

Trapped in the Digital Divide: The Distributive Paradigm in Community Informatics

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Abstract

This paper argues that over-reliance on a “distributive paradigm” in community informatics practice has restricted the scope of the high tech equity agenda. Drawing on five years of participatory action research with low-income women in upstate New York, I explore the ways in which distributive understandings of technology and inequality obscure the day-to-day interactions these women have with ICT and overlook their justified critical ambivalence towards technology. Finally, I offer unique insights and powerful strategies of resistance suggested by my research collaborators in a drawing exercise intended to elicit alternative articulations of digital equity. If we begin from their points of view, the problems and solutions that can and should be entertained in our scholarship and practice look quite different.

It is becoming fairly common to argue that many of the efforts to ameliorate inequality in the information economy grouped under the rubric of the “Digital Divide” were misguided, both empirically and practically (see, for example, Gurstein 2003). As a salient issue, the Digital Divide has faded from public consciousness and disappeared from the priorities of funding agencies in the United States. This is largely an effect of the Bush administration’s decision to eliminate critical digital opportunity programs. Moreover, as I argue below, as community practitioners, scholars, and activists, our focus on universal access and internet ubiquity is not sufficient to provide for a more just technological present. As an illustration, I describe my experiences attempting to construct popular technology education programs at the YWCA of Troy-Cohoes, a residential facility in a small urban community in mid-New York State for about 90 highly resourceful women living in transitional circumstances and seeking to craft the lives they want for themselves. In particular, I discuss a sketching exercise used to illustrate low-income women’s alternative articulations of inequality in the information society. Their unique visions suggest that our myopia has limited the scope of what might be called the “high-tech equity agenda” and has trapped us in the Digital Divide.

Following Iris Marion Young, I argue that there is a “distributive paradigm”, which “defines social justice as the morally proper distribution of social benefits and burdens among society’s members” (Young 1990: 18)¹, and which is at the heart of much of our work in community informatics. This distributive paradigm acts to restrict the scope of the high-tech equity agenda because: 1) its demographic cast cannot account for the complex inequalities of the information economy; 2) its commodity focus precludes understanding ICT as a “technology of citizenship”; and 3) it forces us to conceive of all high-tech equity issues as “access” issues. These oversights are an effect of the mismatch between the lived reality of low-income people’s interactions with information technology and the normative solutions suggested by ICT policy and activism. In this article I explore that the ways in which Digital Divide interventions have been framed acts to *obscure* the kinds of day-to-day interactions low-income women have with technology; and how the powerful symbolism equating computers with technological and social progress contradicts these women’s experiences, resulting in a critical ambivalence towards technology; and finally present some of the unique insights and powerful strategies of resistance suggested by my community research collaborators. If we begin from their points of view, the problems and solutions that can and should be entertained in ICT policy and activism look quite different from those that remain trapped in the Digital Divide.

Background: The Digital Divide

Lloyd Morrisett, founder of the Sesame Street Workshop and then president of the Markle Foundation, is credited with inventing the term the “Digital Divide” in 1996² to describe the chasm that purportedly separates “information haves” from “information have-nots”. Though the U.S. National Telecommunications and Information Administration (NTIA)

¹ I should note here that I use the phrase “distributive paradigm” to describe a particular regime of (re)distributive policies within the context of the market-oriented representative democracy of the contemporary United States. There are, of course, many other varieties of distributive government policies, some of which provide for the needs of citizens quite a bit better than do that of the US (for example, in the social democracies of Scandinavia and much of Western Europe). Nevertheless, I argue that there are vital social justice issues that cannot be articulated within a distributive paradigm of any kind: the freedom of women to be free of sexual violence, for example.

began in 1995 releasing a series of reports entitled "Falling Through the Net" -- which outline how access to the national US information infrastructure varies across geographical, racial, and income lines -- the "Digital Divide" did not begin to fire the popular (and policy) imagination until 1998. In 1998, the agency's second report ("Falling Through the Net II: New Data on the Digital Divide") included the "Digital Divide" phrase in its subtitle, and current President Bill Clinton promised to aggressively pursue wiring every classroom in the nation by the year 2000 and every home by the year 2007 (NetDay 1998)³. But it was the agency's third report ("Falling Through the Net: Defining the Digital Divide") that most alarmed and activated the public and policy-makers. The report concluded that, contrary to popular opinion which held that market forces would eventually provide universal access on their own,

The data reveal that the digital divide -- the disparities in access to telephones, personal computers (PCs), and the Internet across certain demographic groups -- still exists and, in many cases, has *widened significantly*. The gap for computers and Internet access has generally grown larger by categories of education, income, and race (NTIA 1999: 2).

The release of the NTIA reports mobilized scholars, politicians, local community-building organizations and international NGOs to inquire whether or not ICT could address the needs of the poor, and how exactly to 'fit' low-income people into the information society (Attali 2000; Brown 2001; Rischard 1996; Yunus 2001).

