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# Participations: Dialogues on the Participatory Promise of Contemporary Culture and Politics Part 4: Knowledge and Education

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**Participations: Dialogues on the  
Participatory Promise of Contemporary Culture and Politics**

**PART 4: KNOWLEDGE AND EDUCATION**

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**Nick Couldry:**

Has the range of actors recognized as producing knowledge expanded in the digital age, and, if it has, are the consequences for the wider distribution of power necessarily positive? How should we think about claims that the digital age enables new forms of learning—not only for young people but for all age groups? How best to characterize the new skills that have emerged in this process while acknowledging counterarguments that the digital age has been accompanied by a deskilling of sorts? Does the big data revolution—if that is what it is—promise to democratize knowledge and learning, or instead to appropriate them in newly effective ways?

Do the answers to all or any of these questions change if we reflect on them from the Global South as opposed to the Global North?

I am constantly struck by the huge *gap* between (1) the potentially radical implications of a digital environment for who can be recognized as valid and regular producers of knowledge and (2) the actual changes in who produces, and is recognized as producing, knowledge in practice. This has been brought home to me in two situations in particular.

First, in my recent fieldwork in a well-resourced UK sixth-form (i.e., 16- to 18-year-olds) teaching college where a clear and genuine policy commitment to recognize students as producers of knowledge (and sustaining this through digital means) encountered major difficulties in implementation, in part due to seemingly unrelated factors, such as curriculum rigidity, lack of time and resources to train staff and students appropriately, and lack of free space and time to experiment with new modes of interaction.

The second area is government. The redistribution of resources for producing and circulating knowledge and information that come with digital environments potentially enables new ground rules for how governments can consult citizens, the types of information governments can rely on citizens to produce, and the role citizens can play in policy deliberation and policy implementation—a genuine reconfiguration of the governmental process. But the reality of change (as Beth Noveck, 2009, notes) is much, much more limited, and government's reasons for resisting any change in its dominance over the policy process are fairly obvious.

Meanwhile, in commercial areas where corporations are drawing more on the expertise and insights of consumers, I am skeptical about how much of a redistribution of power has really gone on.

**Sonia Livingstone:**

In policy, public, and academic discourses, I see a widespread confusion about the promise of digital technologies. We are leaving behind the days of optimistic hyperbole (I hope), in which the Internet was to bring the world of information to the fingertips of every student, along with the chance to interact with people all around the world. We have learned that information is not knowledge and that global interaction risks being meaningless without shared purpose and contextual understanding of the other. Then we have a decade or more of research variously mapping the challenges you describe above—difficulties of

managing access, implementing systems, redesigning curricula, and getting parents and communities on board—along with still unsolved resource demands for retraining teachers, updating software, employing technical staff, and dealing with online risks. As a result, everyone involved has learned not to promise too much and to be cautious in articulating the goal: What is it all for?

There are two main answers to this question. Neither can be explicated without recognizing that framing the societal or educational ambitions for digital technologies makes claims not only on the future but also about the past. By this I mean, insofar as bringing digital/online technologies into schools involves the promise of more knowledge, creativity, participation, and so on, it simultaneously implies a previous lack. So what is this lack—what were the limitations of education 10, 30 or perhaps 80 years ago? I ask, because in the policy and academic discourses there are some competing accounts of the problem to which digital technology may be the solution (Livingstone, 2012). And these competing accounts create confusion—between a vision of education that continues to do what it already does but better and taking this opportunity to do education radically differently.

So, is it that, although schools were seen as doing a good (enough) job for the 20th century (teaching canonical knowledge and addressing the workforce needs of the nation), there are some concerns, for instance that achievement gaps are growing (causing knock-on social problems among youth) and that the changing workplace requires new skills that schools do not yet deliver? In Europe, a mild version of this instrumental vision is commonplace (hence, in the UK, a lively debate over teaching kids to code). In the United States, I hear a stronger version, that schools are “broken” and that digital technology offers a viable solution.

Or is it that, as the educational reform movement has argued, schools have long been problematic—stratifying children rather than providing equal opportunities, putting workforce needs before emancipatory visions of knowledge and participation, teaching to the test rather than finding ways to assess diverse modes of learning? Although this more radical vision has never had much play in the mainstream of educational policy, I think it underpins much of the discourse coming from academics working with youth, education, and technology.

When policy makers talk up the hyperbole of digitally mediated learning, playing the rhetorical game of hailing the digital revolution (to drum up resources and enable change), they sound like radical reformers. But generally they mean nothing of the sort in practice. And, thus, we get the huge gap between radical hopes and banal practicalities.

**Don Slater:**

I agree with much or even most of Sonia’s contribution but am concerned that (1) knowledge was viewed from a rather official standpoint (policy, common purpose, achieving good schools), and (2) within that framing, Sonia’s depictions of both radicalism and instrumentalism seemed very abstract and tame (can “radical hopes” for technology and knowledge really be a matter of more creative or free *schools*?). Despite ending up an academic, I loathed school, and my entire sense of what knowledge is and what it is good for was largely defined both outside of and in opposition to schooling (and eventually I dropped out).

Had new media been available to me (as were rock music, drugs, and guitars at the time), they would have been deployed as a stronger resource from which to contest what counted as knowledge and to create a different kind of space. I'm hardly alone in this I'm sure. Moreover, this (oppositional) relation between knowledge and the official clearly harks back to very old debates (Bourdieu, Bernstein, and Willis for starters) about tacit versus official curricula and symbolic violence, about the ways in which the normative ideas of knowledge propounded in policy become points of reference that students have to relate to in order to succeed, define themselves and their careers, systematically fail (as in the case of Willis' "lads"), find free space to think of new things, and have to find new languages and practices to articulate their covert, tacit, implied, alternative, resistant concepts of knowledge and knowing.

So, at the very least, first, all this raises the question of what new normative concepts of knowledge are being articulated around digital technologies? What is the balance between explicit and implicit normativities in different sites such as classrooms, bedrooms, playgrounds, and so on, and how are these ecologies of knowledge and technique being altered by the politics around new media? How are new normativities officially inscribed, enforced, resisted? What new versions of knowledge are being elaborated in other places? This is clearly related to Sonia's questions, but it tries to be more distant from official policy and open up the conflicts (overt but also unarticulated) over radically different views of common purpose or what this stuff is good for. If nothing else, I would not only never expect agreement over what either knowledge or technology is good for, but would regard such agreement as the end of politics, freedom, innovation, and mischief.

Second, I worry about tracing new normative concepts of knowledge back to official positions and policy pronouncements (of anyone—teachers, policy makers, students, etc.). This is just as bad as any technological determinism that tries to trace things back to the new machines. A brief anecdote: On the weighty public forum, *Desert Island Disks* (a music choice program on BBC Radio 4), the formidable pop psychologist Tanya Byron recently made an excellent observation: It is daft for people to be either surprised or outraged over children accessing pornography online or to treat this as an isolated issue; it is pretty predictable in a context where (particularly middle-class) children are largely confined to their bedrooms and excluded from other spaces of potential autonomy (like the street) in the interest of reducing "risks" (!) and in the pursuit of academic hothousing (homework, exams, and tutoring in the middle-class case). Reframed in knowledge terms, the construction of sexual discourse takes place within a complex ecology and moral universe, and the very idea of what counts as knowledge, how it is enjoyed, validated, trusted, and so on must be understood in terms of an ecology which may have—as in Byron's example—an inverted or implicit or subterranean relation to official knowledges.

