media where they were most likely to enjoy new clicks and signatures and to developing curation engines that matched people with petitions on issues they care about. The White House cannot be seen as partisan toward particular petitions or ideas in such a way. Their only options for fostering the empowerment of citizens were to convert petitions of import into policy change and to make the process as transparent as possible. Both the critics and the steep decline in participation on the site suggest the White House had not sufficiently delivered on those design goals.

On July 28, 2015, the new lead for We The People Jason Goldman authored a blog post in response to the litany of criticisms over the years, attempting to steer the perception of it back toward empowerment. The White House published a backlog of 20 responses to petitions that had met their threshold and promised to respond within 60 days to new qualifying petitions. They introduced a new integration program starting with Change.org where signatures collected on that site (with its superior advertising and curation features as Karpf discussed) would count for the signature threshold on We the People. Lastly, they said they had "assembled a team of people responsible for taking your questions and requests and bringing them to the right people—whether within the White House or in an agency within the Administration—who may be in a position to say something about your request." Goldman's post concluded with an example of a petition from January 2013 that had prompted the creation of a multi-agency task force to study the policy and eventually produced a new law signed in August 2014.

A new infographic of statistics from We the People was released with the blog post with updated average statistics from a user survey in 2014, revealing another reduction in percentages of citizens feeling that they were likely to have learned something new (45%), it was helpful to hear the administration's response (64%), and they would use the site again compared to the infographic in 2013 (79%) ("We the People, By the Numbers" 2015). Perhaps, if the White House had been freer to explore a dynamic and interactive approach to the design and been tracking measures of empowerment more closely, continuously rather than as a long-term average—privileging such indicators over the misleading graph of total signatures over time (featured most prominently in both infographics)—positive design changes would have been implemented sooner and the averaged survey responses would tell a story of increasing rather than decreasing value to petitioners.

## The Logic of Civic Technology

One source of disconnect between civic technology design and citizen empowerment is the internal logic of most civic technology—efficiency—and its main source of inspiration: Silicon Valley technology company culture. Analyzing the existing logics and proposing an alternative logic of democracy that can better serve citizens offers a foundation for empowerment-based design.

In their framework for a civic technology field guide, Micah Sifry, Matt Stempeck, and Erin Simpson broadly define civic technology as "the use of technology for the public good" (2016). They defend the utility of this vague framing by noting: "1) it is culturally and historically subjective, 2) we use public to distinguish from personal and private, and 3) 'public good' deals with shared public challenges." Underneath this expansive umbrella, they find common technical functions and social processes that define civic technology as a field of various digital tools and also as a subculture. This definition allows civic technology to encompass "constituent to government communication tools" such as the We the People platform, "issue reporting tools" such as SeeClickFix, a small for-profit civic technology company that makes apps and work order systems allowing city residents to request fixes to local infrastructure directly, as well as "group communication tools" such as Facebook Groups, a feature of the mammoth social media platform allowing users to organize communities online (Sifry, Stempeck, and Simpson 2016). Focusing on functions sidesteps the incongruence of including in the field both explicitly defined civic technology companies and platforms (SeeClickFix, mySociety, We the People) as well as technology companies that lack an initial, explicit civic mission or intention (Twitter, Google, Facebook) but whose tools and platforms provide civic functions within the networked public sphere, finding that they share a necessary orientation toward the public good in practice.

The social processes and, by extension, the design processes of civic technology are a convergence of the public good-orientation of civic engagement and public service and the ethos of the digital technology industry dominated by the culture of Silicon Valley's technology industry. These are sometimes in tension, demanding different logics of technology design. In particular, the specific logic of efficiency used to optimize algorithms and lower costs of participation can be an undemocratic logic when it primarily serves the platform itself or stakeholders other than citizens. Furthermore, for-profit civic technology companies and the larger social media platforms like Facebook and Twitter, where an enormous amount of civic activity takes place, are most susceptible to making trade-offs in their design logic in ways that can damage democracy.

