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LIQUID LABOR, PRECARIOUS LIVES:  
AN URBAN ETHNOGRAPHY OF ONLINE WORK AND DIGITAL INEQUALITY

By

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## ABSTRACT OF THE DISSERTATION

Liquid Labor, Precarious Lives: An Urban Ethnography of Online Work and Digital Inequality

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The primary purpose of this ethnographic study is to better understand the economic lives of participants in Philadelphia's KEYSPOT project, a network of digital access and skills programs funded by the federal Broadband Technology Opportunities Program (BTOP). Created as part of the 2009 American Recovery and Reinvestment Act (ARRA) or "stimulus package," the BTOP initiative intended to respond to the Great Recession of 2008 by supporting and expanding U.S. broadband infrastructure, particularly in distressed urban and rural communities. Implicit in this primary goal was the understanding that technological development stimulates job sector growth and can mitigate unemployment and underemployment. Yet, what job opportunities were available to the poor and working class urban Americans targeted through these technology programs? How did computer access and digital training practically shape their economic lives?

In this dissertation, I argue that there is a disconnect between the policymakers designing broadband programs and the "policytakers" to whom the programs are targeted. Borrowing from Mosco (2004), this disconnect is due in part to the "digital

myth” that suggests technology is a cheap, efficient and individual-targeted solution to complex problems such as urban poverty. And whereas these programs endeavored to connect low-income Philadelphians to jobs through a focus on imparting digital access and skills, the types of formal sector jobs available to KEYSPOT job-seekers were part-time, low-skilled, low-wage and did not provide needed benefits like health insurance. Notably, these positions were particularly inflexible for working parents and located in fields like carework, domestic work or the service industries.

Given these formidable impediments to locating good jobs in the formal sector outlined above, some struggling parents with digital skills instead pursued flexible, low financial risk opportunities in the informal sector (Bauman, 2000). These informal digital labor activities ranged from offering specific services such as modeling or caricature drawing, to promoting handmade goods or digital goods online. In some cases, urban street economies are merging with digital economies in unique and unanticipated ways. Yet, while some might celebrate these new forms as “entrepreneurial,” I demonstrate that this work is a type of highly precarious, highly exploited digital labor that did not translate to increased economic stability or security. And KEYSPOT participants in both the formal and informal sectors largely continued to rely on social programs because they could not make ends meet.

I suggest that that the rise and frequency of these flexible, informalized arrangements more broadly signals a changing relationship between capital and labor in urban economies. I argue that the extant research in the digital labor field has overlooked the ways in which online tools are utilized by the working class and likewise that the dominant digital divide literature has been inattentive to the ways technology practically

impacts the economic lives of the urban poor. Thus, rather than “digital labor” or “immaterial labor,” I propose “liquid labor” as a framework for understanding the emergence of these new highly precarious, mutable and flexible online practices. I suggest that this space marks a new terrain of struggle in the fight for technological development and, more importantly, economic equality and opportunity in low-income urban communities struggling in the wake of neoliberal policies of retrenchment.

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## DEDICATION

To my mom, dad, Gigi and Pop—

I appreciate the incredible sacrifices you made for my education.



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## **Chapter 1**

### **Introduction**

#### **Meet Joanne and Mr. Wilson**

On my first day of ethnographic fieldwork, I met Joanne and Mr. Wilson –two “regulars” at an open access computer lab (“KEYSPOT”) located in a faith-based community center in North Philadelphia. The computer lab assistant, Camille, termed Joanne and Mr. Wilson “regulars” because each visited the lab several times a week, typically on a predictable schedule. Mr. Wilson and Joanne both lived nearby and therefore usually walked to the lab in the mornings. Joanne brought her son, Jaleel, while Mr. Wilson came alone. I continued to see Joanne and Mr. Wilson regularly throughout the next two years I spent studying the city’s KEYSPOTS, a network of digital access and skills programs funded by the federal Broadband Technology Opportunities Program (BTOP).

To return to my participants, Joanne is a 34-year-old African American woman and because she did not have access to affordable childcare, I spent many days helping Camille entertain Jaleel so that his mother could work in the lab. On a typical day, I would read Jaleel stories or aid Camille in finding new videos of early locomotives on YouTube for him to watch (his favorite). While Joanne did use some of the lab’s resources – like printing and internet access – she owned a laptop and brought it with her to the lab. In fact, Joanne had digital skills and experience with software like Microsoft Word and Illustrator, knowledge of webpage creation, fluency in social media, and some experience in graphic design.