Between 1999 and 2003, there were a slew of publications that sought to examine, support, go beyond, or do away with the concept of the Digital Divide. Some (like Compaine 2001) are critical of Digital Divide approaches because they represent "welfarist" strategies of governance, promote unfair and opaque forms of wealth redistribution, or stand in the way of robust commercial competition and the "natural and inevitable" market mechanisms of distribution. Some seek to expand the "access" rhetoric of the Digital Divide beyond simple physical access. These scholars and activists insist that issues such as the production of relevant, useful, appropriate, and affordable content; language and literacy barriers; effective use of information; the role of the user as a producer rather than a passive consumer; infrastructure; community control; and sustainability of programs have to be addressed simultaneously (Besser 2001; Children's Partnership 2002; Servon 2002; Wilhelm, et al. 2002). Still others insist that the Digital Divide is simply the most visible manifestation of new forms of "virtual" inequality: these following and reinforcing the social and economic stratification that already exists -- and is worsening -- in the United States today (Mack 2001; Mossberger et al. 2003; Norris 2001). These scholars insist that the Digital Divide responds and contributes to other kinds of "divides," naming the democratic divide, the global divide, the information divide, the opportunity divide, the racial divide, and the social divide among them.

Critical Ambivalence and Critical Theory

As debate raged around whether the Digital Divide exists, its causes, its effects, and its potential solutions, community technology centers around the country and the world were tirelessly wiring communities, providing them with affordable access to information and communication resources, nurturing generations of trainer/activists and preparing the ground from which community-produced content could grow. But the basic assumption of much Digital Divide policy -- "If you build it, they will come" -- is partially contradicted by my research described below.

One class offered at the YWCA -- "How Does the D@mn Thing Work?" -- illustrates why. The workshop was very loosely structured around the demolition of an unusable donated computer. We took the cover off the machine, handed out screwdrivers, told participants that it was going to the dumpster anyway, and then let them do whatever they wanted to it. As parts came out of the computer, we passed them around and told everybody what each part did. For a few minutes, the women in the workshop carefully extracted cards and drives from the PC and gingerly passed them around the room. After a bit of time and some convincing (women were particularly concerned about waste -- they wanted to be absolutely sure that no one in the YWCA or elsewhere could use the computer before they took it apart), they started to believe that they could actually demolish the computer, and the mayhem began. People hacked at the computer. Broke pieces off and then broke them into smaller pieces. They tore apart bundles of wires, wedged off covers to see the motors and chips, all with a palpable sense of glee.

This was not just the excitement of "opening the black box" and discovering what makes a computer work. It was an act of resistance, of rebelling against the tyranny of the box itself (and of the institutions it represents and enables). This gleeful destruction was a sign of women's complicated experiences of technology, a marker of women taking power

² Some credit Donna Hoffman and Tom Novak with inventing the phrase. Novak and Hoffman (2000) and Compaine (2001) credit Morissette. Morissette himself expresses doubts about the term's origin in Compaine 2001. Nevertheless, the phrase reached popular currency after the NTIA's 1998 report used it in its subtitle.

³The Clinton administration's attention to universal access to IT considerably anticipated the "digital divide" rhetoric, however. At the G7 Information Summit in early 1995, Vice President Al Gore explained that the Clinton administration's position on Universal Access was a commitment "to wire every classroom, every library, every hospital, and every clinic to the national and international information infrastructure." At the International Telecommunication Union World Telecommunication Development Conference later that year, he "called for all nations of the world to co-operate in building the Global Information Infrastructure founded on principles of universal access, the right to communicate, and diversity of expression." (Gore 1995 and Tarjanne 1995, quoted in Compaine 2001:162-3).

back from a symbol of the system. In a later interview, Meredith Vary, a participant in the workshop, commented,

MV: That taking apart the computer thing really helped [engage women who feel out of the technology loop]. Because I know Patti...

V: Got into it...

M: ...Yeah! I never saw her at any computer type stuff before and that seemed to help her get into it...What's in the inside guts? I can break it apart! It's not this big scary thing, I can *kick* it and things come off. That helped. Stuff like that that shows that computers are not these big infallible immortal objects (Vary 2003: 20).

