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Complicating Access: Digital Inequality And Adult Learning In A Public-Access Computing Space

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COMPLICATING ACCESS: DIGITAL INEQUALITY AND ADULT LEARNING IN A PUBLIC-ACCESS COMPUTING SPACE

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Abstract

Access is often defined in policies oriented to digital inclusion as the potential, if not the means, to access an Internet connection. Using a policy anthropology (Wedel & Feldman, 2005)[1] approach that combines methods of critical policy analysis with an ethnography of adults' learning experiences in a public-access digital café, we argue that access is complicated, contingent, and precarious. We find that the actualities of digital learning among adults on the margins of access differ considerably from those of the "model users" imagined in leading digital policies, and we argue that more contextual foregrounding with respect to the nature of digital learning is therefore required among adult educators and policy makers. We conclude with recommendations for how digital policies might attend to the learning needs of those on the margins of access who will benefit most from affordable Internet and from appropriate, timely, and consistent digital learning opportunities.

Résumé

Souvent, dans les politiques visant l'inclusion numérique, l'accès est défini comme le potentiel, sinon un moyen, d'accéder à une connexion Internet. En mobilisant une approche d'anthropologie des politiques (Wedel et Feldman, 2005) combinant les méthodes d'analyse critique des politiques et une ethnographie des expériences d'apprentissage d'adultes dans un cyber café public, nous soutenons que l'accès est compliqué, conditionnel et précaire. Nous trouvons que les réalités d'apprentissage numérique des adultes sur les marges de l'accès diffèrent considérablement de celles des personnes utilisatrices « modèles » imaginées dans les principales politiques numériques, et nous soutenons donc que, en ce qui concerne la nature de l'apprentissage numérique, les personnes qui enseignent aux adultes et les décisionnaires doivent accorder une plus grande importance au contexte. En conclusion, nous proposons des

recommandations pouvant permettre aux politiques numériques de répondre aux besoins d'apprentissage des personnes sur les marges de l'accès qui bénéficieraient le plus d'Internet abordable et de possibilités d'apprentissage numérique appropriées, opportunes et fiables.

The Digital Café was a busy place again today. Two new learners were referred to the Café by Local Government Employment Agency. They told Dee[2] that to get a job she needed better computer skills, but the agency doesn't teach those skills as part of their employment training. Hope was also referred by this agency and needs to write a resumé and cover letter to apply for online jobs. She doesn't have the language or computer skills to write these herself, so Jay [the volunteer tutor], created a resumé template for her and walked her through each step. Malek has been shut out from his government account after multiple log-in attempts, he must be putting in the password wrong? Cam [another volunteer tutor] is helping him to get a new password but he needs to get into his email first, which also seems to be blocked, made more complicated because he does not have a cell phone and the site requires one for verification! (S. Smythe field memo, April 8, 2015)

Suzanne wrote this field memo during field research at a drop-in computer class for adults in a suburb of Vancouver, BC. Adults of all ages attend the weekly drop-in program, called the Digital Café, for its free access to the Internet, computers, and just-in-time support from tutors for tasks related to email, job applications, online government forms, and social media. The Digital Café study was part of a multi-site ethnography seeking to understand how regimes of digital access are entangled with adult learning opportunities and practices.

The Digital Café began in 2008 as a Community Access Program (CAP), a national initiative of the Canadian federal government started in 1995 "to provide Canadians with affordable access to the Internet and the skills they need to use it effectively" and to "provide affordable access to skills training, job searching and government online services" (Government of Canada, 2007, para. 4). CAP sites were located in public libraries, in community and friendship centres, in schools, and through partnerships with provincial and territorial governments and non-profit agencies (Moll, 2012). Although a newly elected Conservative federal government expressed support for the goals of CAP in its 2007 budget, in April 2012, it suddenly announced the program's demise with the rationale that the program had achieved its objectives and had outlived its necessity: "the vast majority of Canadians are now connected to the Internet at home, while many more have access through their mobile devices" (CBC, 2012, para. 5). This announcement signalled a shift in government digital policy away from public access and education at the community level toward private, fee-based Internet access at the individual household level (Industry Canada, 2010). The cancellation of CAP was also in conflict with Industry Canada policy goals written just a few years earlier to address digital inequalities among "a number of demographic groups including Canadians in rural and remote communities, low income

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2   The names of study participants, the study location, and the municipality where the study was carried out have been changed to protect the confidentiality of study participants.

earners, those with low levels of literacy and education, Francophones over 50 years of age, seniors and others" (Industry Canada, 2010, para 2).