When I asked Joanne why she visited the lab so regularly, remarkably, I learned that she visited the lab to manage several informal endeavors that earned her a small income. First, Joanne explained that she wrote digital books, which she sold on Amazon.com and marketed on both social media and targeted online message boards. Second, using the free color printing resources available to her at the KEYSPOT, Joanne created political buttons that she sold on the street. She was also starting a handmade jewelry business and used social media resources to promote her products. In Joanne's words, engaging in these informal ventures allowed her to be "more flexible," giving her more time to spend with Jaleel. Though she did not have the resources necessary to establish a formal business, with her informal model, she kept financial risks to a minimum and her need for capital was low (Bauman, 2000). However, Joanne admitted that, unfortunately, she did not earn enough from any of these endeavors to survive, and thus frequently scanned for other opportunities in both the formal and informal sectors.

In contrast to Joanne, Mr. Wilson, a tall, slim African American man in his mid-seventies, visited the KEYSPOT primarily for conversation. He rarely used the computers and expressed no interest in taking the digital courses offered. About four months into the project, I finally thought to question Mr. Wilson on his reluctance to use the computers. He grimaced and responded flatly, "Everything is turning into computers." When I asked him why he found that so disconcerting, I half-expected Mr. Wilson to reply that it was either diminishing face to face interaction, too expensive, or too complicated to use and understand. Perhaps Mr. Wilson did not appreciate the benefits the Internet could provide?

Strikingly, Mr. Wilson explained that for most of his life, he worked at a local bowling alley in the community. His job responsibilities included moving bowling pins into place and helping customers keep track of their bowling score. It was a “good job” because he got to make friends, learned about bowling, and played for free occasionally at nights or on weekends after the alley closed. He became a proficient bowler and later joined a league with friends –their balls were inscribed with their names and they carried them in “fancy” bags with zippers. However, in the late 1980’s the bowling alley became mechanized; machines moved the pins into place and computers kept the scores. Mr. Wilson lost his job. When I asked what type of work he did next, Mr. Wilson shrugged and turned away – “Nah, don’t matter.”

Most broadly, Joanne and Mr. Wilson’s experience in the KEYSPOOT program in Philadelphia offers a window onto the ways in which policy, poverty, and digital technology intersect on the ground. More specifically, these experiences reveal how structural impediments to formal work, a growing digital workforce divide, and declining social support in the wake of the urban crisis may generate a new set of digital work practices for poor Philadelphians. Further, their stories reveal the complex economic, social and cultural factors that can shape participant attitudes and interactions with technology. Although at first glance Joanne and Mr. Wilson’s stories may appear unique and highly contradictory, I will argue in this dissertation that both their experiences are a consequence –and reflection –of a broader restructuring of the relations between capital and labor in the contemporary information economy.

## Stakes of the Project

Informed by an ethnographic study of participants like Joanne and Mr. Wilson, this project explores the economic lives of poor and working-class families in the modern informational city, as seen through the lens of the Broadband Technology Opportunities Program (BTOP). To elaborate on BTOP, the program was created as part of the 2009 American Recovery and Reinvestment Act (ARRA), also known as the “stimulus package,” that intended to respond to the Great Recession of 2008. The first objective of the ARRA was as stated, “to preserve and create jobs and promote economic recovery” (American Recovery, 2009, p. 123). Implicit in this primary goal is the understanding that technological development stimulates job sector growth and can mitigate unemployment. Yet, what job opportunities were available to poor and working-class Americans assisted through the technology programs, like Joanne or Mr. Wilson? Why are these new forms of digital labor – such as creating e-books and selling buttons on the street –emerging in the context of a federally funded jobs skills and job training program? Furthermore, why would a participant cite job loss as a reason *not* to adopt broadband? Or more concretely: how can we better understand Joanne’s reliance on the informal digital economy or Mr. Wilson’s attitudes on the role of technology in his economic life?

