Community + Culture features practitioner perspectives on designing technologies for and with communities. We highlight compelling projects and provocative points of view that speak to both community technology practice and the interaction design field as a whole. — **Christopher A. Le Dantec, Editor**

Digital Civics: Taking a Local Turn

Patrick Olivier and Peter Wright, Newcastle University

We work at Culture Lab, Newcastle University's cross-faculty digital technology research center. Newcastle is a flourishing research-focused university; our motto is "Excellence with a purpose" and our vice-chancellor urges us to ask ourselves not what are we good at, but what are we good for? This connects with our strategic vision to be a *civic university* that is embedded in, and responsive to, its local context. The civic university agenda is reflected in our three societal challenge themes, *aging, social renewal, and sustainability,* which are the focus of a significant proportion of our research funding.

The university's success comes at a time of economic crisis and austerity in the U.K., with local councils being required to make drastic cuts to public services. For example, one of our local councils responsible for more than 190,000 residents has had to make £37 million ($57 million) in reductions in the latest round of public expenditure cuts, yet it is responsible for providing vital services such as waste management, transport, pre-university education, and social care. As human-centered computing researchers at a successful civic university, we are therefore compelled to ask ourselves how our digital research could be of use and value to local councils and local citizens.

FROM CONSUMERS TO CITIZENS

Culture Lab has enjoyed significant funding from our national research councils to explore how ubiquitous and social computing can be used to address the university's societal challenges.

Much of this work has been undertaken through big initiatives such as our SIDE Research Hub (Social Inclusion through the Digital Economy). As our publications over the period testify, we have explored areas including dementia care, chronic disease, mental health, primary and secondary education, social and community care, and local democracy. Our human-centered and participatory approaches have helped us connect with individuals and communities, providing a rich understanding of the challenges our participants face, while at the same time returning to them systems and services that we hoped were meaningful and helpful to them.

But in 2012, we got a wake-up call. Chris Csikszentmihályi, whom we had invited to Newcastle to give a keynote address at the ACM Designing Interactive Systems (DIS) conference, presented an array of a brilliantly conceived and executed civic media projects. These projects addressed political concerns, gave a voice to under-represented communities, and opened up agonistic design spaces. But most significant for us was his challenge that

Insights

→ Digital civics aims to create relational rather than transactional public services.

→ A key challenge for digital civics is to move beyond volunteerism toward a model of citizen-led service commissioning.

→ Relational models of public services are best realized through long-term engagements with the full range of local stakeholders.

we should stop designing for consumers and start designing for citizens. We had never thought in these terms before, and it led us to critically question not only the impact of our research on the people and place where we reside, but also the relationships between local citizens and our research group, our faculty, and our civic university. What we came to realize was that despite our commitment to human-centered and participatory processes, we might as well be doing our research anywhere. Although our focus was on individuals and communities, the things we were doing often failed to extend beyond the confines of our projects. Worse than this, the way in which we were conducting some of our research with our clinical and education collaborators meant that we were proliferating the received wisdom, standard procedures, and institutional norms that limited people's ability to exercise control over their own lives, to organize, and to help each other.

The way we were designing technology gave people some input into the design of products, but only within the traditional framing of health, social care, and education as something that is "done to" citizens. For example, we were not using technology to give people a voice in the commissioning of services that local government or the National Health Service provided to them. We were not offering alternatives to traditional top-down consultation mechanisms. We were not providing support for people to deliberate on matters of concern, express their collective views, or instill in people confidence

that their voices would be listened to. We now call this endeavor *digital civics*, as it uses digital technologies to truly empower citizens.

DIGITAL CIVICS RESEARCH AT CULTURE LAB

In 2014, the U.K.'s Engineering and Physical Sciences Research Council awarded us funding to establish the Centre for Doctoral Training in Digital Civics. The center will train 55 postdoctoral researchers over the next eight years to carry out an extended program of digital civics projects. Mindful of the shortcomings of our previous work, we established the center as a close partnership with our local councils, a number of regional NGOs, and businesses. The program is designed so that researchers are required to work with local communities and councils in four areas of service provision: education, public health, social care, and local democracy.