Finally, this train of thought raises for me the issue of what *our* social scientific knowledge is good for in this context; what we as new media researchers are supposed to know or what our knowledges are supposed to look like. I mean something very specific here (a longer version of this is in Slater, 2013): Over several years of research on new media in development contexts (South Asia, Latin American, West Africa), I was funded by agencies and connected to governments and schools on the basis of the types of questions Sonia asks: Could I provide knowledge of the potential dangers and benefits of using new media in relation to either official policy goals or new goals that could be formulated for new media? Both versions demanded basically predictive knowledges concerning the impact of known media objects

(Internet, radio) on known policy objects (knowledge, empowerment, etc.). But in almost every context I worked in, the interesting and promising knowledges I could produce were of entirely indirect, unanticipated, unintended, and sometimes seemingly unrelated ripples elsewhere in an ecosystem, where the useful thing I could do was to spend time ethnographically teasing out the connections that might lead from (in Byron's example) types of sexual knowledge to types of parenting and schooling arrangements. In this kind of new media research there was always the question of where should my knowledge start from and who should it be interesting to.

***Sonia Livingstone:***

Nick kicked things off by inviting thoughts on the huge gap—which I agree with—between the radical implications of the digital environment and the actual changes we have witnessed so far. He sees this as problematic in the domains of both education and civic participation. In my work, and especially in responding to the question I often get in response to my presentations—We see now what's wrong, but what can be done?—I had suggested that to understand why this gap matters and to whom, we first need to explicate an analysis or critique of education (or civic participation) in predigital days (to focus matters, let's say the second half of the 20th century in the global North). And then we need to map more precisely what we think education (or civic participation) could and should be in the future.

Whether the digital environment can and will make a difference is then our core question. Several positions are possible. (1) Education has long done a sterling job but now must change to fit new conditions of globalization, lack of jobs for life, and demand for new skills (I see the UK and U.S. governments taking this position, broadly speaking). Or (2) education has long served the elite but failed the majority (doubtless too crude, but this has been a starting point for many educational reformers for decades). My point, then, about the digital is that, for the first group, digital seems to offer a quick fix (new skills, new tech) that doesn't require any profound rethinking of teachers, curricula, path to employment, and so on. But for the second group, the digital—especially now that policy makers are paying attention—seems to offer a tactical pressure point to open up a far deeper reshaping of the power and authority structures of schools in relation to society. The confusion comes when both groups draw on the same academic research or meet at the same conferences and seem to be talking about the same thing. But their analysis of the past and vision of the future are very different—hence, mutual frustration all around.

So to Don, I didn't in the least mean to sound too abstract or to align the normative with the official. I agree with you that the digital seems to have opened up a free-for-all on normative visions, including many whose interests lie in administrative efforts to discipline youth or in commercial ambitions to profit from an increasingly privatized education sector. But that doesn't capture all the normative visions—and perhaps I can call on others in this discussion to pitch in here? For instance, Craig Watkins and I had a conversation recently about whether schools in the United States could be called "broken"—failing a generation of already-disadvantaged youth—and whether the Connected Learning Research Network (<http://clrn.dmlhub.net>) could be useful in guiding a different approach. And Henry Jenkins and I have talked about how radical the vision of digital media literacies could be in challenging and reshaping existing hierarchical relations between teacher knowledge and student knowledge.

It's indeed an interesting question to consider what kind of knowledge we can produce and how its insights can be heard by what are now called "research users." My own fieldwork (<http://clrn.dmlhub.net/projects/the-class>) abounds with instances in which young people's interests, energies, and desires go unrecognized, even blocked, by inattentive and anxious parents and teachers who see the digital as so worrying that they don't think even to sit down with a child and ask them what they are doing, or who are so concerned about meeting targets and getting the "right" results that they can barely countenance alternative pathways to knowing something different (Livingstone & Sefton-Green, in press).

**Andreas Hepp:**

I want to question whether there are any "radical implications" of the digital environment if we understand radical implications as emancipation. I do not want to say that there are no emancipative moments of digital media whatsoever. We all know that especially in California many technological developments of the 1970s were related to the student movement and the (partly naïve) hopes to build a better world with computer technology. Also the principal idea of collecting information via something we now call the Internet is linked to quite old ideas of enlightenment and the role of accessible knowledge. However, if we read histories of what was later called the information society—for example, as written by Armand Mattelart (2003) or James Beniger (1986)—we quite easily also find other lines of implication, such as the idea of control through information. This again has several aspects, partly aspects we might accept (a better control of the allocation of resources, for example, which might support welfare), but also aspects we are worried about, such as the control of information, either by business to make money out of it, as Joseph Turow (2011) analyzed in relation to the new advertising industry or by governments' attempts to track "criminal citizens."

I want to emphasize two points: First, the "radical nature" of the digital environment can also be a radicalness that is addressed against emancipation. And, second, there is no principal need to link the digital environment with something positive.

Taking our own empirical research (Hepp, Berg, & Roitsch, 2014a, 2014b) on young people, their appropriation of digital media, and processes of communitization, we came to a very inhomogeneous picture when it comes to engagement and participation with the help of media.

First, it is interesting that communicative demarcation is relevant for young people. It is an important and remarkable topic for them: When do they want to be accessible and for whom? How to use which kind of digital media for which purpose, and so on? And when it comes to social, cultural, and political engagement, it is striking that some of the most engaged young people we interviewed were also the most skeptical about digital media. We had the case of a young woman who helped organize political demonstrations against xenophobia, but she only occasionally used the Internet. Direct communication was for her the most important way to communicate politically, and the Internet was much more related with commercial exploitation and surveillance than with critical engagement. In a certain sense, she was an extreme case; however, the skepticism and demarcation in respect of digital media was a general topic for everyone we interviewed, especially people who were politically engaged.

What we mainly found were small forms of engagement related to the mediatized horizons of communitization of the young people. We used the term *mediatized horizons of communitization* to name the general subjective orientation of one person to the various forms of communitization that characterize his or her life. This horizon is mediatized as the relevant communities are built up through media related practices. In our research, we found four types of young people: localists, centrists, multilocalists, and pluralists. Localists are oriented to the local when it comes to communitization; centrists to a certain topic (a religion, youth culture, etc.); multilocalists to a variety of however defined localities; and pluralists are open against a high plurality of often very different forms of communitization.

When it comes to engagement, our main result was that there is no type whose representatives are engaged more than others. Across all these types, we find engagement, but these are small forms of engagement and closely related to the specificity of the respective horizon. Localists, for example, are engaged in local communities, and often very traditional ones (voluntary fire and rescue services, music and sports clubs, etc.). Centrists are engaged in the communities that mark the center of their horizon of communitization, such as a church or a youth scene, where they are often part of the organizational elite. A comparable relation between the orientation of engagement and the specificity of the horizon can also be demonstrated for the other types. All these forms of engagement are also mediatized in the sense that (digital) media are deeply interwoven into the way this engagement is realized. Meetings of voluntary fire and rescue services are organized via Facebook, self-organized music concerts are advertised via online campaigns, and so on. And the skills for these kinds of media-related practice are often quite high. However, rarely found engagements only within the media—for example, by writing commentaries in online forums. When this is done, it is in forums that relate in some way to topics that are important within the horizon of communitization.