To expand on Joanne’s experience and economic life, while BTOP funded training programs and computing centers like KEYSPOTs have focused on the role of digital technology in stimulating job growth, many participants utilized digital resources to create opportunities *outside* the formal economy. These activities ranged from offering specific services such as modeling or caricature drawing, to promoting handmade goods or digital goods online. In some cases, street economies are merging with digital

economies in unique and unanticipated ways. Participants used social media resources such as Twitter or Facebook to promote a variety of individual services or products. Notably, poor and working-class participants like Joanne explained that they are attempting to achieve greater economic flexibility in what they perceived as a tenuous job market by drawing income from multiple sources. However, unlike traditional entrepreneurs who celebrate risk, liquid laborers like Joanne attempted to mitigate financial risk (Nelson, 2012). Though many participants utilized these informal economic opportunities only as supplemental income, some participants had given up on the formal sector altogether, and relied only on informal economic opportunities to support themselves. Others engaged in what informal economy scholars like Devey, Skinner and Volodia (2006) have termed “churn,” or circulating between the formal and informal sectors.

I will argue in this study that in a global information economy marked by the breakdown of durable institutions like the welfare state, participants like Joanne must increasingly navigate these informal sources to make ends meet. In short, in the wake of retrenchment and the urban crisis in Philadelphia, the informal economy is offering poor families a source of supplemental income many once received through welfare and social programs. Thus, the informal economy should be viewed critically and seen as connected to –and a consequence of – broader patterns of governmental and labor restructuring. I would underscore that these informal practices are also shaped by childcare needs. To explain further, the kind of formal opportunities available to KEYSPOOT job seekers were more likely to be low-status, low-paying and part-time positions located in fields like carework, domestic work or the service industries. These positions did not offer a living



wage and were also the least flexible for parents, providing no benefits like healthcare and requiring undesirable or nighttime working hours. Thus, low-income parents like Joanne were seeking out new opportunities online. Whereas these flexible work options and new digital activities could be viewed as expanding possibilities for low-income Philadelphians, I will argue in this project that these practices should be understood as operating within a larger set of urban survival strategies. Furthermore— alongside critical immaterial labor scholars like Andrejevic (2008), Dyer Witheford (1999), Fuchs (2010, 2012, 2014) and Jarrett (2014, 2015)— I will demonstrate how their digital labor is uniquely exploited in the non-wage digital economy.

To return to Mr. Wilson’s economic life and experiences, while many digital divide scholars and federal policymakers have focused on digital “access” or “skills” as a path to economic opportunity for low-income Americans, I will insist that Mr. Wilson’s life story also reveals some basic complexities – and dangerous assumptions – that have clouded our ability to analyze how technology fits into the everyday lives of poor and working-class Americans. To explain my point, as our society has entered into a new political phase in which government programs are increasingly shaped by the discourses of personal responsibility (Bauman, 2000; Harvey, 2005), we as a nation have been prompted to seek out cost-efficient and individual-targeted solutions to complex social problems like urban poverty and inequality. Embracing the “myth of the digital sublime” as Mosco (2004) conceptualizes it, we have often turned to ICTs (information communication technologies) and private technology sector partnerships to attempt to solve these challenges. In other words, digital technology is widely seen almost as a magical toolbox we can deliver to an individual so that she or he can, alone, dig out of

poverty. I am not implying that broadband access and training programs have no utility or social benefit but, instead, I insist that a failure to appreciate the on-the-ground economic realities facing urban Americans like Joanne or Mr. Wilson has resulted in a problematic disconnect between policy visions and program practices. Here in this study, I term this as a gap occurring between the policymakers and the “policytakers,” or the populations to whom broadband programs are targeted.

In this way, developing a more nuanced understanding of the economic lives of BTOP participant and correspondingly their economic motivations for broadband adoption is integral to a study of the digital divide, as it reflects the personal and varied relationships program participants have with technology. So, whereas some low-income Americans are unable to utilize technology based on a lack of “access” or “skills” –as policymakers and many scholars assume –some like Joanne possessed advanced technological skills yet structural barriers like lack of childcare have constrained economic opportunity for her. In contrast, Mr. Wilson actively chose to reject technology because of his personal life experiences. But more importantly, Mr. Wilson saw technological advancements like computerization as *directly responsible* for the loss of a job he found fulfilling. Although the usage of the informal digital economy or job loss due to computerization and automation may seem trivial or confined to the fringe, I argue that they are deeply interconnected and central to an analysis of the contemporary information economy. To explain, the exploitative nature of the new economy may create the conditions under which these new informal economic survival strategies have become a necessity for the poor. In other words, because the types of good jobs available to urban workers like Mr. Wilson in the previous generation have diminished or evaporated, now

contemporary urban workers like Joanne must cobble together part-time or informal opportunities to support their families. I therefore suggest that “liquid labor” is poised to become a potentially significant feature of the new urban economy among low-income communities. Said differently, in this project I assert that the emergence of these informal digital “liquid labor” practices should be understood, instead, as resulting from a restructuring of relations between capital and labor. While this is an argument other scholars I have made, digital labor as it relates to the working class has been hitherto understudied and undertheorized. In this way, this project presents “liquid labor” as a possible framework for understanding the changing relationship between work, class, technology, poverty and policy in the modern informational city.