Notwithstanding the exclusion of Aboriginal people from this description, the groups that Industry Canada has identified as on the margins of digital access are also those who are most likely to participate in adult literacy, language, and employment training programs. Digital access is entangled with adult learning, and digital policies are thus important to the work of adult educators. With this in mind, the study reported here explores how digital access and inclusion are defined in digital policy (Stevenson, 2009) and juxtaposes these formulations with accounts of people's actual engagement with the Internet and digital technologies in a particular context (Selwyn, 2004, 2012). These goals rest on the premise that solutions to digital inequalities may indeed be found in the experiences of those at the margins of digital access, and they lead to these guiding questions:

1. How is access defined in Canadian digital policies and by whom?
2. How do these concepts of access materialize in the everyday digital learning experiences of those who rely on public settings for their everyday computer needs?
3. What might we learn from experiences of digital learning among people at the margins of access that can inform digital policies and processes of adult learning?

To address these questions, we first elaborate concepts of digital access and inclusion and how these are entwined with adult learning. We then describe the policy anthropology approach (Wedel & Feldman, 2005) that we have adopted to trace the slippery meanings attached to digital access and inclusion and how people are positioned within these formulations (Stevenson, 2009). This policy anthropology approach combines a wider lens of critical policy analysis (to address question 1) with a narrower or more finely grained ethnographic lens into the particularities of actual use and experiences of digital access and learning (to address question 2). We consider three digital policies that were swirling around the Digital Café during our study. We then describe the context and methods of our ethnographic study and present an access story, a detailed account drawn from our field notes and interviews that illustrates an entanglement of digital policies, digital learning, and inequality for a Digital Café participant (Flyvbjerg, 2006). In the discussion, we approach question 3 and consider what we may learn from the experiences of digital learning among people at the margins of access that can inform digital policies and processes of adult learning.

Digital Access, Digital Inclusion, and Adult Learning

It is increasingly difficult to conceptualize adult learning as a project of social and economic equality without also attending to digital equality. As Robinson, Cotton, Ono, Quan-Haase, et al. (2015) argued, "It is by now well understood that digital inequality and exclusion cannot be analyzed apart from the offline circumstances of individuals and groups and that specific forms of digital exclusion map onto particular kinds of offline disadvantage" (p. 570). Inequalities in digital access in Canada play out in matters of income and the affordability of the Internet and devices, in the role of digital policy and the Internet in exacerbating existing socio-economic inequalities, and in differentiated forms of online participation and learning that are available to people according to income, language, age, gender, employment status, and a range of other intersecting factors.

According to the 2012 Canadian Internet Use Survey, 83% of Canadians were connected to the Internet in 2012, a 4% increase since 2010 (Statistics Canada, 2013). However, there are differences in connection rates related to income. Ninety-seven percent of Canadians in the highest income quartile are connected to the Internet, yet only 58% in the lowest income quartile have Internet access (Statistics Canada, 2013, p. 2). The close correlation between income and Internet access may be explained by the fact that Canada has some of the highest Internet service fees among G7 countries (Geist, 2014). Yet the rate of Canadian household Internet subscriptions is not necessarily an indication of Internet affordability and connectivity; many low-income households place great importance on Internet access. The Public Interest Advocacy Centre, a consumer advocacy group concerned with access to government services, found that low-income households make sacrifices to maintain an Internet connection, which can account for almost 8% of monthly household expenses:

> Consumers were reluctant to cancel their communications services, even in the face of increasing costs and tight household budgets. … Some consumers were even willing to cut other basic expenses, including food, clothing and health care, rather than cancel their communications services. Others insisted that they would not know where they could cut back in their household budget. (Public Interest Advocacy Centre, 2015)