Traditional thinking in public service provision casts citizens as service consumers, local government as information producers, and digital technology as a broadcast information medium. Our vision for digital civics is that by working with councils and citizens on locally embedded and responsive demonstrator projects, we can create a participatory imaginary in which both citizens and local government can explore the value of an alternative model of service provision. This alternative moves away from consumer-producer relations toward the idea of local governments providing *participatory platforms*, platforms through which citizens can take a more active role in shaping agendas, make decisions about service provision, and play a more central role in making such provisions sustainable and resilient. In addition, such platforms will create possibilities for new forms of relationship between citizens, local councils, NGOs, and businesses. Realizing such an imaginary and changing these relationships is not going to happen overnight. It will require sustained effort to support citizen groups and organizations by giving them the skills and technologies to engage and form public relationships with those in power, and to give them evidence that it is worth the
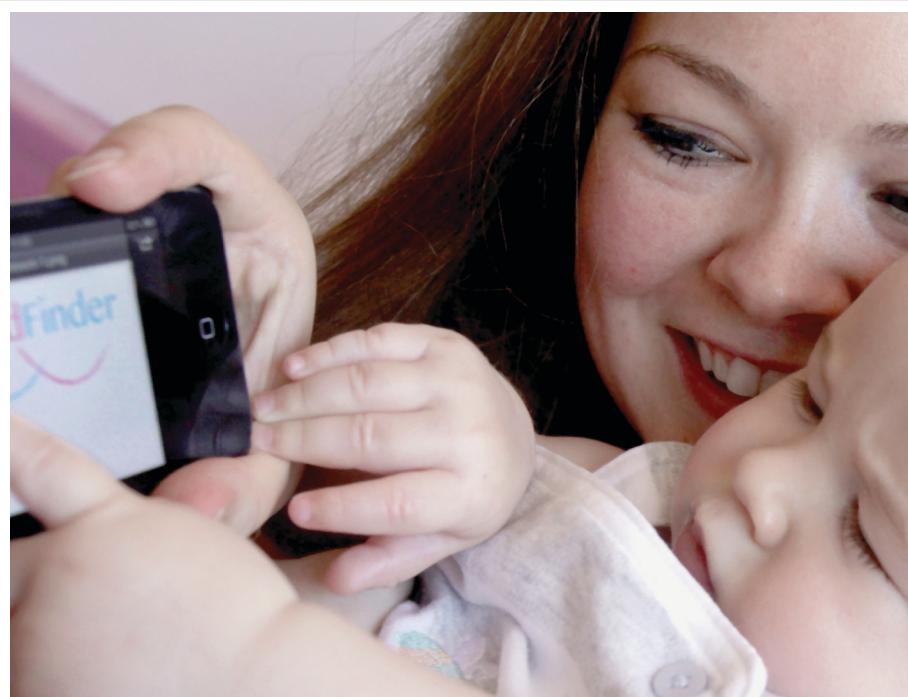

FeedFinder.

effort. Likewise, it will require local governments to develop new skills and methods of working with citizens, methods that move beyond traditional scripted processes of consultation toward more open dialogue.

In these times of austerity, there is a risk that digital civics might be construed, on the one hand, as finding ways of making citizens *do it for themselves*, or on the other hand, as dismantling public service provision. This is not our vision. As Harry C. Boyte in his inspiring book *Everyday Politics* argues, digital civics is about a new configuration of government and citizenry, one that is relational rather than transactional, and in which political thinking and action can be co-produced and co-owned through dialogue across differences in experience, values, and knowledge [1]. In what follows, we describe two projects that represent some baby steps toward a digital civics: FeedFinder and App Movement.

FEEDFINDER

The promotion of breastfeeding is a major issue for U.K. public health practitioners, and of particular concern in the Northeast of England, where only 32 percent of mothers use breast milk after six to eight weeks, the lowest average in the country. Madeline Balaam, from our group, in
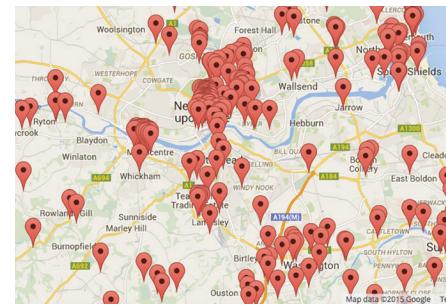
Feedfinder location reviews.

consultation with local public health providers and midwifery services, undertook to research this issue and explore ways in which digital civics could respond to this challenge. She worked with 21 young mothers from diverse socioeconomic backgrounds in a series of workshops in which the women shared and discussed their experiences of breastfeeding, especially outside the home. The workshops revealed that as a result of public health campaigns, the media, and contact with local service providers, young mothers often experience moral pressure to breastfeed because it is strongly linked with the idea of being a good mother. Furthermore, breastfeeding is often promoted as the natural and trouble-free method. But in reality, as some of Madeline's participants confirmed, many women experience practical difficulties with breastfeeding, especially during the first few weeks of a baby's life, and they have concerns

about where they can breastfeed when out of the home.