This complicated symbolism of computers is profound, yet it is rarely considered in the context of “accessibility” for low-income people (with the notable exception of Mack 2002). The technology itself seems simultaneously too fragile and utterly infallible -- the face of “the System” in contexts ranging from the low-wage workplace to the welfare office. Low-income women in the United States disproportionately bear the negative effects of high-tech development. They are more likely to be subject to intense technologically-mediated surveillance on the job via technologies like keystroke counters and practices like phone and email monitoring (Sewell 1998, Sewell and Wilkinson 1992). Their interactions with technologies of state administration, including criminal justice technologies like “offender management” systems (Virtual Arrest 2002), and social service technologies like electronic benefits dispersal (Newcombe 1993). They often live in the most technologically degraded environments, suffering higher rates of asthma and environmental cancers (Bullard 2000; SVTC 1997; WEACTION 2002). They are most likely to lose jobs to technological change and worker deskilling, and are the last to be rehired or retrained after sustained unemployment (Barney 2000; Buckberg and Thomas 1995; Gans 1995; Gibbs 1995). Experiences with technology in their everyday lives often contradict the powerful stories about IT that pervade popular media and policy discourse. The mismatch between the stories these women hear about the potential for ICT to change their lives for the better and their disproportionate experience of its negative effects creates critical ambivalence.

Critical ambivalence, I realized over time, is a sign of incipient analysis. I noticed, for example, that women would repeatedly and enthusiastically sign up for classes in a newly created community technology lab, and simply not show up. This was a symptom of the mismatch between the image of computers as the route to social and economic progress and these women's own experience of technology as exploitative, intrusive, and limiting. Rather than being “information poor” in any simple way, participants in popular technology education programs at the YWCA had copious direct experience with large-scale bureaucratic IT systems.

My collaborators provided extremely articulate and astute critiques of the ways that ICT is deployed within the social service system to limit their dignity, freedom, and opportunities. For example, many believed that ICT is one thread that binds together with the local department of social services (DSS) and broader socioeconomic strands of injustice to create a net of constraint they commonly refer to as “the system.” Because of this, it is often difficult to separate views about DSS, racism, poverty, or sexism—more generally—from views on information technologies and computers specifically. The insight that ICT, state service offices, and structural inequality combine to create a system of disempowerment proved enormously productive for our collaborative educational processes, both in conversation and in collaborative project design.⁴ This was particularly the case when we re-examined what is often misread as adult women's “reluctance” or “inability” to engage with technological training, and when we puzzled through participants' resistance to viewing ICT as a tool for social change and justice.

I use critical ambivalence here in Feenberg's sense - it is a part of an emergent critical theory of technology that popular technology education is intended to unleash. “Critical theory,” Feenberg writes, “argues that technology is not a thing in the ordinary sense of the term, but an ‘ambivalent’ process of development suspended between different possibilities. This ‘ambivalence’ of technology is distinguished from neutrality by the role it attributes to social values in the design, and not merely the use, of technical systems. On this view, technology is not a destiny but a scene of struggle” (Feenberg 1990). For Feenberg, critical theories of technology can be realized by rewriting “technical code,” by using theory in a Freirian sense to both inspire action that changes society and technology for the better, and to see the relationship between technology and people as intrinsic to modern social justice goals. The goal of popular technology education is to undermine the myth of technological neutrality by finding “tipping points” that can guide development and design out of its “suspension between possibilities” and towards social justice⁵.

It is important to note, however, that despite their ambivalence, women in the YWCA community showed remarkable perseverance when trying to access ICT tools, and even some optimism describing the possibilities of technological change. When I asked the women I interviewed to finish the sentence “A computer is like a...,” they responded with “a window,” “the future,” “a lifesaver.” They consistently disproved reports like the “Ever-Shifting Internet Population”

4 *This experience tends to support the claims of Freire, Horton, and other popular educators, who insist that radical, “problem-posing” education truly starts when facilitators reflect back to participants the contradictions that shape their lives for analysis and action. I argue, therefore, that my collaborators' critical ambivalence in the face of technology is a sign of incipient analysis rather than apathy, fear or ignorance.*

5 *Like Freire, Feenberg sees critical theory as the rejection of value neutrality in analysis, and the move towards more coherent and engaged understandings of the world.*

by the Pew Internet and American Life Project, which claims that “technological pessimism” is a significant barrier to participation in the “information age” (Pew 2003: 41).

In this context it is urgent to nurture optimism that ICT can be used as a tool of social change, even though the commitment to digital equity has waned under President Bush’s administration. As the Bush administration began to call for the elimination of funding for critical digital opportunity programs in 2002, the digital divide was still a significant problem, but community technology investments were beginning to pay off (Benton Foundation 2002). National funding to bridge the digital divide peaked in 2001. That year, the Technology Opportunities Program (TOP) received \$42.5 million and the Community Technology Centers Program (CTC) received \$65 million. In President Bush’s fiscal year 2003 budget request, both programs were slated for elimination (OMB Watch 2002)⁶.