Silicon Valley is obsessed with metrics of participation. How many users registered? How many actions did they take? In a conventional technology platform, design is optimized to increase user engagement in order to increase interactions with advertising. This creates incentives for designers to build features that give those who can pay to promote content prominent positions on the platform and to build algorithms that presents users with content and invitations to

participation that are more likely to get them to click rather than what may actually serve their interests best. Problems such as the proliferation of political disinformation campaigns and shallow infotainment, as well as echo chambers of conversation formed by Facebook's news feed, could be attributed to this logic.

The assumption that more clicks signals what users really want to accomplish leads to other problematic assumptions. For those who design civic technology, the implicit theory of change is that user engagement will scale due to lowered barriers to participation and network effects, and aggregate engagement online might convert into impact. Creating space for individual actions is not equivalent to creating space for collective action. Early users of Twitter had to create this capacity themselves by adopting the convention of using "RT" and the username of a user ahead of content copied from them in order to share or to amplify the original message, as well as by adding the "#" symbol ahead of discussion topics to make it easy to search for them. The company later built explicit features for "retweets" and "hashtags" to support these functions.

Technology used for political campaigns often follows logics similar to Silicon Valley technology platforms, where sufficient participation translates into winning an election. This is the logic behind We the People, which was devised by veterans of campaign technology such as the company Blue State Digital, which was responsible for the 2008 Barack Obama U.S. presidential campaign website [my.barackobama.com](http://my.barackobama.com). There is a necessary short-sightedness in such "instrumental" design visions: the technology just needs to support a high intensity level of engagement until the end of the campaign. Usually, the actions are highly scripted by political directors driven to ensure the maximum level of support on election day, and they closely monitor aggregate numbers of actions and avowed supporters, just like We the People was reporting in the headlines of their infographics. Surveys about people's perception of the campaign is helpful for monitoring morale and telling stories of the value of what they are doing, but it is almost never meant to help steer the campaign.

To be fair, participation is itself an important predictor of future engagement. However, the goal of civic participation is not simply a singular win or more of the same participation; it is about a larger impact on society and on an individual citizen's life. It is about personal growth and the health of democracy. Measuring impact on an individual citizen's life is rare outside of academia. But if we set a goal for empowering citizens, then our understanding of impact must broaden and lengthen. We must talk about lifelong civic participation, and this requires us to examine predictors like positive shifts in attitudes indicative of a maturing civic identity and in a citizen's sense of efficacy.

	Silicon Valley	Instrumental Civic Tech	Empowerment-based Design
GOAL	Earn Revenue	Win Campaigns or Solve Problems	Empower Citizens
METHODS	Sustain Regular (Sticky) Engagement with Platform	Inspire Intense, Short-term Participation	Build Knowledge, Skills, Identity, and Efficacy over Long-term
METRIC	Participation	Participation	Attitudes and Efficacy
LOGIC	Efficiency		Democracy

Figure 1: The Internal Logics of Civic Technology

As depicted in Figure 1, an Empowerment-based Design approach to civic technology seeks to build knowledge, skills, identity, and efficacy in its users over the long-term. We can measure these using survey tools that reveal individuals' changes in attitudes and efficacy over time. This offers a dimension of qualitative meaning to any acts of participation by users and helps put them in the context of growth as a citizens. This is a logic of democracy in contrast to the participation-based logic of efficiency that dominates most technology design. Making things easy to participate in is important but insufficient for empowerment and may actually impede the growth of citizens over their lifetime when designers optimize for engagement with platforms themselves rather than with democracy more broadly.

In their argument for more playful civic technology design via "meaningful inefficiencies," Eric Gordon and Stephen Walter also find that most civic systems follow a logic of technological efficiency (2016). The citizen becomes an abstracted archetype of the "good user," who navigates the system as intended—their behavior shaped as intended by the "user-friendly" system. Gordon and Walter assert, "designers and proponents of civic technology too often articulate participation and openness within the framework of efficiency and control" (2016, p. 251). Their alternative vision proposes designing systems for emergent civic action, rather than desired behaviors. Meaningful inefficiencies is borrowed from game design, where playful experiences are engaging because they are challenging; this creates opportunities for creative problem-solving and, as the authors argue, civic learning. Political scientist David Karpf finds the same value of "beneficial inefficiencies" lost within political advocacy when organizations trade old membership communication systems like phone trees or meetups (that required person-to-person relationships and conversation, which also strengthened organizations and trained new leaders) for email listservs, petitions, or analytic listening tools (Karpf 2012; Karpf 2016). Gordon and Walter (2016) as well as Karpf (2016) concede that meaningful/beneficial

inefficiencies should be balanced or blended with efficiencies that ensure that systems work well and support users in their goals and tasks.