It is now widely recognized that equating "level one access" (Robinson et al., 2015), or access to an Internet connection, with digital inclusion masks persistent differences and inequalities in digital uses and experiences within and across communities and societies (Haight, Quan-Haase, & Corbett, 2014; Mossberger, Tolbert, & Franko, 2013). Low-income communities use the Internet, but their struggles to maintain access and to participate in online environments are largely invisible because, indeed, digital policies and tools are not designed for them. Mirchandani, Ng, Sangha, Rawlings, and Coloma-Moya (2005) made this point in their study of computer skills training among contingent women garment workers in Ontario. Although these women benefitted from computer training, they still experienced barriers to continuing fluency and participation online due to their restrictive working conditions, lack of access to language education, and difficulties negotiating the English keyboards and Internet sites, which the authors argued contributes to "the exclusion of these and other racialized workers, especially women, in the very design of computers and the Internet" (p. 28).

The concern among researchers studying digital inclusion is thus not if people are using the Internet but rather *how* different groups are enrolled as participants in online environments and the kinds of practices to which they have access. Investigating this entails greater attention to people's actual experiences of digital access and use (Selwyn, 2012) and to how growing reliance upon digital technologies on the part of governments and other institutions might exacerbate inequalities (van Deursen & van Dijk, 2014). In this vein, Selwyn (2010) questioned technological determinism that assumes Internet access will lead to greater social equality, asking instead, "Who benefits in what ways from Internet connectivity? How does the Internet amplify rather than disrupt existing social patterns and relations?" (p. 96).

It is here that digital policy and adult learning intersect. A laissez-faire approach to digital policy (Mervyn, Simon, & Allen, 2014) equates Internet access with digital inclusion and assumes an implicit theory of do-it-yourself learning (van Dijk, 2006), wherein individuals

are seen to develop computer skills through the trial and error experimentation that access itself provides. The logic is that the more one uses the Internet, the more proficient one becomes and the more socially equal and empowered. This view is circulated by powerful actors in Internet policy and provision, such as Facebook CEO Mark Zuckerberg. He argued that Facebook's Free Basics project, which proposes to offer citizens in India free access to Facebook and a few other popular sites, is a "no brainer" because "we know that when people have access to the Internet they also get access to jobs, education, healthcare, communication. We know that for every 10 people connected to the Internet, roughly one is lifted out of poverty" (Zuckerberg, 2015, para. 7). This laissez-faire, auto-didactic approach to computer skill development assumes that the Internet itself is a neutral and static tool that can be mastered with practice (Selwyn, 2012; Warschauer, Knobel, & Stone, 2004). But as Matzat and Sadowski (2012) observed, we actually know very little about how do-it-yourself digital learning is experienced in practice except that it requires some level of skill and confidence to begin with. This led these authors to conclude that relying upon do-it-yourself pedagogies alone to foster digital skills and social equality can exacerbate digital inequalities.

In contrast to individualized and neutral views of the Internet's pedagogies, Haight, Quan-Haase, and Corbett (2014) observed that the Internet is an ever-changing medium; the rise of social networking sites, e-government, coding, encryption, and privacy protocols all require ongoing access to new technologies and opportunities to learn new digital literacies. This suggests that policies oriented to digital inclusion should be concerned with ongoing access to the *kinds* of practices that are most powerfully linked to critical engagement and digital production (van Deursen & van Dijk, 2014).

There is nothing basic about digital learning in this dynamic and complex ecology. Digital access and inclusion unfold in constantly changing assemblages of devices, discourses, and practices through which social and political power is exercised. This implies the need for careful attention to how digital access is defined in policy and how these concepts of access materialize in the experiences of people who rely on public-access computing.

"Studying through" Canada's Digital Policy Imaginary: A Policy Anthropology Approach

Policies have powerful organizing effects in people's everyday lives. At the same time, policy may be understood as constituting an imaginary, a made up or imagined world that tends toward simplification and masks complexities (Hamilton, 2012). Such imaginaries often reflect the visions and values of the people who create policy. Attending to the imagined world of a particular policy draws our attention to relations of power in how policies are made and enacted. To understand Canada's digital policy imaginary, we draw from policy anthropology, employing the notion of "studying through," in which policy analysis follows "the source of a policy—its discourses, prescriptions, and programs—through to those affected by the policies" (Wedel & Feldman, 2005, p. 40). This requires a complementary spatial perspective (Larsen & Beech, 2014) that brings into focus the lives of people in their communities and, within the same frame, distant and disparate actors that are entwined in these complex but consequential social relations (Ball, 2012; Gilbert, 2010). As Peck and Theodore (2015) told us, "context matters deeply" (p. 6) in policy analysis, and an anthropological approach to policy analysis helps us to see policies as enactments of values

and practices that, much like the lives and learning of people in the Digital Café, are in the making, improvisational, and contingent (Gatt & Ingold, 2013).