These are research results that refer only to young people in Germany. But at least three points are more general and important within our discussion: First, it is not a certain public institution that counts for engagement (the school, the local government, etc.), but what's important is the orientation of the young people's horizon of communitization. Second, it is not the media or the digital environment as such that matters. Rather, it is the kind of social relations that count as communitization. And, third, the small engagement of the young people is seldom oriented to abstract forms of politics (state politics). It is an engagement rooted in the mediatized life-worlds of the young people. Here many of them develop a remarkable intensity of engagement, often related to processes of learning that are beyond official institutions of education. The best example for that are (youth) scenes.

What might this mean for our discussion? It means that we should not focus so much on the digital environment as such. Digital media can be an important help if engagement is linked to everyday communitization. But digital media do not foster engagement in general. For me, the interesting point is that the lived experience still plays the main role for young people—and this in times of intensified mediatization (at least in Central Europe). This mediatization is also globalized lived experience. However, the global lies in the outer areas of the horizon, and it becomes relevant for further engagement only if it can be grounded in everyday practices of communication.

Therefore, maybe we should focus more on the lived experiences when we discuss the emancipative potential of digital media.

**S. Craig Watkins:**

The questions raised by Nick are intriguing. I will focus my posts on two related aspects: First, the degree to which digital facilitates the (uneven) distribution of new forms of learning and skill formation. Second, the relationship between technological innovation and the process of deskilling. Both of these issues have serious implications for the future of learning and the pathways to opportunity.

In the research that we have been conducting (Watkins, 2011, 2012, 2013) we have thought a lot about the social distribution of new forms of learning, especially the skills and forms of capital associated with digital media and learning.

In the United States, for example, we are witnessing a greater diversity of youth than ever before adopting and using digital media technologies. In fact, when it comes to mobile platforms, Black and Latino youth are more active than their White counterparts. Importantly, access to technology and access to information does not mean access to knowledge or higher-order thinking skills. Sonia reminds of this in her initial post. Similarly, access to technology does not mean access to the same forms of capital and opportunity to leverage technology in particular ways, including, for example, civic engagement and economic or educational opportunity. Let me offer an example from our fieldwork that addresses these issues.

Many of the youth we have been working with come from under-resourced schools, families, and communities. Still, many of them remain relatively active in their use of technology. They use mobile devices. They are active on social sites like Facebook, Twitter, and Tumblr. And several of them have adopted the after-school space and hours at school to pursue their creative interests in digital media making. Several students were involved in the production of, among other things, music, video, graphics, and games. It is clear that many of these students have managed to find ways to make school (especially the after-school setting) a much more relevant and interesting place. Further, they have created noteworthy learning ecologies that are peer supported and interests driven. Part of what our work is charting is how these students *do* school, through their own distinct expressions of connected learning. But here is where things get interesting.

As we begin to think about pathways to future opportunities, a real question has emerged: To what degree are our schools (and other educational institutions) adequately preparing our most disadvantaged students for future classrooms, workspaces, and civic spheres? Several of the students in our study are interested in pursuing careers in the creative industries. And while there is certainly robust innovation and modest growth in the knowledge economy, employment opportunities typically require the acquisition of higher levels of education and higher skills. So, although digital media are more widely distributed than ever before, not all learning ecologies, literacies, and pathways to digital participation are equal.

This leads me to the second theme noted in Nick's original post: the question of deskilling. Most

economists believe that one of the more consistent impacts of technological innovation is the degree to which it often places an even greater premium on education. This, more specifically, is called skill-biased technological change (SBTC). Claudia Goldin and Lawrence Katz (2009) maintain that the rise in economic inequality is due, in large measure, to a slowing rate of educational attainment that has not kept pace with technological change and the rising demand for more high-skilled workers. They characterize this dynamic as “the race between technology and education.” MIT economist Daron Acemoğlu (2002) writes that “technical change favors more skilled workers, replaces tasks previously performed by the unskilled, and exacerbates inequality” (p. 7).

The shifts that are transforming our economy are not merely related to deskilling; they also point to a general supplanting of certain low- to middle-skill laborers. A belief exists that steady advances in computing, robotics, and automation are simply rendering certain jobs obsolete. Additionally, there is a belief that these same changes are creating an even higher premium for more complex skills and knowledge acquisition. All this leads, consequently, to the widening levels of educational and economic inequality seen throughout parts of the industrialized world. Tyler Cowen puts it best in *Average Is Over* (2013), when he writes:

Workers more and more will come to be classified into two categories. The question will be: Are you good at working with intelligent machines or not? Are your skills a complement to the skills of the computer, or is the computer doing better without you? (pp. 4–5)

Later he adds, “ever more people are starting to fall on one side of the divide or the other. That’s why average is over” (p. 5).

The real challenge in terms of any effort to create more equitable digital and learning futures is to scaffold environments that not only support the ability of a greater diversity of young people to gain access to technology but also access to more advanced skills and forms of knowledge. Most crucial is the ability to use those skills and knowledge to solve problems in a manner that creates alternative pathways for new kinds of knowledge producers, citizens, and social mobility.

**Jason Mittell:**

I teach small classes at a small college in a small town in a small state (in a large country, of course), so all my local experiences are inherently micro. This semester, one of those small courses is called Digital Media Literacy, consisting of 15 first-year students simultaneously exploring the content suggested by the class title and getting oriented to college-level writing and research as well as our college and small-town communities. As part of this process, I arranged a collaboration with our town’s middle school (which covers seventh and eighth grades, ages 12 to 14), where teams of my students would offer mini-lessons on digital media literacy to classes of middle schoolers. Each team of two college students was mentored by a professional middle school teacher, and they developed lessons on topics ranging from using Google Docs to facilitate peer review to considering the best ways to use social network software to collaborate on

school projects or share their artwork—all while highlighting a reflexive take on how technology differently enables and constrains communication.

What struck me after a week of observing their first forays into teaching was that, despite our immersion into and embrace of the digital, the learning that I witnessed (and experienced myself) was rooted distinctly in the face-to-face. My college students gained an appreciation of the hard work of teaching, of how teachers can help kids focus and engage with such apparent ease, and of the hours of work it takes to plan 30 minutes of class time. They have reported that the experience is making them view their own professors' class sessions (and their role in them) in a new light—a level of metacognition that I wish all students had. The schoolteachers saw how even a lesson run by so-called digital natives prompted unplanned technical troubleshooting and required a good deal of hands-on instruction before kids could use the technologies that they are allegedly fluent with. The kids felt a few aha moments of education, although less through the magic of technology than the power of conversation—when the students did the math to discover the massive reach of Facebook posts set with Friends of Friends privacy permissions, their gasps and wows were best absorbed in the physical classroom, not through the limited social cues of texts and tweets. And my own learning included all these insights, providing some takeaway lessons for my own teaching practices.

This experience reinforced some of the reasons why I have been an outspoken critic of the MOOC (massive open online course) craze that has swept the United States and seems to be gaining steam in Europe. Bracketing off the vital issues of privatization, profiteering, and the damage MOOCs might cause to faculty livelihood and academic culture, effective education and learning seem the opposite of massive. My experience, teaching my 15 students about the digital and watching them work with a teacher to bring those lessons to groups of 20 middle schoolers, is innately small scale, and not particularly scalable. Obviously, larger scales are already in place within the face-to-face educational realm, and the small scales I'm working with are a luxury and privilege on many levels. But as we think about how digital media change our educational possibilities, I keep coming back to my own small-scale experiences and wonder how online communication might best foster the one-on-one exchanges and intimate conversations where I have found learning to be most profound and effective, if not the most efficient.