I hope to make it clear that I am deeply committed to, and supportive of, the critical work being done by community technology centers around the country as they struggle to provide the most basic access to technological tools for the nation’s poorest citizens. Not surprisingly, we have yet to reach the Clinton administration’s goal of wiring every classroom, every library, every hospital, and every clinic to the national and global information infrastructures. We are even less likely to do so under current political conditions. However, as my collaborators richly illustrate, the question of access alone does not prove sufficient to provide for a more just technological present. As activists and organizers, many of our own strategies and tactics left us vulnerable to attack as the political winds changed under Bush. The disaggregated demographic sources we relied on to argue for a widening technology gap left us unprepared to counter the complex forms of inequality inherent in the information economy. The commodity focus of many government efforts (putting hardware and cable into schools without teacher training or software support under E*Rate, for example) undermined our ability to argue that the market alone cannot provide adequately for the public interest. Even NGOs occasionally fell prey to the commodity-focus of digital divide understandings, limiting opportunities for social mobilization by privileging elite use patterns and focusing on technological fixes. Our myopic commitment to the organizing concept of “access” has left us unable to articulate high-tech equity issues that are not distributive in nature.

The Distributive Paradigm

The demographic approach favored by the NTIA and the commodified understanding of citizenship favored by government and NGOs alike do not capture the experiences of low-income women in the information economy. Even extremely well-developed, multifaceted, holistic models of access, like Clement and Shade’s “Access Rainbow” (2000, 2002) -- which includes seven overlapping dimensions of access, including carriage, devices, software tools, content/services, service providers, literacy/social facilitation, and governance -- are caught in the distributive paradigm. The provision of material, social, and “informational” goods in the face of many women’s severe deprivation is certainly an imperative issue. As Iris Marion Young attests,

There are certainly pressing reasons...to attend to...issues of the distribution of wealth and resources. In a society and world with vast differences in the amount of material goods to which individuals have access, where millions starve while others can have anything they want, any conception of justice must address the distribution of material goods. The immediate provision of basic material goods for people now suffering severe deprivation must be a first priority for any program that seeks to make the world more just (1990: 19-20).

However, in contemporary welfare capitalist societies, insurgent social movements’ calls for justice include many concerns that are not of a distributive nature, including, for example, demands to be free of cultural imperialism, to work in safe and fulfilling environments, and to end gender-based violence. In the information economy, non-distributive social justice issues include demands for increased transparency and accountability in the use of data in the social service and criminal justice systems, opportunities to design and produce culturally and socially sensitive software and hardware, freedom from excessive surveillance in the workplace, and proper attention to health and welfare issues in high-tech work. Other issues like childcare, transportation, healthy communities, self-sufficiency wages, educational equity and prison reform may seem incongruent with a “high-tech equity agenda,” but are also necessary to provide for a more just and sustainable information society⁷. Some, but not all, of these issues are distributive in nature.

Young argues that “a focus on the distribution of material goods and resources inappropriately restricts the scope of justice” (*ibid*: 20). It fails to bring social structure and institutional contexts--like decision-making procedures, the sexual division of labor, and culture--under evaluation. It presupposes social atomism and self-interest, or “possessive

⁶ In 2002, the CTC program was funded at \$32.5 million and TOP was funded at \$15.5 million. Bush eliminated the program, but requested level funding of HUD’s Neighborhood Networks program (at \$20 million in FY 2002 and 2003). The Technology Opportunities Program was eliminated outright. In July 2002, the Senate restored the CTC and TOP programs to FY 2002 levels in its Fiscal Year 2003 Labor-Health and Human Services-Education Appropriations bill (National Institute for Literacy 2002). The Bush administration called again for both programs’ elimination in the fiscal year 2004 budget proposal (CivilRights.org 2003).

⁷ All of these issues are action items on ARISE’s (A Regional Initiative Supporting Empowerment) agenda. ARISE is a faith-based organization dedicated to developing a “high-tech equity agenda” for the Capital Region of upstate New York.

individualism.” In addition, the distributive paradigm misrepresents nonmaterial “goods” and resources--like power, self-respect, rights and opportunity--when its logic is extended to them. Power and rights, like citizenship, are learned and practiced in relationship with others in the context of specific institutions. They are relational practices, not possessions. Like Darrin Barney (2000), who argues that the moral imperative of “access” to technology corresponds to the particular demands of late-capitalist information economies, Young argues that the distributive paradigm of justice,

[C]orresponds to the primary formulation of public debate in [welfare capitalist] societies. Processes of interest-group pluralism restrict public conflict primarily to distribution; issues of the organization of production, public and private decision-making structures, and the social meanings that confer status or reinforce disadvantage go unraised (*ibid*: 66).

The distributive paradigm “privatizes the citizen” by defining her primarily as a client-consumer, and fragments and depoliticizes public life by discouraging deliberation about collective decisions.