Designing and measuring for empowerment rather than participation may also address fundamental problems of justice and inequality. A focus on activity privileges those who have greater access to technology and more sophisticated literacy in how to employ it or exploit it to their benefit. Designing for empowerment brings people and their voices directly into the design process and evaluates success according to improved outcomes for those people based on their actual needs, not those manufactured by the platform. Civic technology design can and should learn from the field of civic education. If we want to enhance citizen empowerment, we need to think about how we are designing for civic learning and addressing real civic empowerment gaps (Levinson 2012) and participation gaps (Jenkins et al. 2006). And because we are designing digital tools, this means designing metrics that work on civic learning, not just on simple participation.

## The Civic Empowerment Gap

Problems with civic technology design unfold against the backdrop of profound inequalities in empowerment among U.S. citizens. In her 2012 book *No Citizen Left Behind*, Meira Levinson describes and seeks to address what she calls the "civic empowerment gap" in the United States. It starts in schools, where students have unequal access to quality civic education and opportunities for transformative civic experiences. These inequalities overlap with inequalities of class and ethnicity so that young people from marginalized backgrounds have fewer opportunities to prepare to be citizens able to exercise voice and influence their communities for the better. This creates a deeply unequal democracy.

Levinson adopts the Civic Mission of Schools' definition of what kind of citizenship good civic education should aim for:

"Civic education should help young people acquire and learn to use the skills, knowledge, and attitudes that will prepare them to be competent and responsible citizens throughout their lives. Competent and responsible citizens:

- Are informed and thoughtful; have a grasp and an appreciation of history and the fundamental processes of American democracy; have an understanding and awareness of public and community issues; and have the ability to obtain information, think critically, and enter into dialogue among others with different perspectives.
- Participate in their communities through membership in or contributions to organizations working to address an array of cultural, social, political, and religious interests and beliefs.
- Act politically by having the skills, knowledge, and commitment needed to accomplish public purposes, such as group problem solving, public speaking, petitioning and protesting, and voting.

- Have moral and civic virtues such as concern for the rights and welfare of others, social responsibility, tolerance and respect, and belief in the capacity to make a difference." (Gibson and Levine, 2003, p. 4)

Levinson concedes that this list is somewhat old-fashioned yet is inclusive enough to reflect the distinction between skills, knowledge, attitudes, and habits that represent the different characteristics we know to be correlated with civic participation and empowerment.

To introduce her prescriptions for addressing the civic empowerment gap, Levinson states, "The most concrete and pervasive context in which most young people interact is in fact school. Schools are themselves civil societies, for good and ill. They exert a profound effect on students' and adults' civic experiences, identities and opportunities—even when they have no intention of doing so" (2012, p. 56). Civic technologies are at least as pervasive and play a similarly profound role as civic spaces for all ages of citizens. In the same way, we expect schools to prepare our young people to be effective citizens, I believe the creators of our digital civic spaces have a responsibility to design for civic learning and empowerment.

This is not just a question of feature design but also of policy. Social media sites claim to operate as neutral platforms and do so in order to elude accountability and regulation (Gillespie 2010). However, the reality is that the logics of their design and their participation in international flows of information means they transform those flows and influence the logics of the industries and stakeholders they touch—Facebook and the news industry being perhaps the most prominent example (Caplan and boyd 2018). With the civic functions of these platforms continuing to grow, these companies cannot avoid their responsibility as stewards of democracy and its online instantiation: the networked public sphere. This includes not just civic and political information in the form of news but also tailored advertising by campaigns, election guides and voting reminders, petition and constituent services tools, and spaces that attract political organizing. Researchers, designers, and citizens need to understand how the design of these platforms transform other institutions in our democracy (Caplan and boyd 2018).