This is not to offer a reactionary call to abandon technology, but rather to contextualize it within what seems to work best about education, at least at a classroom rather than systemic level. Too many of the calls to digitize education still believe that access to tools is the main hurdle to overcome, and that an iPad in every student's hand will lead to salvation. But in my experience as an educator, researcher, and parent, the best digital learning occurs when we teach students (of all levels) *about* the technology, not just how to use it (as has been long argued by David Buckingham, 2007, and many other media educators). The challenge for U.S. education is that the system is set up to favor the quick addition of the tool (often bestowed by corporate charity looking for long-term brand allegiances) rather than engaged learning about technologies and why they matter. I see such engaged and reflexive teaching already happening at my local school's integration of computers via a dedicated course about digital citizenship and literacy (although the teacher believes the school's approach is atypical), and I was happy to have my students extend that approach, even if only for a brief session. But until we find ways to teach such media

literacy broadly to both teachers and students with sufficient reflexivity, I fear that digital technology in formal education will become yet another failed bandage on a broken system.

**Nick Couldry:**

Jason's point can be reinforced even from contexts that, in one respect, are directly about the use of digital platforms. In my recent fieldwork in a senior school in the north of England, the digital settings that worked did so because they encouraged participants to take on knowledge roles different from those they normally took on: a Twitter stream set up by teachers that gradually drew students into presenting themselves as makers and sharers of knowledge, and to be recognized as such by their teachers; the embedding of students' stories about why they made the art they did via QR codes accessible on the mobile phones of those who stood in front of the artwork. In both cases, students became recognized as sources of information and knowledge in ways they had not been before. These fragile cases bring out the importance of a wider *social* framing that is missing in digital rhetorics of empowerment through technology.

One term that might help make such a framing more concrete is *recognition* (Honneth, 2007): Sustained forms of recognition are crucial components of any genuine move toward new forms of skill, and the deskilling Craig talks about eloquently involves the withdrawal of older forms of recognition. Maybe others would find other terms more useful here, as we think about the actual *social* processes that digital rhetorics obscure.

**Liz Bird:**

Maybe I can jump in by taking some points raised by several people so far, clustered around (as Craig succinctly puts it) "the degree to which digital facilitates the (uneven) distribution of new forms of learning and skill formation [and] the relationship between technological innovation and the process of deskilling." So far, almost everyone has addressed these issues in the context of the first world, but as Nick originally mentioned, the challenge has global dimensions that perhaps I could usefully touch on here.

I currently have an active research project in Nigeria; it is not centrally about either digital issues or education, so my comments are observational rather than evidence based. In Nigeria, about 25% of people have Internet access, but broadband penetration is much lower, with most people accessing through cell phones, which are ubiquitous given the appalling state of the landline infrastructure. Broadband is increasing but still relatively rare; very few have access at home or school (less than 5% each), so the majority of broadband usage is through Internet cafes. The national power grid is precarious, with most communities experiencing hours each day without power. Last year, I visited a high school that is regarded as the best in the small town where I work (Asaba, on the west bank of the Niger). There was one computer, a donated machine in the principal's office. Even at the university level, access is difficult and spotty; colleagues at the University of Nigeria tell me that they can't count on being able to access the Internet at work, and almost everyone uses a personal e-mail account (typically Yahoo!) to connect, most reliably by phone.

What does this really mean? At the most obvious level, it's clear that while the old digital divide terminology may be passé in the developed world, that divide is still huge in places like Nigeria—not only between that nation and the West but within the country itself. The advance of digital technology in Nigeria has solidified the gaping chasm between the wealthy and everyone else in a way that's hard to appreciate from the outside. The wealthy and their families have seamlessly moved into the globally connected world that we all take for granted. Their children go to private schools, often outside Nigeria, then on to U.S. or UK universities; they and their businesses have their own generators and broadband connections; they conduct business online and participate in social media. Everyone else struggles with underfunded schools, constant blackouts, corruption, and so on. Many see the possibilities of digital technology to educate, connect, and mobilize, but putting these ideas into practice is very hard. During our research, we have become close to a young man who organizes youth groups, trying to mobilize for change. We brought him a laptop with a wireless connection, and he was delighted but told us that the usual way he accesses WiFi is to sit outside the local Internet café and try to pick up the signal.

Now this doesn't mean that the digital world has failed completely to facilitate the distribution of new learning and skill formation among the less affluent. Smart phones are everywhere, and many people are adept at using them for connecting for social and other purposes. It seems that no technology is ever thrown away; on every street there are small businesses that repair and repurpose all kinds of devices. If this technology were somehow harnessed in schools, perhaps there could be exciting ways to create digital learning projects. The digital learning so far discussed on this thread is apparently dependent on the kind of rich, broadband-based infrastructure that we assume is needed as a starting point. Are there models out there that could use the technology that students in places like Nigeria have? Or would that simply serve the purpose of distancing them still further from what could be seen as the digital norm?

In addition to the discrepancies in educational opportunities, the uneven access to digital literacy shows in other significant ways. Nigeria, like many other countries, has a huge diaspora population. These expatriates have developed ways of connecting, through hundreds of online sites, social media groups, and so on. My research focuses on collective memory and the reconstruction of a historical atrocity, and we have found these online forums to be highly effective in disseminating our work and eliciting comments. In addition, I've become increasingly interested in tracking the broader discourse on Nigeria and its problems that permeates these sites. Perhaps the most striking themes (please forgive great oversimplification here) are: (a) We love Nigeria, but (b) Nigeria is broken; (c) the people in Nigeria can't fix it, in part because all the smart and educated people have left. One forum I have looked at particularly closely focuses on lengthy and erudite discussions of Nigerian history, often featuring laments about how much better the country used to be during immediate postcolonial times. Some members do still live in Nigeria, typically in upper-middle-class professions, but most reside elsewhere.

What seems to be happening here is a solidification of the privileges of those who have access to the global, digital world producing further marginalization of the mass of people who do not, and a reluctance on the part of the haves to help the have-nots. And deskilling is definitely part of the picture, too. Without access to training in digital skills at school or elsewhere, young people have few avenues to move out of poverty, while digital literacy is reserved for those able to participate in educational contexts that are already digitally well resourced.

I'm aware that I'm painting a rather bleak picture here. Don Slater mentioned that his work addresses the way digital resources can be used to assist in development movements in West Africa, and I don't want to minimize the importance of that. I also don't want to distract from the really interesting discussions we've been hearing. I'd like to think about ways that cell phone technology could be harnessed to contribute to learning and activism—in developing countries, *that* is the aspect of the digital world that has reached the most people, and there are numerous examples in the literature of how this has improved the ability of small entrepreneurs, farmers, and others to participate in the wider economy. But we shouldn't forget that when people from developing countries participate in the global digital conversation, for the most part they represent only a tiny fraction of their mostly digitally disenfranchised compatriots.

**Elizabeth Losh:**

Anne Balsamo notes, "Participation is another one of those keywords everybody loves. Who can be against participation? Like kittens, we all should just love participation" (2013). Unfortunately for those who defend it, participation is messy, unevenly distributed, difficult to predict, prone to spur the forces of reaction, and likely to die out without infrastructure to sustain it. Kittens could certainly be compared to the forces of participation, but so could mountain lions.