Even the best calls to broaden the definition of IT equity still center on the concept of access. Lisa Servon, for example, argues that IT access is a weak solution to persistent poverty and inequality, but her solution is to broaden the idea of access beyond narrow ideas of “possession or permission” to include opportunities for resources, education, and skills (Servon 2003). Mossberger, et al. advocate moving beyond the narrow boundaries of current definitions of the digital divide, writing that the access divide is only one dimension of a problem that also includes a skills divide, an economic opportunity divide, and a democracy divide. These authors council increased attention to the skills divide at public access points, limited experiments with an educational technology subsidy, and equal educational opportunity and an investment in lifelong learning as solutions to these distributive dilemmas (Mossberger, et al. 2003).

The distributive paradigm in IT policy and community informatics practice acts to restrict the scope of the high-tech equity agenda. It relies on a deficit orientation that underestimates the considerable resources, skills, and experiences of low-income communities to interact with, design and produce “popular technologies,” rather than being passive recipients of elite-produced technology tools. It underestimates the considerable (but often negative) interaction low-income women already have with technology at work and in their everyday lives. It obscures the operation of powerful institutions like the criminal justice system, the social service system, and the low-wage workplace to structure women’s relationship to IT (Eubanks 2006). It privatizes and individualizes digital equity issues, limiting opportunities for social mobilization. These limitations have left digital equity programs unable to counter the free-market enthusiasm of conservative critics. Unlike many critics of Digital Divide policy (e.g., Compaine 2001), I have little faith that market mechanisms will rapidly--or even eventually--provide for increased economic and social equality in the age of IT. In fact, I think Digital Divide policy does not go too far, but rather not nearly far enough. The over-reliance on the distributive paradigm by policy makers and organizers alike is at the heart of contemporary U.S. public policy’s inability to articulate technological citizenship as if low-income women mattered.

Alternative Articulations: Revisioning Digital Equity

When I started interviewing women at the YWCA of Troy-Cohoes in the summer of 2003, I had been working in the community for two years. Ruth Delgado Gutzman and I met through the *Women’s Economic Empowerment Series*, held in the YWCA’s Sally Catlin Resource Center the previous summer. Ruth is an engaged and articulate Puerto Rican woman who was completing her Masters in Education at Russell Sage College in Troy. Deeply committed to the well-being of children, and hoping to become a high school counselor, she possesses a sharp wit and an abiding interest in social justice issues.

The Sally Catlin Resource Center was flooded with sunlight on July 29, 2003. The windows were open over State Street and oscillating fans worked to move the air in the room when we met to talk about ICT and social justice. Other members of the YW community typed quietly on the public computers, and the intercom cut in and out of our conversation, announcing phone calls and visitors for YW residents and staff. Ruth was quick to name the goal she feels we both share: creating a “technology for people.” She described her experiences with technology as generally “very, very positive,” and explained that she believes very strongly that technology can be used as a tool of social change.

However, she expressed disappointment with current means for producing information for the internet and assessing its validity, as well as reservations about most scholarship describing women’s technological inequality, and with the public policy geared towards alleviating it. She insisted,

People who say that women are afraid of technology, or don’t know how important it is, are missing the point...When you’re just surviving, you’re in survival mode. You don’t think about technology, you don’t think about the latest anything. You are surviving. And that takes your whole life - just to survive...Especially women! Women love to learn and are able to learn. They really like technology and want technology. If you offered women a system that they created, for everyone, they would want it, they would engage with it. But it’s not like that (Gutzman 2003: 17).

Computers, software and internet architecture are designed for financial people and for business people, for professionals, she said. “But where are the mothers,” she asked, “or people who work and struggle to stay afloat? The homeless?” “Technology for people” would be different from universal access to existing computer systems, she

argued. It would mix systems “designed by women, for everybody” with educational programs that combine practical/functional goals with technology skills training in order to increase people’s well-being financially, emotionally, socially, and intellectually. The prospect of brainstorming just such systems had been her primary reason for joining *Women at the YWCA Making Social Movement (WYMSM)*, our participatory design group.

As we talked, we doodled pictures to try to reach a mutual understanding. I sketched a quick rendition of the popular concept of the Digital Divide:

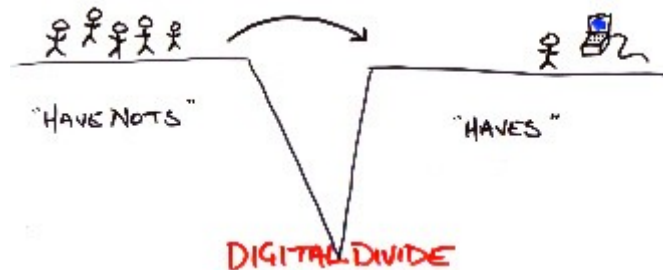


Figure 1. My drawing of the Digital Divide, During Interview with Ruth Delgado Gutzman, July 29, 2003.