To understand how digital policies play out for people at the Digital Café, we started by mapping the digital policy terrain (Ball, 2012) of the jurisdictions within which the Digital Café is situated. This led us to overlapping federal, provincial, and municipal digital policy texts. For each of these, we followed through to other relevant regulatory areas such as local library Internet use policies and employment and government service centre practices. As we followed these policy trajectories, we attended to how the concept of "access" was mobilized, focusing on the following categories: access to Internet connectivity, access to digital tools, access to technical support, access to digital education, and the affordability of all of these aspects. We asked how the problem of access in such texts is configured, which perspectives are privileged or missing in such formulations, and about the differentiated ways in which people are positioned.

Digital Canada 150 (Industry Canada, 2015) represents the Canadian federal government's approach to digital inclusion after the demise of CAP. Network BC and Citizens @ the Centre (Government of British Columbia, 2014) are British Columbia's strategies for expanding broadband access and implementing digital services, respectively. We also reviewed the *City of Vancouver Digital Strategy* (City of Vancouver, 2013), which addresses digital government, digital infrastructure, and the digital economy in that city. Although the Digital Café is not located in Vancouver, we included the Vancouver strategy for two reasons. First, the municipality in which our study was located did not have an explicit digital strategy. Despite the fact that their digital strategies are not codified, most local municipalities' practices are similar to those of Vancouver in relying primarily on the public library to provide citizens with use of public computers, free wireless, and some basic instruction to use the Internet to find information and complete government forms. Secondly, Vancouver is in close proximity to the Digital Café, and many Digital Café participants' lives cross into Vancouver for personal and work-related reasons, and therefore are affected by the digital policy climate there.

In viewing the documents, what is immediately noticeable is that the central objective for the strategies is the promotion of a digital economy alongside a strategic move toward digital government. For example, Digital Canada 150 declares,

> Our government has brought in measures to promote a vibrant and competitive telecommunications industry. We have taken steps to connect and protect Canadians online. We are providing Canadian businesses with opportunities in the global digital economy. We are leading on digital government. And we have been preserving and sharing Canadian content online. (Industry Canada, 2015, p. 5)

Citizens @ the Centre is singularly focused on the goal to increase the scope and reach of digital government, and the *City of Vancouver Digital Strategy*, while including a broad range of goals, also prioritizes the centralization and expansion of e-government.

We then scrutinized the policies for the ways that digital access is defined, not just rhetorically but also in practice. Next to the development of a digital economy and the implementation of e-government, broadband Internet provision is a major focus. Digital Canada 150 emphasizes the creation of an investment and regulatory climate that promotes consumer choice in Internet service providers, competitive pricing, and access to an

Internet connection, with the goal that "by 2017, 98% of Canadians will have access to a connection of at least 5mps" (Industry Canada, 2015, p. 2). Commentators described this commitment as "disappointing" and "slower than comparable targets around the world" (Geist, 2014, para. 5). Similarly, the exclusive goal of Network BC is "to provide high-speed Internet access to 100% of British Columbians by 2021" (Government of British Columbia, 2014, para 2). This will be achieved through contracts with local telecommunications players oriented to creating a market-based approach to digital access. On the municipal level, the *City of Vancouver Digital Strategy* aims to bring free wireless connections to public buildings, including all community centres, through a contract with one of the three largest Canadian telecom providers. Indeed, during our research, free Wi-Fi hotspots were launched at various public locations across the region, which is welcome but also introduces new dimensions of digital inequality, as these hotspots assume access to a mobile device and the capacity to use it.