I've written two books (Losh, 2009; in press) about traditional institutions and computational media that focus on the inevitable conflicts between regulation and content creation that occur when citizens' or students' desires for participation challenge existing conventions. The first one is about government agencies, and the second one is about universities. So I was glad to receive the invitation from Nick to join this conversation about how knowledge is constituted both politically and procedurally. Both of my books try to explicate embarrassing failure stories that don't map neatly onto either the cyberutopian or cyberdystopian positions that we've been discussing on this thread.

Like Sonia Livingstone, I tend to be skeptical of grandiose claims about the so-called digital generation. Like Craig Watkins, I don't think that techno-missionary accounts of the digital divide give enough credit to existing communities of practice as sites of knowledge creation or describe honestly the real problems of access to social and economic mobility, as opposed to access to a particular form of politically sanctioned computing that can be marketed by corporations to school districts as consumers and coded as educational by society's moral guardians.

As a rhetorician, I did flinch a bit at the talk of "rhetorical games" earlier. I don't think we can really stand outside of rhetoric. We all deploy rhetoric, especially when we accuse other people of doing it. I also believe that discounting the importance of public policy and academic discourse too quickly could be a mistake. I love Don Slater's scholarship, because it asks academics to pay attention to role of the extreme and the banal in digital culture rather than rely on romanticized notions of our objects of study. Nonetheless, official versions matter, so I do take issue with some of the claims in his post. In the name of championing a better understanding of participatory culture, it seems critical to participate in the systems of legitimation to which powerful decision makers turn for guidance. Every time I can get a government official or a college president interested in this work, I feel encouraged that we all might be

able to move public discourse into more nuanced territory than the moral panics or rhapsodies over sci-fi gadgetry that dominate the airwaves.

For the better part of two years I've been fortunate to be a part of FemTechNet (<http://femtech.net/newschool.edu>), an initiative organized by "an activated network of scholars, artists, and students who work on, with, and at the borders of technology, science and feminism in a variety of fields including STS, Media and Visual Studies, Art, Women's, Queer, and Ethnic Studies" that welcomes others to join. A lot of people talk about FemTechNet as an anti-MOOC, because it situates itself as an experiment in open distributed learning that is fundamentally dialogic and many-to-many in its structure, but it also promotes an understanding of cyberfeminist histories that predate MOOCs.

Many of the local crises that occur when classrooms adopt unruly digital practices have been rehearsed in the antihierarchical pedagogies of the women's movement. After all, feminists have described their classrooms as transgressive, collaborative, engaged, devoted to interdisciplinary inquiry, connected to the community, and sensitive to the importance of emotion and social roles in learning for much of the 20th century. Now many of these high impact practices are lauded by the Association of American Colleges and Universities, but for a long time they were loathed by the academy.

I can't say much about the global South, although I have been doing some new work in India about the informational labor of feminist activists and their attention to managing metadata and naming conventions in online discussions that are structured around status updates as part of a larger project about networked political co-presence and "tweeting the revolution" with Beth Coleman. For example, in the recent Delhi rape case that galvanized public opinion, multiple pseudonyms were used for identifying the 23-year-old victim, which made frequently unrewarded informational labor often more complex and time-consuming.

The issues that Nick raises about the politics of big data are also very much in mind as I work on a new book about the role of digital technology in the Obama administration and—by extension—the global dissemination of a particular set of ideas about the relationship between distributed computational networks and direct democracy. Right now there is a scandal in the United States about the botched launch of the HealthCare.gov website that plays havoc with the tech-savvy reputation of the White House. The site has been plagued by intermittent service, error messages, and privacy and security vulnerabilities as well as political discord that includes Silicon Valley finger-pointing and right-wing hacktivist distributed denial of service attacks. I find it a particularly interesting failure story, because the president promised to deliver a government website with a consumer user experience in mind, just as if "you'd shop for a plane ticket on Kayak or a TV on Amazon." Not everyone who studies digital participation might accept this model of citizen as a shopper for services as an ideal for governance, of course.

***Sonia Livingstone:***

I liked Liz Bird's argument that "what seems to be happening here is a solidification of the privileges of those who have access to the global, digital world producing further marginalization of the mass of people who do not." It crystallizes a challenge in my mind: the question of whether anything we have been saying is particular to the digital or whether basically we are talking about how resources—digital in this

case, but they could have been many other kinds of resources—are commonly used to reproduce, even magnify, inequality. There are plenty of sociologists and economists now producing trend data showing that the gap between rich and poor—measured both within and across countries—is becoming greater, and more rigid. As I suggested at the outset, although I do think rhetoric matters (as Liz Losh argues, because it has effects), I also see it as an opportunity: If the digital is the current bandwagon of governments, can it be harnessed by those working for social justice goals?

Thus, I wonder if we have said enough yet about why a group of scholars interested in media/digital technologies is debating the gloomy state of inequality and deprivation. Are we the right people to be discussing this—rather than, say, experts in poverty or development or inequality? I'm not saying we don't know anything about these matters, of course; merely that we also know about digital media technologies, and we haven't said much about these yet. If we were to omit the specific mention of digital and media technologies from what has been said so far, what would be different?

I would suggest three positions about the importance of the digital. (1) Policy makers, governments, and other stakeholders believe that the digital is making a difference, so the policy window is open and resources can be mobilized. (2) The digital is becoming ever more bound up with, or embedded in, or infrastructural for, all kinds of other processes of markets, governance, life-worlds—in effect, the mediatization argument (Hjarvard, 2008; Rawolle & Lingard, 2010). (3) The particular affordances of digital interfaces make the difference—this is the position most often argued in education (users can be producers, content can be remixed, everyone can share and comment, etc.).

Many still hope that, whether for reasons of rhetoric, infrastructure, or interface, knowledge and participation can be enhanced and made fairer insofar as they are newly mediated by the digital. For the most part, we have expressed doubts, drawing on a large body of evidence in support. But the doubts so far expressed, I suggest, are less related to anything digital but rather more to familiar forces of institutional inertia, social reproduction, and commercial interests.

***Jason Mittell:***

I have few thoughts on why we've been focused less on digital media and more on the contexts in which digital media are disseminated and used. For me, the rise of participatory digital media has provoked a two-stage reaction. First, I celebrated that these technologies have validated our theories. Having been schooled in post-Birmingham cultural studies, it was quite a thrill to see widespread evidence of negotiation, poaching, polysemy, and burgeoning alternatives to dominant media that remix rather than reject commercial forms, and crowdsource funding rather than rely on centralized capital. It has been exciting to see how students now accept theories of active audiences as obvious, compared to the skepticism that was still prevalent a decade ago.

However, the second reaction is where the real insights of cultural studies kick in. The point of emphasizing negotiation over domination, hegemony over ideology, was not to celebrate the popular (contrary to many straw-man critiques), but to complicate simplistic binaries and models with insufficient explanatory power. So if there is more visible evidence, reinforced by rhetoric of corporate and policy

leaders (synonyms here in the United States), that everyone is a producer and the media have become inherently more democratic, then our scholarly duty is to complicate and contest such utopian simplicities, just as the foundational work of cultural studies complicated and contested dystopian orthodoxies. So as we look at rhetorics of digital learning as liberation, we are all compelled to ask what is missing in that formulation, how might such innovations reinforce or leave other systems of power in place, and who is left behind on the sidelines of participation.