Ruth admitted that she did sometimes feel out of the loop, “like a dinosaur,” because she doesn’t have a laptop, but she thought that “Digital Divide” rhetoric was also missing the point. If policymakers just aren’t getting it, I asked, could we describe the problem -- and its potential solutions -- better? She insisted, “It’s not technology that will make our lives better. That will make us ‘haves.’ It’s social conditions, financial conditions, the environment. Technology is just a little part of it...it’s not *justice*” (*ibid*: 36). Though inexpensive or free computers and internet access would be a fundamental step toward “technology for people,” she took the pen out of my hand and re-drew the picture to correct the ‘deficit model’ of Digital Divide policy.

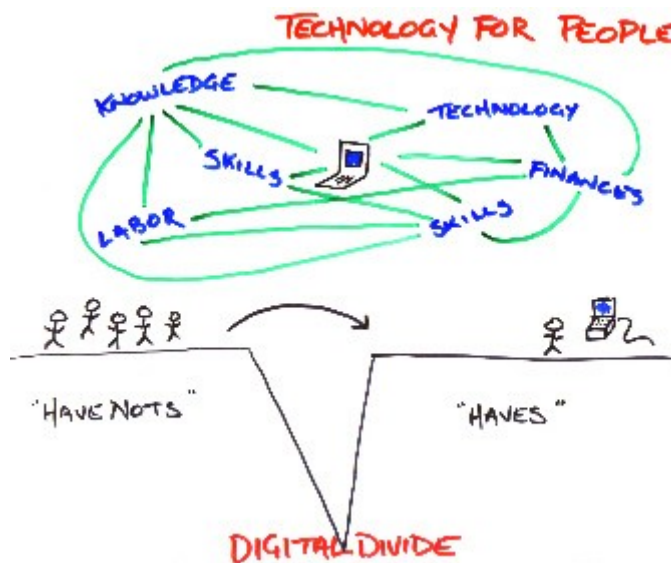


Figure 2: A copy of Ruth Delgado Gutzman’s re-articulation of the Digital Divide, Reproduced for clarity - the original was drawn by her in the margin of her informed consent form. July 29, 2003.

She explained that people on *both* sides of the putative “divide” have skills, strengths, and resources to share with each other. Technology, in the best-case scenario, should connect people -- strengthened by their diverse experiences, across levels of social stratification -- in systems of equal barter and exchange. After she finished drawing, she said to me, “If you take one message from our conversation to policymakers, it’s this. **We don’t need to look at the hole. We need to look at the net**” (*ibid*: 47.5, emphasis mine).

This early exchange was an important site of both empirical and methodological insight: after I interviewed Ruth, I worked the process of “doodling the Divide” into many of my interviews. It proved to be an enormously productive technique for breaking through pat responses to interview questions (“Computers are the future,” etc.) to point towards the structural and interpretive questions at the heart of the critical ambivalence that characterized many women’s interactions with technology.

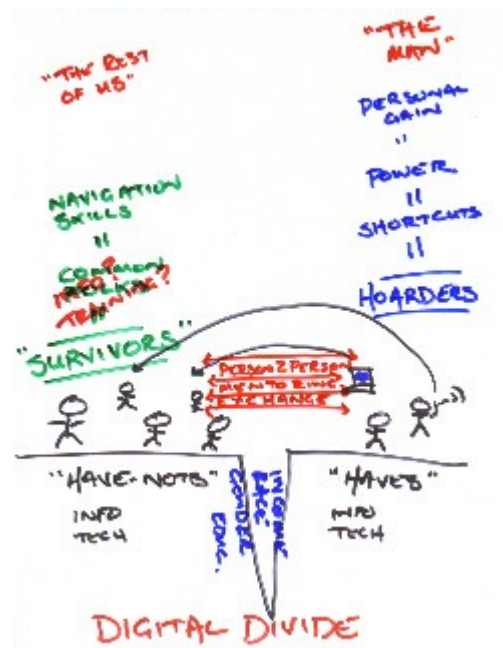


Figure 3: Cathy Roylance's articulation of the Digital Divide. She was speaking, I was drawing. From our interview, January 19, 2004.

These sketches illustrate three major critiques of digital divide rhetoric. First, women I spoke with argued that the characterization of “haves” and “have-nots” is overly simplistic; it does not describe their experiences and obscures structural inequality. For example, Cathy Roylance renamed the “haves” technology “hoarders” and the “have-nots” technology “survivors” (or, “the man” and “the rest of us”). Others explained that people in different social and structural positions have access to different kinds of material and intellectual resources. While it may be true that folks on the “have-not” side lack the consumer power that folks on the “have” side possess, they insisted that “have-nots” possess many different kinds of local knowledge: community knowledge, knowledge of ‘the system,’ double consciousness, more finely attuned social Geiger counters, as well as social networks, navigation skills, and an ethic of sharing.