In order to provide appropriate context for this dissertation, first I will expand on this concept of “liquid labor,” providing a frame for the larger study. Second, I will sketch out the research questions guiding this project. Third, I will explain why Philadelphia is a useful location for a study of these new digital work practices and review my fieldsites. Fourth, I will discuss ethnography as a methodology, touching on issues of rapport, researcher stance, subjectivity and the data collection procedures. Finally, I will provide some key terms and offer an outline of the dissertation chapters.

### **Offering a New Framework: Liquid Labor**

As discussed, the primary purpose of this study is to better understand the economic lives of participants in the Broadband Technology Opportunities Program (BTOP) in Philadelphia and how “liquid labor” strategies were utilized by participants like Joanne. However, I also propose “liquid labor” as a framework for understanding the transitioning relationships between work, class, technology and inequality. To elaborate,

when one considers the shift between how work was defined in the previous industrial economic period (formal, waged, unionized) and the work in the modern information economy (flexible, unwaged, self-directed), I suggest that the emergence of informal digital strategies – especially among the working urban poor in advanced economies – becomes more predictable (Sennett, 1998). So, why “liquid” labor? Drawing on Bauman (2000) who insists that the modern era is characterized by the dissolution of social support institutions and the rise of precarious living, I assert that these flexible, low-financial risk online work practices should be understood as a type of super precarious, highly exploited labor. While I agree with scholars like Beck (2000) and Deuze (2006) that “risk” is a defining feature of liquid life, I suggest that “liquid laborers” assume the most risk, circulate in the most precarious survival circuits (Sassen, 2003), and contend with the greatest life uncertainties. Moreover, I advocate for a materialist consideration of risk in the context of digital work. For instance, whereas risk is celebrated as an entrepreneurial value among the high-tech elite (Neff, 2012; Rumberger & Levin, 1985), the poor and working class occupy a very different position in the economy and are thus bound by a different decision matrix when it comes to risk. Said differently, the ability to take risks in the new economy should be understood as ultimately yoked to an individual’s economic or social resources.

Beyond Bauman’s framework, I have also selected “liquid labor” as a more appropriate term than “immaterial labor” (Hardt & Negri, 2001, 2005, 2009; Lazzarato, 1996) or “affective labor” (Fortunati, 2011; Jarrett, 2014, 2015; Ouelette & Wilson, 2011) to describe this emergence and usage of the informal digital economy by poor and working-class participants for a few other key reasons. First, borrowed from the language

of economics, “liquid” assets are those that can be easily converted to cash. Poor and working-class participants like Joanne utilized the informal digital economy as it provided a quick means to supplement income streams, often with unregulated or untaxed cash transactions. These strategies were pursued so that individuals could maintain the utmost flexibility and limit financial risk (Beck, 2000).

Second, liquid labor can illustrate how the so-called “immaterial” labor market can also have material components in the informal digital economy. For instance, digital goods created by KEYSPOOT participants could circulate online and later change form and enter the streets of Philadelphia as material goods. For example, a participant I introduce later, Ron, utilized digital platforms to promote material goods whereas a participant, Sky, used a similar platform to promote informal services. Joanne and another participant, Deric, even utilized digital tools to create digital goods that they sold online and never converted to a material form. Said differently, I suggest that as labor takes on new arrangements along class lines, the divisions between material/immaterial labor begin to dissolve.

Third, as Bauman (2000) and Castells (1989) argue, the expansion of digital information technologies has allowed capital more freedom to move and flow. In other words, in the contemporary information economy, fluid capital can flee union backed workers in developed economies like the U.S. and easily seek new pools of unprotected global workers. Drawing on Rodino-Colocino’s (2006) framework, this flight from protected workers in advanced industrial nations has engendered a digital workforce divide. In sum, while a small core of elite tech workers reap the rewards of the new digital economy, they are increasingly supported by a sprawling network of precarious –

and exploitable – low-skilled and even high-skilled laborers (Rumberger & Levin, 1985). I will expand on this last point in Chapter 3 as well.