## A Framework for Democracy, Citizen Empowerment, and the Role of Civic Technology

"Free spaces" offer a way to connect the responsibility for civic learning and empowerment shared by schools and by civic technology (Evans and Boyte 1986). As background to their theory of free spaces, Sara Evans and Harry Boyte tell the story of U.S. democracy that was envisioned as a republic led by elites from the start, where community was taken for granted and individual rights and freedoms, part of the Enlightenment tradition, were instead emphasized (1986). The rustic vision of small U.S. towns organizing themselves in self-governance was real but divorced from the state—an arrangement that changed with the industrial revolution and the Progressive Era, which ushered in a more centralized society and

sought to bring it under the control of scientific processes. By the mid-twentieth century, the responsibilities of citizenship and town hall-style meetings were seen as an anachronism, whereas the freedom to be a disengaged citizen was celebrated as a triumph of the modern democracy (Evans and Boyte 1986). Instead, the newspaper and evening news were thought to have sufficiently replaced participatory forms of democracy as the public sphere.

Although some deem the ancient idea of democracy as rule by the people as quaint, the mediated, modern form of democracy produces a highly unequal society and undermines our own fundamental narratives of America as a land of opportunity. Popular narratives suggest that anyone could become president, and that community and citizens are our most valuable resources. However, these are not cultivated with the same enthusiasm that the U.S. devotes to the creation of new informational and technological systems for governance and the protection of individual liberties that most often benefit the elite.

Studying the rise of popular social movements like the Civil Rights Movement and the Knights of Labor, Evans and Boyte propose we reimagine U.S. democracy and the crucial role played by spaces—often voluntary associations like churches and neighborhood groups—that offer a practical civic education for the average citizen:

"Particular sorts of public places in the community, what we call free spaces, are the environments in which people are able to learn a new self-respect, a deeper and more assertive group identity, public skills, and values of cooperation and civic virtue. Put simply, free spaces are settings between private lives and large scale institutions where ordinary citizens can act with dignity, independence and vision." (1986, p. 17)

They continue, "Democratic action depends upon these free spaces, where people experience a schooling in citizenship and learn a vision of the common good in the course of struggling for change" (Evans and Boyte 1986, p. 18). Although there is significant variation in free spaces between different contexts, some common features define them:

"They are defined by their roots in community, the dense rich networks of daily life; by their autonomy; and by their public or quasi-public character as participatory environments which nurture values associated with citizenship and a vision of the common good." (Evans and Boyte 1986, p. 20)

Research on citizen organizations finds that organizations whose internal processes are more democratic and inclusive (less hierarchical) strengthen their members' civic skills (Verba, Schlozman, and Brady 1995), and are more effective, regardless of whether they have more resources (Andrews et al., 2010) or are employing new media tools (Gaby 2017). Ultimately, free spaces, which we could perhaps call "empowering" spaces, play a core role in democratic society, responsible for cultivating the citizens a democracy needs.

The best known critique of forms of democracy that proceed without significant citizen engagement is Barber's *Strong Democracy* (1984), which calls for a participatory democracy rich with self-government by citizens with one goal being "the creation of a political community capable of transforming dependent private individuals into free citizens and partial and private interests into public goods," supported by "institutions designed to facilitate ongoing civic participation in agenda-setting, deliberation, legislation, and policy implementation (in the form of "common work")" (1984, p. 151). Crucially, Barber argues, "Community grows out of participation and at the same time makes participation possible; civic activity educates individuals how to think publicly as citizens even as citizenship informs civic activity with the required sense of publicness and justice" (1984, p.152). When strong democracy works properly, it "creates the very citizens it depends upon because it depends upon them" (Barber 1984, p. 153). For Barber, citizenship is the intersection of community and conscious participation.