As a scholar of American television, I always try to remember that at the same time that digital transformations have enabled participatory fandom, alternative forms of authorship and distribution, and the reduced power of networks to define how and what we watch, we have also witnessed the rise of Fox News, arguably the most reactionary political power in the United States in many decades. These two developments may or may not be related, but their simultaneity should remind us that cultural shifts are never as simple as they seem.

What is distinctive about the digital is its tendency (at least today) to be characterized as inherently liberatory and democratic, whereas other media forms and cultural practices are less embedded in utopian rhetoric (again, today). So these discussions rightly raise our skeptical hackles, and we feel the need to complicate and contextualize rather than explore the media themselves.

**Don Slater:**

I'd like to put together one of Elizabeth's comments and one of Jason's. Elizabeth felt I was arguing that official versions were not relevant—I'd take pretty much the opposite viewpoint, and one closer to hers, that they are massively important; what most matters is that they are treated as part of the field to be studied rather than as framing discourses that stand outside the field, either molding it or posing the only question we can ask as scholars: Are new media empowering or not? If the question is being asked by an official funding body or addressed to me by a policy maker, my academic responsibility is to critically analyze the question as an element of my field of study—indeed, as a particularly powerful formative actor in and on that field. Given that most of my work over the past 15 years has been on media and in development contexts, that position seems particularly obvious: I could not study media in South Asia or West Africa without studying how basic terms such as *media*, *development*, *communication*, and *information* were being defined by all parties, including policy makers. *New Media, Development and Globalization* (2013) was mainly an attempt to see what questions might arise if you put official discourses and all local ones in the same analytical frame, symmetrically, rather than allowing the official discourses to frame the local ones and to generate the questions we address to all other actors (including ourselves as academics).

Obviously this doesn't stop us asking about more or less emancipatory/participatory/empowering uses of media, or new media, but it forces us to ask how the emancipatory, participatory, and empowering are defined, including how they are defined officially and in official practices, and to treat those official discourses simply as players in the field alongside many other actors.

Which leads to Jason's point that "what is distinctive about the digital is its tendency (at least today) to be characterized as inherently liberatory and democratic," claims that "we feel the need to complicate and contextualize." This is hugely important, but let me rephrase in terms of my first paragraph: Digital media certainly have generated the most extreme utopian (and dystopian) framings imaginable—in and for the *global North*. One response would be to research how far these extreme claims stand up empirically (are we *really* becoming post-human, forming new kinds of community, entering an information age of liquid capitalism?) or not—in the 1990s that would have approximated to Mark Poster versus Frank Webster/Kevin Robins. Clearly, however, whether we as scholars are skeptical about these claims is not the most important thing; and to start from that issue is to place ourselves in "their" frame, our only job being to prove or disprove utopian rhetorics.

The alternative is to see what part these claims and counterclaims have played in constructing the field of communications, and to trace this globally rather than as contained within these northern discourses. What seemed almost self-evident in the media and development field was that the digital was not so straightforwardly characterized as inherently liberatory; the picture was far more complex: There was what I came to think of as an international division of network ethics: When northern digital discourses were applied to northern contexts and agents (including development workers), digital media were certainly seen as liberatory and transformative in the extreme; people have used the idea of digital media for more than 20 years now to project fantasies (and fears) of total transformation of personhood and sociality. However, when northerners (including development workers and policy makers) are talking about the global South (or marginalized bits of the North), the discourse is generally entirely instrumental: The digital media are not vehicles of transformation but utilitarian tools to accomplish already given ends. Southerners are not meant to become something new through new mediations but are rather meant to become who they already are supposed to be (authentic indigenes or potential workers within an international division of labor). To the extent that my attempts to generate knowledge of new media are locked within this international division of ethics, I am likely to be asking questions and seeing empirical material that reflects this official fragmentation of the field, and I am unable to see how this division of ethical frameworks is constituting my field (e.g., in media projects in south Asia, it was clear that users regularly contested the instrumentalist framing of their relationship to new media by official programs, and that they often did so in discourses that sounded remarkably like northern cyberculture). So to the extent that I as a researcher operated within this international division of ethics (e.g., sticking to a research brief to see how digital media can be a tool of poverty reduction), I was actually repressing the liberatory and democratic potential of new media among the people I was researching.

**Nick Couldry:**

You have thrown down an interesting challenge, Don: *How do we do good studies of knowledge production—anywhere, in any field?* More specifically, what sorts of local discourses about knowledge and knowledge uses are currently regularly being missed in our accounts? Where (as researchers) could we be that currently we generally are not? And, wherever we research from, how can we ask new types of questions that are not entirely prestructured within what Don calls the international division of network ethics?

Can we, in the study of digital knowledges, repeat what I would call the Brian Larkin moment—that is, when he asked: “What [would] a theory of media look like if it began from Nigeria rather than from Europe or the U.S.?” (2008, p. 253). Which must mean—since we are variously constrained in where we can do our research—how do we do our research, *even in familiar places*, differently—that is, framed within a different configuration of the geographies of knowledge production? Are there new types of actors we need to hear from that have not been much listened to before?

**Andreas Hepp:**

I think that Don, Nick, and Sonia are right that the main question is—as Sonia put it—“whether anything we are saying is particular to the digital” when we were discussing participation and inequalities (either within the West or globally). For me, this is also the essential point, but it is not easy to answer. There is both an easy (and, in my view, wrong) and a complex (but more open) answer to this question.

The easy answer is something we find in books like *The New Digital Age* by Google representatives Eric Schmidt and Jared Cohen (2013). Interestingly, they are quite close to the mediatization argument when they outline a perspective in which the main change is that (digital) media play a role in nearly everything: identity, citizenship, state, revolution, terrorism, conflict, reconstruction—everything relates to the digital and therefore can be solved by digital media (or at least solved in a better way). When they come to participation, they have a clear argument: “Citizen participation will reach an all-time high as anyone with a mobile handset and access to the Internet will be able to play a part in promoting accountability and transparency” (p. 34). It is worth reading books like that, not because they are correct descriptions of what’s going on, but because they give us an idea about the orientation of the companies that dominate the field we are discussing here. Such a statement provides insight into what we might call (Don) “claims and counterclaims in constructing the field of communications”—in this case at the level of everyday practice in the main companies. In this field, we still have the profound link between the proposed possibilities of digital media, on the one hand, and new possibilities for participation (in schools, in communities, in government, etc.), on the other.

This close link was also very present in the early ideas about digital natives, who should, as a generation, be different (and better) in their mediated participation compared to the generations before. However—and our discussion demonstrated this—such a simple idea of the specificity of digital media for participation falls short. As researchers in this field, we cannot share this easy link that is made in public. Nevertheless, it is worth analyzing this discourse because it is highly orienting for political decision making.

When we come back to the question of whether anything we are saying is particular to the digital, there is something particular that still makes it arguable that something like a digital media generation exists in Western countries. This means *not* that the members of this generation would have identical patterns of media access, use, and appropriation. It is also not the case that they “speak” the “native language” of digital media, as the idea of digital natives introduced. What the digital media generation (or generations) share is a certain experience of mediatization. Specifically, they are born into a media-saturated world, into polymedia environments, the media manifold, a media life). What does this mean for them? First, that

it is normal and therefore unproblematic when they act in relation to different media. Second, that there is no single medium we have to use for one purpose but that there are choices between different media in relation to the personal resources of time and money. And, third, that there are certain skills needed to act within such an environment in a way that corresponds to each person's own needs and imagined agency.