The federal and provincial digital strategies reflect the laissez-faire approach to digital access described above. Notable is a near absence of meaningful consideration of whether potential users have the means to take advantage of the availability of an Internet connection. Although "affordability was a key consideration" in Digital Canada 150 (Industry Canada, 2015, p. 41), there is little attention to how low- and middle-income Canadians will afford new data caps and rising Internet costs. In terms of access to educational opportunities as outlined in Digital Canada 150, with the exception of renewed support for Computers for Schools to refurbish and redistribute affordable (but old) computers to community organizations and schools and to train youth in these refurbishing skills, there is no mention of digital skills or access to adult education that people may need to meaningfully use the Internet (Geist, 2014). In place of a general digital learning strategy, a hyperlink is provided to Canada's new adult learning policy, the Canada Job Grant, which was introduced in 2013 and is geared toward funding employers to offer training to workers destined for or already employed in "high demand jobs" (Employment and Social Development Canada, 2014). Generally, this training does not include digital literacy education for people new to computers. The Network BC strategy consists primarily of public-private partnerships to deliver cable, tower, and satellite access to both urban and rural communities and does not acknowledge the need for skill development as part of its digital strategy.

Only the *City of Vancouver Digital Strategy* seems to pick up on the close tie between digital inclusion and digital learning, recognizing the existence of a digital divide that it defines as "access to technology and education to increase digital literacy" (City of Vancouver, 2013, p. 5). The strategy announces that the "library has the mandate to address education related to the digital divide" (City of Vancouver, 2013, p. 12) and outlines the ways that the Vancouver Public Library is already meeting this objective by providing free wireless to patrons as well as computers, software, and computer classes. Municipal digital policies matter for understanding differential access to digital learning across the region. In Vancouver, computer classes are offered in most library branches several times a day on diverse topics and in various languages. However, in the municipality in which the Digital Café is located, only a few classes are offered each month at one branch, and patrons can reserve a computer terminal for one hour per day, with the option to sign up for more time if there is no one waiting—though typically there are waitlists for computer time. While the City of Vancouver strategy recognizes the role of instruction in digital inclusion, and we have observed very patient and competent librarians working with patrons to support their

digital needs, we have also observed that the particular literacy and learning needs of adults new to computers who are English-language learners or who have little formal education, require more consistent and specialized instruction than librarians can provide.

Who are the Internet users that are privileged in these digital strategies? Wedel and Feldman (2005) suggested that policy, as an imaginary, "imposes an ideal type of what a 'normal' citizen should be. Individuals of a population must contend with, measure up to, subvert, manipulate, or simply internalize these ideal types as part of their own identity" (pp. 37–38). This typical citizen in digital policy is often described in terms of a "model user." The City of Vancouver, in fact, uses the model user approach in support of its plan to expand digital government:

> Throughout the consultation and visioning process, the digital strategy team used "A day in the life …" approach to envision what a digital Vancouver could be. With the initiatives outlined in the strategy, what does a day in the life of a digital citizen in Vancouver look like in 2016? (City of Vancouver, 2013, p. 34)

Here we are introduced to an imagined Stephanie, "a working professional and well educated," who works long hours in the "Digital District" (City of Vancouver, 2013. p. 35). Stephanie is regarded as digitally proficient and seems to have continuous access to multiple devices, data, and a high-speed connection at work, at home, and on transit. She values ease and efficiency of services, meaning that she can achieve her personal life goals almost instantaneously (getting a home renovation permit, sending in a dog license application, applying for a digital business development grant, even registering to speak at a meeting at City Hall), all while she sits at her desk in a professional downtown office or rides public transit to and from work. What we do not see is Stephanie looking for a device to connect to public Wi-Fi because she can't afford it at home, or struggling to compose an email to apply for a job, or getting locked out of accounts for online services. Stephanie's idealized experience contrasts with the actualities of digital access and uses we observed among the people we met in the Digital Café. Before we recount this story, it is perhaps timely to speculate that digital policies are not only imaginaries that hold visions and values of a "what if?" or figured world, but are also implicated in the creation of a new world, new citizens, and new forms of governance.