In response to the workshops, Madeline and her team developed FeedFinder, a location-based review app for breastfeeding mothers (https://feed-finder.co.uk) [2]. FeedFinder allows mothers to rate and review public places (cafes, parks, department stores, etc.) where they have breastfed, to share this information with other app-using mothers, and to make it public through the app and website. FeedFinder was released onto the app store and Google Play in summer 2013 with a small local promotional campaign at the end of July. Within the first six weeks, 1,450 users signed up, and 921 reviews were added. At press time, it has been running over 18 months and has 5,000 users. Over 1,900 places have been rated and 1,810 reviews posted. We are not claiming that FeedFinder is the total solution to getting young mothers to breastfeed. Rather, it is a demonstration of how social media can be used not just to broadcast public health information to consumers, but also to draw upon the expertise and experience of citizens themselves to create and maintain a trusted information service around an issue of importance to them.

APP MOVEMENT
FeedFinder is a digital civics success for us, but it still embodies a model of citizenship in which citizens volunteer their time and effort in response to someone else's initiative. Our next challenge is to consider how we can go beyond this model and give citizens control over the services that get commissioned in the first place.

One response to this challenge is our latest digital civics platform, App Movement. App Movement allows individuals to propose their own location-based service (or *movement*) around an issue that is important to them (https://app-movement.com). The movement might be anything from dog-friendly shops to child-friendly streets. Citizens describe their proposal, and if they can recruit 50 supporters, then the movement shifts into a design phase in which the supporters customize the rating criteria, brand, look and feel,

and so on. Following the design phase, a new app incorporating these design choices is automatically generated and uploaded to the app stores. Through their engagement in the design phase, the movement's supporters constitute a ready-made and highly motivated community of interest who populate the app with its start-up data.

Our App Movement website went public in February 2015, but already a number of proposed movements have received significant public support. For example, an idea for a *dementia-friendly places* movement was posted which posed the question, "How can we design or shape outside places, such as our cities or our neighborhoods, to support people with dementia to continue to use and enjoy them?" The proposal received 87 supporters within the first week. Of interest were the comments that the proposal provoked. These included recommendations for places, "We have recently discovered a brilliant cafe in Dunston… we take my dad there as often as we can, it is accessible, friendly and very understanding of my dad's condition…" specific suggestions for improvements to the urban environment, "It would ideal if there were clear signage on dementia friendly shops, cafes etc…" as well as clear evidence of networking the idea, "Katie, I think there could be a lot of interest in this. I will pass it on through my networks and ask people to get back in touch with you." The app went through its design phase in March and is now available in the App store (search for *Care Connect Dementia*).

DIGITAL CIVICS AND THE CIVIC UNIVERSITY
Our digital civics program is just starting; we not are proposing that FeedFinder and App Movement or our other pilot platforms (see http://di.ncl.ac.uk) are the panacea for digital citizenship. Indeed, they are at most a "toe in the water" through which we hope to stimulate discussion and imagination. One of the great values of our Digital Civics Centre is its eight-year timescale. A key feature of success for us will not simply be doing great research that we can share at SIGCHI venues,

but also developing partnerships with local government, local businesses, NGOs, and communities in the region. It is only through developing these long-term relationships that the potential of digital technology to offer new relational models of local government can be realized. There will be challenges and opportunities here too for the university. Even with its vision of itself as a civic university, engagement is sometimes construed as technology transfer, translational research, or knowledge exchange, all of which are easily misunderstood as academia producing knowledge to be consumed by citizens, businesses, and government, rather than as citizens, business, and government co-producing and co-owning knowledge (and technology). It's a shift in thinking that has the power to fundamentally reshape the relationship between the university and the city [3].

ACKNOWLEDGMENTS

ENDNOTES
1. Boyte, H.C. *Everyday Politics: Reconnecting Citizens and Public Life*. Univ. of Pennsylvania Press, Philadelphia, 2004.
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3. Goddard, J. and Valance, P. *The University and the City*. Routledge, London, 2014.

🖊 **Patrick Olivier** is Professor of Human-Computer Interaction and co-director of the EPSRC Centre for Digital Civics at Newcastle University. He is interested in the application of social and ubiquitous computing to health, social care, and education.
→ patrick.olivier@ncl.ac.uk

🖊 **Pete Wright** is Professor of Social Computing and co-director of the EPSRC Centre for Digital Civics at Newcastle University. His research area is the human-centered and participatory design of digital systems. He is best known for *Technology as Experience* (MIT Press, 2004), *Experience-Centred Design* (Morgan Claypool, 2010), and *Taking [A]Part* (MIT Press, 2015).
→ p.c.wright@ncl.ac.uk