For me the specificity of digital media is that they are related to this media saturation of our life-worlds and social worlds. The problem with participation here is that we have *more* possibilities to communicate with the choices of different media. However, this does not say anything about whether this communication is more (or less) participatory. To answer this question, we must investigate carefully the different mediatized worlds of the present. This is not just an academic venture. It has much to do with our engagement as academics in civil society and political decision making. Politically speaking, it would be great if digital media were more participatory. Then we only should invest in more digital media and would live in more participatory worlds. But, because this is not the case, we should understand our academic role in the investigation of different mediatized worlds and in relation to the participatory potential of different digital media within them. A detailed knowledge of this is helpful for civil society and for policy advising. To provide critical knowledge like this is the best we can do to support the participatory possibilities of digital media.

Coming back to the question at the beginning of my comment: Yes, there is something special about digital media, but not a direct participatory (or excluding) effect. What is special about digital media is that they pushed mediatization forward (at least in the West). And because of that, we also have to reflect the participatory potential of digital media more contextually than we had to reflect the participatory potential of other media before. For example, social media are at the same time just as helpful for the government surveillance of people as they are for the people to organize protest movements against this. Participation is highly contextual in contemporary mediatized worlds.

***Elizabeth Losh:***

As a rhetorician who approaches these kinds of digital knowledge production practices from a humanistic perspective that relies on close reading and mining archives rather than from the perspective of the social sciences, I always feel that methodology questions have different valences for me.

I do often interview content creators and go out into the field and even look at data and numbers, but I do so mostly because I hate to be wrong, and I know that it is easy to be wrong without context rather than from my disciplinary training in reading texts comparatively. I certainly can't claim the kind of capacious scope of expertise of Don Slater or my colleague nearby in Southern California, François Bar, so I am wary to respond to this concluding part of the thread.

That said, the question about what a theory of media would look like if we chose a different point of origin is one that's been important in the postcolonial digital humanities for a while now and before that in research centers and think tanks in the global South, such as Sarai at the Centre for the Study of Developing Societies in Delhi or the Centre for Internet and Society in Bangalore. Books such as Ravi

Sundaram's *Pirate Modernity* or Nishant Shah's collection *Digital AlterNatives with a Cause?* show a basic rethinking of the figure/ground relationship.

It is useful to start with the specific challenges that Teju Cole (2012) raises about the Kony 2012 Invisible Children campaign in attacking the "white savior industrial complex" that reifies assumptions about democratization as a missionary project with "fantasies of conquest and heroism" as well as those about digital empowerment and the leveling effects of technology.

In answering the provocation about angles of vision, I agree that we need to do more than merely apply the ways that we already read Facebook to sites like Weibo or Cyworld, as we recognize the demise of the English-only Internet. Furthermore, as we approach understanding our own participation in the Internet of things—as mobile and ubiquitous computing technologies disseminate around the globe, the design of sensors and screens transforms subject-object relations, and more sophisticated semantic web technologies, machine learning algorithms, and AI chatbots are developed—the very notion of literacy is changing as computers become able to read and write and speak in new ways. For example, what should we make of QR codes or RFID devices in considering how we think about digital empowerment and who—or what—creates knowledge?

Marshall McLuhan was right to think about money as an actor in various media ecologies, and researchers can learn a lot about the future of ways to think about media and ubiquity in the global South by looking at the research of Bill Maurer's group at the Institute for Money, Technology, and Financial Inclusion (IMTFI). I have met such wonderful colleagues from African universities by being a blogger for IMTFI (<http://blog.imtfi.uci.edu>) that I would strongly recommend their research about informal learning and economic inclusion. I tried to encapsulate some of my thoughts about how mobile money might be a way to think about ubiquitous computational media experiences here: [www.mediafieldsjournal.org/small-change/2013/8/8/small-change-mobile-money-as-media-experience.html](http://www.mediafieldsjournal.org/small-change/2013/8/8/small-change-mobile-money-as-media-experience.html).

Now researchers with the Selfies Research Network ([www.facebook.com/groups/664091916962292](http://www.facebook.com/groups/664091916962292)) are also trying to make the familiar strange. Although many regarded the selfie as proof of the vainglory of celebrity culture, those familiar with the genre know that its peculiar combination of humanizing, individualized self-portraiture and the detached gaze of the technical apparatus may actually be uniquely characteristic of more complicated forms of marking time, disciplining the body, and quantifying the self. As large-scale data analyzed by the lab of Lev Manovich from selfies shot in cities on four continents also indicate, the selfie has become a truly transnational genre that is as much about placemaking as it is about the narrowcasting of particular faces and bodies.

**Sonia Livingstone:**

I like Liz Losh's comments on both the Internet of things and the selfie, because both directions advance my query about the digital. I also liked Andreas' comments on what might be specific about a digital media generation (namely, a cohort born into a media-saturated world that therefore takes for granted media choice and values media skills). I completely take Don's point, too, that we should not permit our academic agenda to be set by the utopians and dystopians whose technologically determinist

proclamations get so much traction in the public and policy domains. But there is something we're still missing in considering exactly why it is *digital* media technologies are so often linked to participation, learning, and engagement.

Recall the intellectual tradition of studying long-established media (mainly, television and cinema, though others, too). Perhaps we, collectively, are among those who have emphasized the discursive and material contexts of media use (to use too simple a word). We work variously with institutions, with people in their everyday lives, with particularly interesting sociocultural-political moments in the circulation of goods and meanings (of diverse kinds). But in relation to television, cinema, radio, and print, such work rested on huge and sophisticated (though contested) traditions of what was long called textual or literary or semiotic studies—which examined the materiality and symbolic form of media themselves. It was in relation to this bedrock of argumentation and analysis, I suggest, that the “circuit of culture” approach (Johnson, 1986) positioned media within larger political economy, cultural/everyday and global/local contexts to grasp their meaning and significance.

So, in asking about the digital, I am inviting consideration of the particularities of the connections (or interface) between the textual/technological and the wider contexts that both shape and are shaped by them, just as we did for audiovisual media. Perhaps, in avoiding anything that smacks of technological determinism, and in avoiding anything that could be read as espousing a naïve optimistic rhetoric, we are not getting on with our own project, which, surely, wouldn't black-box the digital and would recognize the social justice/emancipatory visions that, at heart, motivate many academics.

***Gina Neff:***

I would like to propose a set of methodological and phenomenological entry points into Sonia's last intellectual charge to communication scholars. Participation and emancipatory knowledges resonate with many of us as admirable values to support in the digital age, but as a discipline we should expand our tool kits to address the “emancipatory visions” that motivate many of us.

First, I would argue that we cannot truly understand participation in the digital age without richer theories of the role of materiality in communication. Look no further than the rhetoric of the coming “Internet of Things” to find that how we talk about agency is shifting drastically away from human-centered power and action. The legacy in our field of focusing on meaning making does not help us here, where what counts as communication is black-boxed within complex sociotechnical systems that are intelligible to few and in which human participation is passive at best. We must expand our notion of communicative actors, and a growing number of communication scholars are doing that through attention to the multiple and complex roles for materiality. When material processes have been addressed by our field, it usually has been through the lens of the social and cultural meanings and framings for those objects (Lievrouw, 2014). This leaves us with a paucity of theories to anchor studies of the emerging new types of participation in our civic and social lives and communication networks. How can we think about participation and knowledge in online political discourse when Twitter bots are designed to muddle political conversations, torment candidates, and misdirect debate (Howard, 2014)? What are the implications for equity when posts on Twitter are coded in large-scale big data sets as a proxy for participation in a public as a citizen, as

Crawford (2013) has shown with government responses to Hurricane Katrina? My own recent research has been puzzling over the problem of how we can think responsibly about the power of things to structure the possibilities of and for communication in group settings. Within the teams we studied, documents functioned in material ways that were not necessarily aligned with and, indeed, were often orthogonal to their textual and symbolic meanings (Neff, Fiore-Silfvast, & Dossick, 2014). If communication scholars are serious about their commitment to the concept of participation, we must expand our theories and methods for thinking through what participates in our discourse and how action and voice form within those settings.