Side-by-Side Ethnography at the Digital Café

The Digital Café was so named to create an atmosphere of sociability and informality. Coffee, tea, and sometimes snacks were available, but the real attraction was the two-hour drop-in time during which people could use the old but serviceable computers and work one to one with volunteer tutors to either learn new skills on the computer or to get help with specific tasks. Some people brought their own computer devices if they had them, and the research project contributed two newer laptops. The small room was often full before the 3 p.m. start time with adults between the ages of 35 and 75 (the majority between ages 50 and 60); most were new immigrants, with formal education levels ranging from Grade 8 to graduate degrees that were not recognized by local employers or higher-education institutions. As the Digital Café became known in the community, a growing number of participants were referred by government employment or social services agencies for

help applying for jobs and filling in government forms; the local library also referred their patrons who needed more time and one-to-one instruction than the library could provide. Of the 234 unique visitors to the Café during the research, 79% reported having an Internet connection at home but had no one to help them with their everyday computer learning needs. Some people dropped into the Café for urgent help with a government form or job application, never to return. Others attended faithfully each week, setting themselves new tasks and bringing questions for the volunteer tutors. Most came and went, so as a learning setting, the Café felt very much like a "busy intersection" (Leander, 2009; Reder, 2012), a place of temporary but often significant learning encounters that allowed people to get the digital learning support they needed and then move on.

Suzanne and Sherry, and a third research assistant, Angel, attended the Café as participant observers on different days, keeping running records of tutor and learner conversations and happenings as people engaged in computer learning; we captured images, when possible and with permission, of the screens people were working on and of the tools and resources people drew upon for learning, such as handwritten notes and slips of paper with reminders and keyboarding strategies (Wali, 2010). As newcomers to this learning space, we were inspired by Law and Singleton's (2013) ideas about slow and "care-full" research, which involves "tinkering slowly, experimentally and collaboratively to find the best way forward" (p. 488). One such way forward was an approach to observation that emerged from the affective and material actualities of digital learning. Using computers can be frustrating and emotionally taxing, and in the Digital Café, people are often learning to use computers in high-stakes contexts in which the outcomes of tasks are immediately consequential, such as the denial of social assistance benefits if a form is not completed correctly or the loss of access to an email account. It was therefore not tenable to observe people as they struggled on their own with these tasks, particularly on days when there were not enough tutors. Moreover, as Attar (2005) observed, it is difficult to keep track of all that goes on in the rapid flow of hands and eyes, keyboards and screens that are entangled in digital learning activities. We found ourselves setting aside our documentation tools and sitting next to people as we negotiated digital tasks *with* them. As the research unfolded over the weeks and months, we became co-learners and co-explorers of computers, sometimes more expert, other times more novice, as people with different skills and knowledge passed through the Café. We thus shifted our stance to learn with and from participants, striving toward observant participation (Otto & Smith, 2013).

It was in these side-by-side learning relationships that we collected several stories of digital access among participants at the Digital Café. We present one such story here, that of Malek, who was one of the first participants we met during our study and who attended the Café almost weekly over the course of a year. As we described above, reading policies through the actualities of local practices and doings is at the heart of the policy anthropology approach. Following Flyvbjerg (1998) and Kirkeby (2011), we illustrate in some detail Malek's struggles with digital access and learning so that others may recognize these experiences as similar or different to what goes on in their practice settings, in ways that might inform their own instructional approaches and policy contexts (Kirkeby, 2011, p. 13). Skilled practitioners routinely transfer knowledge from one context to another, and detailed stories support this process without claiming to *apply* to other settings or to represent other contexts (Flyvbjerg, 1998, 2006).

Malek: An Access Story

Suzanne met Malek when he was a student in the English as a Second Language (ESL) class that met just before the Digital Café on Wednesday afternoons. Jan, a volunteer tutor in the ESL class, discovered that Malek is an artist and eagerly suggested he google the name of an upcoming art festival that she thought he would enjoy. Jan was always looking for authentic contexts for her students to use their English-language skills. But Malek hesitated and then laughed her off. "No, no computer!" He waved politely and left. Isha, a community outreach worker who also taught the ESL class, arrived to find Jan and Suzanne standing in the middle room. "Does Malek not like to use computers?" Suzanne asked. "Malek would probably like to use computers" Isha replied, "but I don't think he has ever tried. I know he has no computer at home because I have been helping him fill in a bunch of government forms."