These ideal fusions of community and participation are Evans and Boyte's free spaces. The canonical examples, appearing to have emerged from communities themselves and seen as in decline through the lens of Robert Putnam's *Bowling Alone* (2000), were unfortunately often homogeneous and exclusive of marginalized groups (Jain 2003; Allen 2004). Instead, emphasizing forms of citizenship that connect strangers around commonality and respecting differences and leveraging existing institutions to support these practices offer a path toward building shared civic identities, trust, and respect despite differences (Allen 2004). Recent theories focused on civic and political participation online propose that civic and political organizations there take on a different character: looser, more network-based associations (Bennett and Segerberg 2013). Findings from a large panel survey of U.S. youth highlight an important relationship between non-political and friendship-driven activity on major social media platforms and political engagement (Kahne and Bowyer 2018).

In his recent writing, Harry Boyte has argued that schools can and should be intentionally designed as free spaces, in part, by "renewing the public, empowering dimensions of teaching." (2016). This suggests that other spaces for citizen engagement and growth such as civic technology can also be intentionally designed to provide "room for self-organizing efforts and development of public skills and broader political agency," if only designers are held to account for the public roles they play (Boyte 2016).

As core contexts for contemporary participatory democracy, civic technologies ought to be designed with the goal of becoming free/empowering spaces. And these online free spaces can be designed to work at different scales: "transmovement" or global, "indigenous" to specific communities, or "prefigurative" to emerging community identities and calls to action (Polletta 1999). This places civic technology platforms and their creators within a framework of democracy where the work that they do serves a public function and has a direct impact on the health of the democracies in which they play a role (see Figure 2). When creators of civic technology implicitly and explicitly encourage civic and political participation through their platforms, this helps realize Barber's vision of strong democracy. The natural extension of this is

that the creators of civic technology have a public responsibility to design their platforms in ways that support strong democracy, and by doing so realize their own destiny as participatory citizens.