Following this insight, most women argued that the have/have-not divide should be re-imagined and renamed. Jes Constantine, for example, renamed it the “People Divide,” arguing that the medium was irrelevant, and that thoughtful participation, action, and



Figure 4: Jes Constantine's “People Divide”

collaboration is the only route to the openness and respect that makes communication across difference possible.

Secondly, several women pointed out that the “divide” was actually a product of social structure. For example, Jenn Rose renamed it “systemic inequality,” and Cosandra Jennings renamed it “a crack in the system.” Amanda Demers, Jennings, and Roylance all argued that systemic inequality would not persist if someone was not profiting from it. Jennings pointed out, for example, that both labor and money go from the “have-not” to the “have” side in order to support technological development, and wrote across the crack in the system “systemic payoff in [the] disconnect.” Exploitations—extraction of resources from the poor to profit the wealthy—is represented in Jennings’ drawing by the red circle of the system, the money and labor arrows that point from left to right (see Figures 5 and 6).

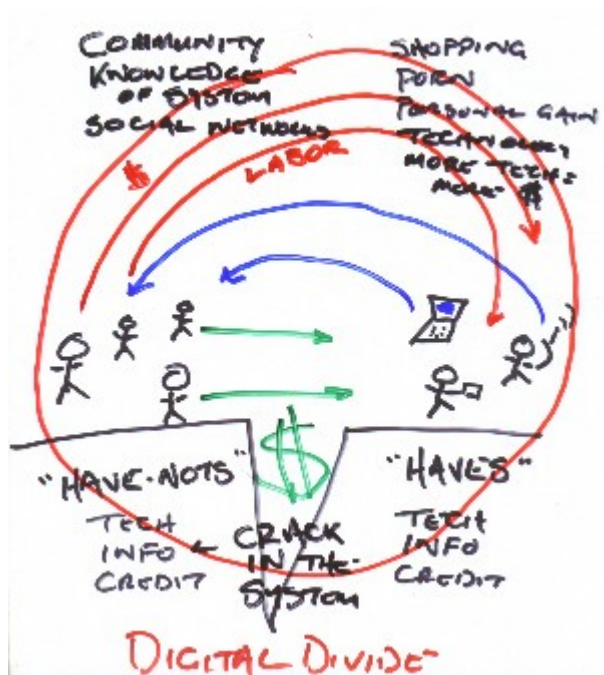


Figure 5: Cosandra Jennings's articulation of the Digital Divide: a crack in the system. She was speaking, I was drawing. From our interview, January 24, 2004.



Figure 6: Cosandra Jennings, detail.

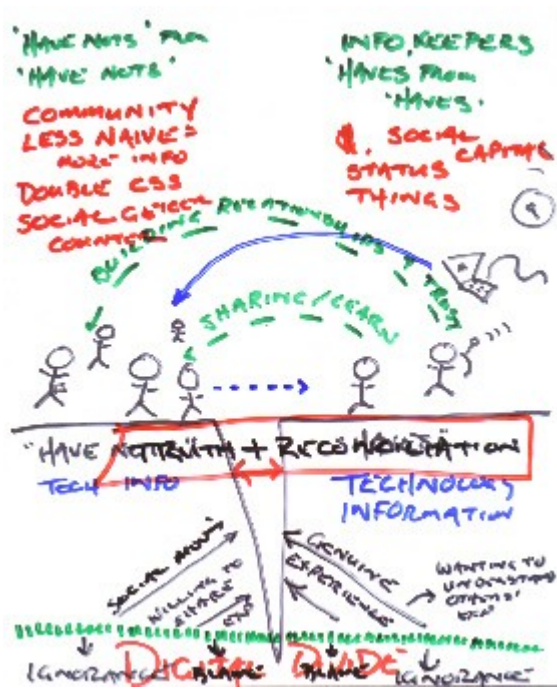


Figure 7: Amanda Demers' articulation. The green lines at bottom represent the "grassroots." She was speaking, I was drawing. From our interview, February 2, 2004.

Amanda Demers described the persistence of this structural inequality when she explained that "have-nots come from have-nots" and "haves come from haves." Almost all of the women who sketched the divide with me argued that for all these reasons, technology alone had little chance of significantly impacting social inequality. More pressing, they argued, were issues of racial prejudice, greed, classism, economic exploitation, basic needs, education, and other social supports.

Finally, women offered alternative solutions that leveraged technology and diverse local knowledges to build networks based on truth, trust, reciprocity, and reconciliation. The problems they described, while daunting, are not insurmountable. Some even saw a role technology could play in creating positive social change, seizing on ICT's ability to act as an interface across social differences. Jennings argued that ICT can be used to educate people on the "have" side of the divide about the realities of life on the "have-not" side. This is represented by the solid line leading from "knowledge of system," through a computer, onto the "haves" side. As the dotted line labeled "maybe" shows, she was less optimistic about the possibility of creating social networks via computers (see Figure 6).