Lastly, liquid is also a term that also resonates with Devey et al.’s (2006) concept of “churn,” or the process whereby precarious workers enter and exit the formal and informal labor markets. In other words, poor and working-class job seekers float in and out of available opportunities, in both the formal and informal sector, yet never gain stable economic footing. As Edin and Lein (1997) explain, in many poor and working class urban communities, there is no longer a career “ladder” where workers can move towards better wages over time (p. 131). Instead, the current economy functions for this group more as a “carousel” in which jobs may change, but economic conditions do not substantially improve (Edin & Lein, 1997, p.131). In short, the term “liquid” is able to capture this process of churn impacting workers like Joanne.

Thus, in this dissertation drawing on Bauman’s (2000) concept of “liquid modernity,’ I would propose the rise of informal digital labor – or *liquid labor* –as a major framework for understanding the complex issues surrounding the information economy in advanced capitalism. A Marxist feminist lens also helps explain the emergence of these practices, as it emphasizes on how the necessity of reproductive labor has generated new working arrangements across racial, gender and class lines. To elaborate, KEYSPOt participants like Joanne were motivated to pursue flexible “liquid labor” in large part due to their childcare responsibilities. As I referenced earlier and will address in depth in Chapter 6, the types of formal sector opportunities available to participants like Joanne were in the sectors that were the least conducive to parenting. Mosco’s (2004) frame of “digital myths” helps to critically evaluate the workforce

discourses underpinning BTOP, in order to better understand the gap between digital workforce policies and these on-the-ground online work practices. Building on this, this project has four research questions that concern the economic lives of BTOP participants, balancing the considerations of actual work practices with workforce policy.

### **Research Questions**

Following from this, my research questions are defined thus:

- R1:** How is “work” – as it relates to poor and working-class Americans – discussed in BTOP materials (e.g. policy documents, internal statements, press releases, web materials)? More specifically, how are the “goals” of digital labor presented and developed?
- R2:** For poor and working class urban Philadelphians, especially parents, what (if any) impediments exist to finding formal work in the modern informational city? In what fields and sectors are participants searching for and gaining jobs?
- R3:** Are there disconnects between how “work” is defined and what work is obtained, particularly by urban parents? What “invisible work” or informal work exists and how is it connected to digital technology in the contemporary information economy?
- R4:** More broadly, how can we better understand – or contextualize – the economic lives of BTOP participants, especially the relationship between informal work and the contemporary information economy in advanced capitalism?

### **My Contribution**

Having discussed my framework and research questions, where do I position this project within existing scholarship? This study contributes to the literature on digital

labor and digital inequality within the field of critical media studies. To elaborate, first I will argue in this project that bringing the extant digital inequality and digital workforce divide literature into conversation with the dominant media studies literature on immaterial and affective labor can offer a new critical vantage point to conceptualize digital work practices. For example, I suggest that for poor and working-class parents like Joanne, reliance on the digital economy as a survival strategy in a turbulent market is a different *type* of interaction than, for example, middle and upper-class users generating “immaterial labor” for online games or social media. Said differently, studies investigating how middle-class users create economic value (for companies) or are exploited through games, Facebook, or Twitter analyze different kinds of immaterial labor. I locate a different type of interaction that is shaped by access to ICTs but also social and class position. That said, it is important to note that in embracing the term “liquid,” I do not mean to suggest that “immaterial labor” and “affective labor” are terms without resonance or relevance. I only point out that these terms are insufficient to describe the ways class and poverty can shape digital labor practices.

Second, I intend to contribute to the critical digital inequality literature, complicating the “access” and “skills” policy focus. I hope to reveal the “digital myths” (Mosco, 2004) embedded in policy more broadly, but also underscore that these programs can unintentionally frame broadband as a means to further retrench the welfare state. The access/skills concentration can also overlook the structural issues (like lack of childcare access) that constrain economic opportunity. It likewise fails to consider the part ICTs have played in diminishing opportunities for poor and working-class laborers like Mr. Wilson in advanced economies. I also assert that these policies have focused on



dimensions of “prosperity” rather than how technology impacts political “participation” (Schement, 2009). Finally, I hope to provide an on-the-ground view of the ways in which the goals of digital labor are built through federal visions, refined by the local partners, guided by the private sector, complicated by marketing efforts and revised by digital trainers and BTOP participants. More broadly, I intend to offer insight into the economic lives of BTOP program participants.