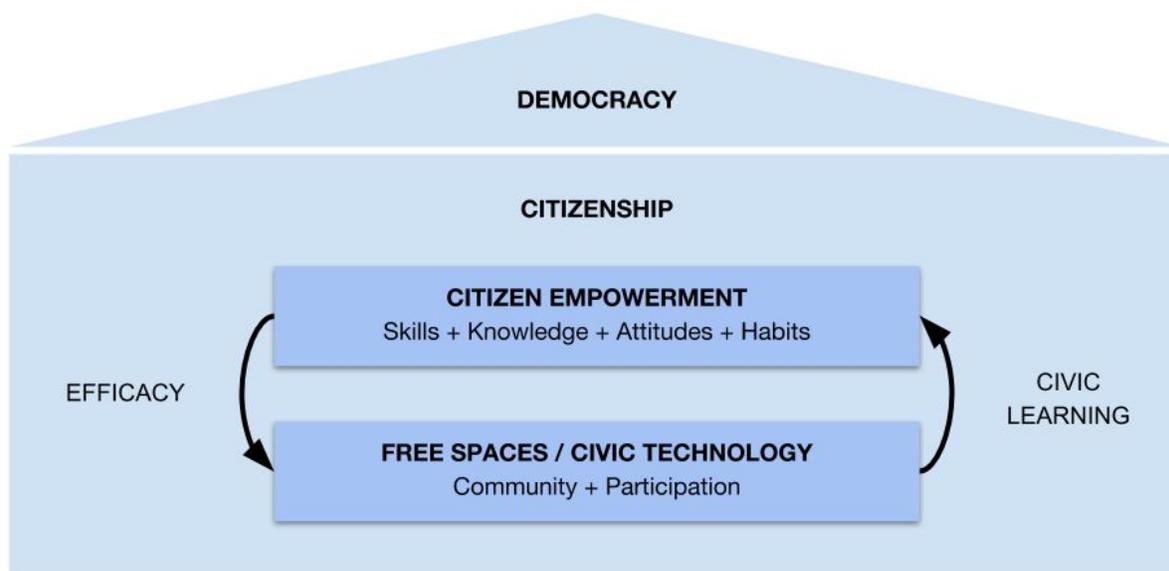


Figure 2: Framework for Civic Technology in Participatory Democracy}

This assertion of responsibility is reinforced by arguments asserting there is no option to "exit" social media as a means of disapproving of their existing designs because equivalent systems for platforms like Facebook do not exist or because only elites have the off-Facebook social capital to spend on what Portwood-Stacer calls "conspicuous non-consumption" (2013); these platforms are effectively utilities and "utilities get regulated" (boyd 2010). Even anti-institutionalist movements like Occupy Wall Street rely on the new media infrastructure of Facebook and Twitter rather than constructing wholly alternative spaces (Kaun 2015). This view of social media platforms as de facto public spaces where we might expect freedom of speech and assembly and other democratic rights and opportunities, extends the definition of civic technology and the responsibility of designers beyond instrumental function and into a framework that demands their designers serve participatory democracy. In other words, We the People represents a rather extreme case as a formal petitioning system operated by the federal government with very specific public obligations, whereas the field of civic technology comprises many actors that have ethical, if not formal responsibilities.

# Implications

The central question of democratic renewal and empowerment might be, 'Are citizens "co-creating" their world?' (Boyte 2017). To enact citizenship in this way, citizens require "free spaces" that foster civic learning through deliberation, action, and reflection: producing "knowledge power" through shared experiences with other citizens (Boyte 2017). The above framework for contemporary democracy places a demanding ethical responsibility on the creators of civic technology to create these "free spaces." However, "free spaces" should be understood as an ideal, with tools and platforms of different purposes and in different contexts realizing the spirit of free spaces in different ways; also, the responsibility of civic technology creators as stewards of democracy should be understood as a wider professional and societal responsibility.

## Professional Ethics for Engineers and Designers

In 2017, the Markkula Center for Ethics at Santa Clara University hosted a symposium on how machines are reshaping civil society. Irina Raicu, director of the Internet Ethics program at the center, writes about the need to rethink ethics training in Silicon Valley (2017). Her program has even produced curricular modules for software engineering courses that ask students to reflect on dilemmas posed by their work and its potential consequences (Vallor and Narayanan 2015). Using classical texts, the module puts software engineering within frameworks of virtue, human flourishing, and the public good. Ethics evolve along with society as well as technology. However, it is the responsibility of both citizens and technology creators to ask: What kind of a society do we want to create?

This may mean defining a "professional realm" for civic technology design (Gardner, Csikszentmihalyi, and Damon 2002). Professional realms like medicine or law represent individual practitioners aligning together as a field to support institutions that maintain high standards for relevant technical competency as well as ethical expectations of professionals to serve other stakeholders and ensure individual members reflect well on whole guild; this alignment in practice might be called "good work" (Gardner, Csikszentmihalyi, and Damon 2002). I believe the location of digital technology within democracy demands a similar movement for alignment within the field of civic technology design, defining good practices for articulating and negotiating core values at the onset of design work, and defining measures that are informed by democratic values and considerations of citizen growth to ensure platforms and tools are evaluated and improved by these ethical standards.

Such an effort is in the mold of what Harry Boyte calls "public work," a way to orient our personal and professional lives toward the practice of everyday politics that serves the public interest (2004). Code for America's programs and the United States Digital Service's launch helped make civic technology design that explicitly serves the public an attractive career. The broader

civic technology "movement," of which these efforts are a part, still emerges from a Silicon Valley culture though. There is a difference between "building more civic apps and making all apps more civic," to quote Nick Grossman (2013). We need to equip technologists to make good on a vision for empowerment against the status quo Silicon Valley mindset of platform-centric growth.

Returning to the vision of the creators of civic technology as stewards of democracy, we should consider the context of civic technology design in the same way Bernardo Zacka depicts street-level bureaucrats who have an enormous influence over how well people are served by the state, including access to public services (2017). Zacka writes about the need for these public servants to be able to handle complex and competing normative obligations in their work, otherwise they may retreat to a reductive moral framework, which makes decision-making easier but serves many citizens poorly. He argues that these institutions must be able to respond to a "plurality of normative standards" and the stewards—bureaucrats in this case—must be sensitive to such standards, which will only occur if their organizational environments reflect that pluralism (Zacka 2017, p. 13). Not maintaining a diverse environment or keeping in mind the needs of a variety of stakeholders leads to one "normative world" taking "systematic precedence" (p. 14). This becomes the logic of efficiency in technology design.