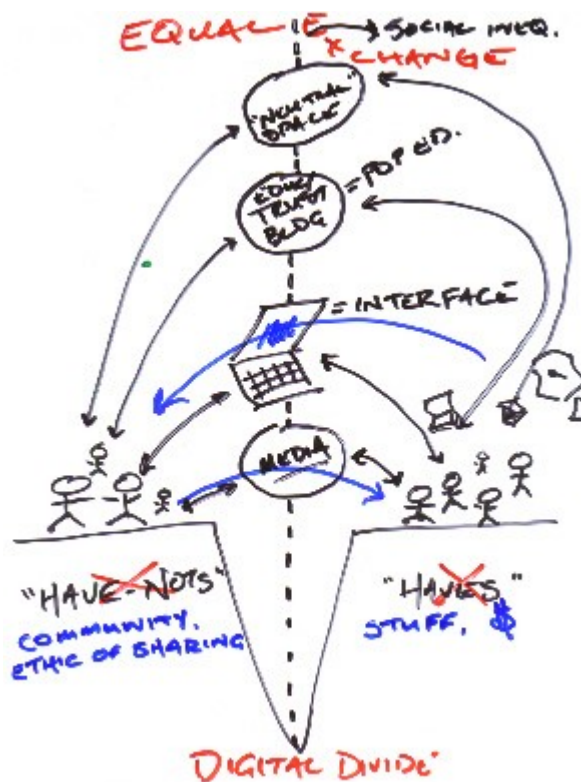


Figure 8: Jenn Rose's articulation of one solution to the Digital Divide: creating nodes of equal exchange across social stratification. She was speaking, I was drawing. From our interview, January 11, 2004.

Constantine, Demers and Roylance offered more people-centered than network-centered solutions. Roylance suggested person-to-person mentoring and exchange. Constantine wrote in large capital letters across her drawing, for example, that "Technology won't do a single thing unless the people on either end can work together." Demers called for a grassroots social movement that bridges the gap, overcoming blame and ignorance through each person's willingness to share their own experience and reciprocal desire to understand the experiences of others. Jenn Rose, like Gutzman, had more faith in the networking potential of ICT. In her drawing, she used technology as one of four nodes -- in addition to "neutral" space, education and trust building, and media -- that can mediate across social structure by creating a network of equal exchange (see Figure 8).

Conclusion

All of the women who participated in these sketching exercises with me expressed dissatisfaction with digital equity being expressed through the metaphor of a "bridge" stretching over a "digital divide." Ruth Delgado Gutzman looked at her drawing: a computer balanced between the putative "haves" and the putative "have-nots," providing a node in a network that can support *all* people. She pointed out that ICT can play into the strengths of low-income communities -- particularly their ability to network resources and skills. Rather than focusing on the digital divide, she argued, we should be focusing on creating a "technology for people" that uses ICT as an interface across levels of social stratification. "Have-nots," she argued, actually *have* a wealth of knowledge and skills, as well as their labor, to trade

and barter. Traditional “haves” have technology and financing at their disposal, as well as a different but valuable set of skills. Technology for people can translate and connect needs to assets across different realms of experience. ICT is particularly well suited to this purpose, because of its openness and capacity to support networks. As Ruth remarked, “If you offered women a system that they created,” she said, “for everyone, they would want it, they would engage with it. But it’s not like that” (Gutzman 2003: 20.1). If it was, technology might become part of low-income people’s set of tools for survival. She remarked,

RDG: Hey, we all need salaries, so I’m not going to say that everything should be free. But for less cash, or for services rendered - bargaining, barter! That would be the perfect way for people who are in the middle [the gap in the digital divide] to get services, to get technology, to get access to a lot of different things. Let’s barter.

VE: Then, is one of the things technology for the people can do connecting up these points? So it’s not at all like a bridge.

RDG: Yeah, it’s not going to happen like that. Remember that these people are not going to want to share. People [on the “haves” side of the divide], socially, are used to being comfortable HERE. It might be racial, or economic...and they don’t recognize all the things that people on the OTHER side have! (*ibid*: 45.5)

A bridge across the digital divide is an inadequate metaphor on which to base a high-tech equity agenda. A bridge can connect only two points: white to black, rich to poor, “haves” to “have-nots.” A bridge over the digital divide can only create equity in terms of the demographic profiles of internet users. Rather than look solely at the *composition* of users--or potential users--of ICT, scholars and activists should turn our attention to underlying *structures* of inequality in the information economy, like workplace and labor market restructuring and the gender and racial divisions of labor (McCall 2001: 8). A bridge over the digital divide underestimates the skills and resources of the people on the “deficit” side of the divide. It also distorts the very qualities of networked communication that *can* make it a powerful tool for social change: its flexibility, its openness, and its ability to connect people to people.

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