Second, if we are truly committed to understanding participation within global circuits of digital knowledge production, then we must continue to, as Sonia suggests, bridge concepts of larger political economy, cultural/everyday and global/local contexts. We need to push analyses beyond texts' meaning and significance—admirable goals, of course—and continue to investigate the ways in which institutional contexts and social/organizational settings determine what is communicatively possible. Thomas Streeter's (2011) work on the ideological foundations that make the rise of the Internet possible is a key example of this kind of research into the social structures that shape communication practices. My own attempt to understand the formation of media workers' professional identities within large-scale economic shifts is another (Neff, 2012). Doing work in communication and media studies on the social structural scale is certainly not easy, but the field will benefit from more studies that use rich evidence drawn from social life to build compelling arguments about the scope of possibilities in which such texts and technologies can reside.

Finally, and implied by my other two points, we need expanded theories of communicative agency and power. In many of the scholarly circles I am privy to, the term *the digital* has come to stand in for and represent a condition or subjectivity akin to modernity—broad enough to evoke sweeping change but too vague in its ability to describe those changes. Carefully teasing apart where agency and power reside in the sociotechnical communicative systems that increasingly shape our lives will help scholars avoid an elitist trap of “digital dualism” in which we pretend “we are in some special, elite group with access to the pure offline” (Jurgenson, 2012, para. 18). Such studies will let us frame what it is to be human—not as possessing some special sort of agency or intelligence that we imagine our systems do not yet have nor formed within some kind of magical, mythical moment of face-to-face, human-to-human, “pure” communication unsullied by mediation. Rather, communication scholars have an urgent responsibility to position our research foci within the sets of strong social structures that have always co-constituted human agency and to recognize our disciplinarily informed ability to name, define, and analyze them, especially as such structures become digital. Doing so will inevitably shift our notions of human subjectivity and agency within such structures, but hopefully will also expand our visions of emancipatory horizons.



### Biographical Notes

**S. Elizabeth Bird** is professor of anthropology at the University of South Florida. Her work has focused on the role of the media in everyday life; current research is a community-based, interdisciplinary study of collective memory in Nigeria. She has published more than 60 articles and chapters. Her books include *For Enquiring Minds: A Cultural Study of Supermarket Tabloids*; *Dressing in Feathers: The Construction of the Indian in American Popular Culture* (Gustavus Myers award for Human Rights); *The Audience in Everyday Life: Living in a Media World* (International Communication Association's Outstanding Book Award), and *The Anthropology of News and Journalism: Global Perspectives*.

**Nick Couldry** is a sociologist of media and culture. He is professor of media, communications and social theory at the London School of Economics and was previously professor of media and communications at Goldsmiths, University of London. He is the author or editor of 11 books, including *Ethics of Media* (Palgrave Macmillan, 2013), *Media, Society, World* (Polity, 2012), and *Why Voice Matters* (SAGE, 2010). He has led funded research on citizens' public connection (see <http://publicconnection.org.uk>) and on story exchange in community engagement (see <http://storycircle.co.uk>).

**Andreas Hepp** is professor of media and communication studies at the Centre for Communications, Media and Information Research, University of Bremen, Germany. He is coinitiator of the German Research Foundation priority program Mediatized Worlds and the research network Communicative Figurations. His main research areas are media and communication theory, media sociology, mediatization research, transnational and transcultural communication, cultural studies, media change, and methods of media culture research. Publications include *Media Events in a Global Age* (edited with Nick Couldry and Friedrich Krotz), *Cultures of Mediatization* (2013), and *Mediatized Worlds* (edited with Friedrich Krotz, 2014).

**Sonia Livingstone** is a professor in the Department of Media and Communications at the London School of Economics and Political Science. She is author or editor of 17 books and many academic articles. She was president of the International Communication Association in 2007–2008. Taking a comparative, critical and contextualized approach, Livingstone's research asks why and how the changing conditions of mediation are reshaping everyday practices and possibilities for action and identity in public and private spheres. She directs an EC-funded 33-country network, EU Kids Online, and The Class, part of the MacArthur Foundation's Connected Learning Research Network. See <http://www.lse.ac.uk/media%40lse/WhosWho/AcademicStaff/SoniaLivingstone.aspx>.

**Elizabeth Losh** directs the Culture, Art, and Technology program at the University of California, San Diego, and is the author of *Virtualpolitik: An Electronic History of Government Media-Making in a Time of War, Scandal, Disaster, Miscommunication, and Mistakes* (MIT Press, 2009) and *The War on Learning: Gaining Ground in the Digital University* (MIT Press, 2014). She is the coauthor (with Jonathan Alexander) of the comic book textbook *Understanding Rhetoric: A Graphic Guide to Writing*.

**Jason Mittell** is a professor of film and media culture and American studies at Middlebury College, Vermont, USA. His books include *Genre and Television: From Cop Shows to Cartoons in American Culture* (Routledge, 2004), *Television and American Culture* (Oxford University Press, 2009), *How to Watch*

*Television* (co-edited with Ethan Thompson, NYU Press, 2013), and *Complex Television: The Poetics of Contemporary Television Storytelling*.

**Gina Neff** is an associate professor of communication at the University of Washington and a senior fellow at the Institute for Advanced Study at Central European University in Budapest. Her book *Venture Labor: Work and the Burden of Risk in Innovative Industries* (MIT Press, 2012) won the 2013 American Sociological Association Communication and Information Technologies Best Book Award. With Carrie Sturts Dossick, she runs the Project on Communication Technology and Organizational Practices, studying the roles of data communication and sensing technology for collaboration and decision making. Her research has received funding from the National Science Foundation, Intel, and Microsoft Research.

**Don Slater** is a reader in sociology at the London School of Economics and Political Science. He has written extensively on new media in the global south, including *New Media, Development and Globalization* (Polity, 2013) and *The Internet: An Ethnographic Approach* (with Daniel Miller, Berg, 2001). He currently directs a research program, Configuring Light/Staging the Social, which studies light and lighting design as material culture ([www.configuringlight.org](http://www.configuringlight.org)).

**S. Craig Watkins** studies young people's media behaviors. He teaches at the University of Texas, Austin. Watkins' most recent book, *The Young and the Digital: What the Migration to Social Network Sites, Games, and Anytime, Anywhere Media Means for Our Future* (Beacon, 2009), examines young people's use of social network sites, mobile devices, and digital media production tools. He is a member of the MacArthur Foundation's Connected Learning Research Network. His work in the network includes leading a team of researchers in a project titled The Digital Edge—a reference to the growing diversity of young people adopting social, mobile, and digital platforms. Their forthcoming book examines the relationships between digital media, learning, and social inequality. For updates on these and other projects, visit his website, [theyoungandthedigital.com](http://theyoungandthedigital.com).

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