Malek, a well-known artist in his home country, came to Canada 12 years earlier with the intention to work as an art teacher in a college. Things did not go as planned; he could not learn English quickly enough to work with students, so he turned to employment in building maintenance until an accident made it impossible to continue. When life changes suddenly, people need to learn new literacies quickly; in Malek's case, this included finding information about disability benefits, negotiating online government forms, and researching other resources he might need, such as affordable housing. Such information is scarcely available anymore in print in the community. When Malek went to government offices, he was redirected online, even though the case workers were well aware that he could not at the time afford an Internet connection or computer at home.

With Isha's encouragement, Malek began to attend the Digital Café. The first few sessions were rough. One of the first tasks for new computer users is to get an email account. This is difficult for people who are not yet proficient with keyboards, because the three-step verification processes designed by email platforms require accurate encoding of a password, a secondary email, and/or a cell phone number to which is sent a verification code. Malek, like many other Digital Café participants, had no secondary email or cell phone, and working around this was a source of considerable frustration.

Malek was the first to arrive at the Digital Café each week so that he could claim the same familiar computer in the corner of the room. Indeed, after a few weeks of side-by-side coaching from tutors and painstaking trial and error, he came to recognize the blue icon from which to launch the Internet browser and was able to key in the name of his email provider, find the username and password fields, and, referring to his notebook, enter his password carefully but accurately. His new proficiency was expressed in the flow of his hands across the laptop, his frown of concentration (rather than the look of despair of earlier times) as his hands and eyes moved together with the keys. "Ha ha!" Malek exclaimed with a smile of satisfaction the first time he entered his email username and password in the fields correctly and landed in his email inbox.

Malek began to email his children and friends in his home country, and they directed him to Facebook. This changed everything. Although Malek was able to make voice calls to his adult children in his home country from time to time on a landline, he had sporadic contact with other friends, family, and his grandchildren. With a Facebook account, his children began posting photos of his grandchildren, he kept up with politics and happenings, and he posted short messages to his friends. It got to the point where he was complaining that

when he opened his email, there were too many Facebook message links for him to read. But Malek was thrilled. He still did not have a computer of his own and he did not feel confident to go to the library to use their computers for extra practice and online time. What if he got stuck? He worried his English wasn't good enough to ask for help and maybe the librarians would be busy.

In January 2015, almost a year after his first computer class, Malek arrived at the Digital Café with a laptop computer. It was enormous, heavy, a model that the younger tutors said they had never seen before. But a friend had lent it to him and at least it worked. He had recently qualified for disability benefits, and with this modest increase in income he decided to get a home Internet connection and forego his TV cable to cover the cost. He had a "new subscriber" Internet rate he could barely afford and a working laptop. Malek was digitally connected! At the Digital Café, Malek continued to learn how to search on the Internet so he could watch soccer and the news, and he practised this at home following instructions from the tutor that he wrote down for himself in his notebook in English with annotations or added notes in his first language. He joined an online typing tutor program to increase his typing fluency, though only did this at the Café as he had difficulty launching the program and saving his work when he was alone at home. When it came to communicating with government and filling in government forms, Malek still needed help from tutors, who often spent long hours with him, and other learners at the Café, working through the complex instructions and protocols. Nevertheless, his proficiency flourished; he was able to learn new tasks with his faster and more accurate typing, and he had a feel for the keys and desktop layout on his own machine.

But then the Internet subscription "starting rate" expired and Malek could no longer afford his Internet connection. He changed to another Internet provider and waited for several weeks for this provider to send someone who spoke his language to his home to set up the modem. But shortly after the service person arrived, his laptop crashed. Its operating system was too old to connect to the new Internet modem. Persistent and determined, Malek continued on at the Digital Café, using the desktops once or twice a week when the Café was open. But we noticed that his fluency faltered; "Where is that Internet thing [the browser]?" "Where do I enter my password again?"

Discussion

There is a tendency, policy analysts argue, to "fail to capture the full complexity of policy contexts" (Weaver-Hightower, 2008, p.153), and this seems to be the case with the Canadian digital policies considered in this article. The juxtaposition of policy read through Malek's story of access offers insights into the entanglement of digital policy, digital access, and adult learning. This brings us to the third question guiding this research: What might we learn from experiences of digital learning among people at the margins of access (like Malek) that can inform digital policies and processes of adult leaning?