## Free Spaces and Instrumental versus Associative Civic Technology

Free spaces offer a paradigm for how civic technologies might best support civic learning. They emphasize reflection and discourse in addition to action. However, this may not be suitable or feasible for every tool and platform built for civic and political engagement. Some platforms like Facebook are associative and include many of the generative features that can support building and empowering communities. Other platforms like SeeClickFix or We The People are more instrumental in solving one problem of disempowerment for citizens when seeking influence over an institution like municipal government. However, they also creates associative opportunities when users find ways to coordinate their efforts through the system, although not to the degree that would qualify it as a free space in the eyes of Evans and Boyte. Given the framework of democracy proposed in this article, should all civic technology aspire to be free spaces? The answer is Yes and No.

Citizens are growing and hopefully being empowered through their use of civic technology. But these tools and platforms are not complete systems themselves, they are embedded in complex ecosystems that stretch both online and offline. For example, an instrumental tool like a digital camera on a smartphone when wielded by a "Cop Watcher"—someone who monitors police violence in their community—becomes part of a system of empowerment rooted in the social practices of the network of Cop Watchers, the community that the individual users live and work in, and the local media that can help amplify their narratives. We should not expect the smartphone camera, or even the smartphone and its various applications, to replace all those

pieces of the ecosystem. However, if civic technology replaces some of those associational components or creates whole new ecosystems, either purposefully as in the case of We The People or SeeClickFix or as a result of their salience to networks of citizens as in the case of Facebook, then the designers of those tools and platforms assume a new responsibility for those citizens, their empowerment, and for the health of democracy more generally. These challenges and responsibilities become more evident when looking at how contentious politics and relational organizing play out over digital technology.

## Contentious Politics

Returning to Levinson's prescriptions for addressing the civic empowerment gap in schools, she notes, "As schools become more civically engaged and empowering communities [...] they also are forced to confront issues that trouble the wider polity, such as political partisanship and diversity of conscience" (2012 p. 57). Emphasizing the porous boundary between school and the real world, she advocates doing more to tear down that boundary and concedes that this is risky for educators. Creators of social media and civic technology are aware of that risk in their designs too.

Facebook was accused of suppressing conservative voices on their site in spring 2016, which led to a high profile meeting with conservative leaders at the company headquarters in which Zuckerberg assured them that the platform is politically neutral. In response, Facebook shut down the program in which journalists curated and edited headlines for the trending topics list and relied on an algorithm to surface them instead. In early 2018, Twitter shut down thousands of accounts traced back to Russian disinformation agents suspected of influencing American political discourse since the 2016 election. These affected the follower counts of conservative figures on the site who complained on the hashtag "#twitterlockout" that their community was being targeted by site administrators.

Smaller civic technology companies also struggle with these questions. In 2011, Salsa Labs, which provides management and communication tools for advocacy organizations, took venture capital funding. This precipitated a shake up in leadership and strategy in October 2012, where the CEO was replaced and the organization removed the word "Progressive" from its website, which was a staple of its mission (Pedersen 2012), as an indicator that Salsa Labs would start serving non-ideologically progressive clients. Outrage by progressive clients online promising to leave the platform prompted the new management to reaffirm their commitment to progressive principles (Leichtman and Schaefer 2012).

Designing for citizen empowerment, just like designing good policy, is fraught when political partisans are identified with the use of a certain platform or are disproportionately affected by design changes to it. One of the features of free spaces is an openness to competing ideas and deliberation and an attempt to reassert the reality that politics is a fundamental part of our everyday lives and not something to designate to certain venues or a class of professionals. Civic technologies can put us in conversation with government and make governance more

participatory. The fear of civic educators like Harry Boyte is that instead technologies will narrow the range of civic experiences and strip us of our agency in the name of efficiency (2017).

It is incumbent on the civic technology community to navigate these challenges and assume their duty to democracy, as their "public work," to deliver truly empowering technology. Participatory democracy also demands that citizens hold these engineers and designers accountable for this responsibility: forming another virtuous cycle.

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