As Selwyn (2010) pointed out, "One is not 'connected for life' once having used the Internet" (p. 94). Malek moved in and out of digital connectivity, which suggests that access is not an event but an ongoing accomplishment that requires the provisional assemblage of different kinds of materials: a familiar and working device, an Internet connection, a password, a charger, a patient tutor, timely and appropriate instruction, and more. Such assemblages are always provisional and contingent; resources come together and flow apart

in ways that are unique to individual lives but that are also caught up in prevailing policy and governance regimes. In Canada at the time of this research, austerity policies pulled people online to access what governments argued were more efficient and economical means to provide government services (Industry Canada, 2015), but at the same time restricted digital learning opportunities through cuts to the Community Access Program that had funded computer instruction and digital access, as well as to adult literacy and basic education programs (Employment and Social Development Canada, 2014).

This returns us to the promises and limits of do-it-yourself digital learning. The practice of trial and error is one of experimentation and exploration; it was the predominant mode of learning in the Digital Café, and indeed in other forms of learning where proficiency is the goal and where the learning objectives are diverse (see van Dijk, 2006). But at some point, as Matzat and Sadowski (2012) also observed, people hit a wall and need direct and guided instruction. The nature of this instruction raised pedagogic dilemmas for tutors at the Digital Café. If the goal of digital learning is to foster independence, should not people be encouraged to learn how to complete online government forms and email subscriptions on their own even when this involves considerable struggle and regardless of the consequences? Isn't this what authentic learning is all about? An alternative view is that the anxious and high-stakes nature of some computer tasks are not suitable contexts for learning new skills, and tutors should "do with" or "do for" learners and work toward confidence and fluency in other lower-stakes activities. This issue has never quite been resolved at the Café.

Pedagogies in the Digital Café were mostly oriented to helping people with immediate, urgent tasks that are entangled in the regulatory and disciplinary regimes that have been designed for people who rely on social assistance, employment insurance, pensions, and disability assistance. These tasks can be trying and joyless. Consequently, a challenge for drop-in public-access computing sites such as the Digital Café and public libraries is to extend the aims for digital learning beyond the accomplishment of these bureaucratic tasks and to make space for open-ended exploration that promotes enjoyment and fluency (Smythe, 2012). Indeed, Malek thrived on Facebook. Although Facebook's capacities for regulation and surveillance are a concern, the platform is designed to promote ease of use; the delight of viewing pictures of grandchildren spurred intense engagement and pleasure and therefore greater digital proficiency, at least in the tasks that were important to Malek (Bynner, Reder, Parsons, & Strawn, 2010). But alongside these moments of enjoyment and connection, Malek's rights as a citizen and his security of access to material resources rested precariously on the availability of working computers and volunteer tutors in a shoestring community-based program. The experiences of digital access that we were able to see with Malek are largely invisible within the prevailing digital policy landscape.

Conclusion

In studying digital access through policy anthropology, we have strived to reach beyond an ethnographic account of the everyday experiences of people and their computers to envelop the geometry of power that is entangled in these everyday worlds. A shorter-term ethnographic study of digital access would not have been able to trace the story of wavering access over time (Anderson, 2005), nor could a digital policy analysis on its own capture the disconnections between digital policy imaginaries of a model user and the actualities of digital access we observed. The merging of anthropological and critical policy analysis

methods allowed us to see the material entanglements of discourses, pedagogies, and technologies. We believe that studies of digital access among diverse adults who rely on public computing sites can contribute to deeper understandings of how digital and social inequalities are entwined with adult learning and can help us imagine how things could be different. Our hope is that this study contributes to this goal and promotes some understanding of how the Internet and digital society are changing adult learning and how pedagogies shape how people are positioned within these powerful forces. To this end, we envision digital policy designed for those on the margins of access such as Malek, who will benefit most from an affordable Internet and from appropriate, timely, and consistent opportunities for digital learning. Public-access computing sites should not be seen as stop-gap measures on the way to an independent and self-sufficient citizenry, who engage in a digital society from the privacy of their homes, but rather as new public spaces to enact collaborative and critical pedagogies that forge a more inclusive society.

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