Third, I propose that the framework of “liquid labor” charts the rise of precarious work in the contemporary information economy more widely. Said differently, this term captures the changing shape of the urban economy and specifically how digital economies are interacting with informal and street economies. It likewise refers to how the breakdown of social support institutions has destabilized the working class who, without jobs or security, must become “flexible” (Bauman, 2000) and float in and out of the formal and informal economies. To better map my intended contribution in the field, however, I will review the range of perspectives and scholarly debates in the fields of digital labor, digital inequality, the digital workforce divide, and informal work in Chapter 3. However, now I will introduce my research site and explain why it provides an appropriate environment to capture these emerging digital labor practices.

## **Research Site**

### **Why Philadelphia?**

Philadelphia – and specifically the KEYSPOOT open access computer centers and digital skills training courses funded through BTOP – provided a rich research site for a study of digital “liquid labor” practices a few key reasons. First, Philadelphia has the highest rate of poverty and deep poverty of the top ten U.S. cities at 28.4% and 12.9%

respectively (Pew, 2012). In 2012 at the time of data collection, approximately 11.5% of Philadelphians were unemployed –and when estimates are adjusted to include the total number of unemployed persons who have actively stopped seeking jobs – the city rate jumps to 20% (Bureau of Labor Statistics, 2012). While this is an introduction to the economic issues framing this study, I will address these factors in greater depth as well in Chapter 5 on Philadelphia and the urban crisis.

Second, the KEYSPOT project specifically targeted populations living at the economic margins, both by embedding the computer lab sites in the city’s existing social service infrastructure and through direct marketing efforts to reach these communities (Wolfson & Crowell, 2013). Given the location of KEYSPOTs, it was easy for me to access social programs serving poor and working-class families. Coupled with the fact that these programs were targeted towards job seekers, the number and diversity of potential participants seeking formal (or informal) work was significant. This diversity allowed me to better understand the impediments to finding work facing marginalized communities throughout the city and the economic lives of programs participants.

Third, the pervasive issues of poverty and inequality in the city intersect with ongoing struggles around ICTs and information access. For example, a 2010 Knight Foundation commissioned study on Internet use at the time of the grant determined that 41% of Philadelphians were without home Internet Access (Knight, 2010). More recent research reports such as a 2013 study conducted by the Pew Charitable Trusts Philadelphia Research Initiative stated that 82% of Philadelphians had personal access to Internet (Pew, 2013). Notably, however, this data also indicated that this growth is largely due to the expansion of mobile broadband penetration – a medium not well suited

to formal job application activities or political engagement, as I will consider further in Chapter 6 (Chew, Levy & Ilavarasan, 2011; Napoli & Obar, 2014).

Fourth, examining these liquid labor practices in a specific broadband training program like KEYSPOTs situates them in a larger policy framework around digital communication and economic opportunity. Using position papers and policy documents to trace and understand the received wisdom which shapes the goals of digital labor – and detailing how programs are utilized on the ground in a very precise context – reveals a more complex picture of the relationship between poverty, digital inequality, and economic opportunity. Said differently, this analysis can bridge BTOP policy with digital practice, and reveal key program “unintended consequences.” These policy principles and the goals of digital labor will be considered in more depth in Chapter 4.

### **Fieldsites**

Having discussed Philadelphia, I will now turn to introduce specific fieldsites. As mentioned earlier, this project is an ethnographic study and included participant observation across multiple sites, semi-structured interviews with KEYSPOT participants and staff, as well as document collection. As I have referenced and will address further in Chapter 4 and 5, these KEYSPOT programs were made possible by two Broadband Technology Opportunities Program (BTOP) grants through the 2009 American Recovery and Reinvestment Act (ARRA), one for public computing centers (PCC) and another for sustainable broadband adoption i.e. digital training (SBA). The foundational goals of the KEYSPOT program in Philadelphia were to: 1) Create or refurbish 77 public computer centers; 2) Develop an awareness campaign around the digital divide and broadband adoption; and, 3) Train 15,000 Philadelphians in educational programs to build digital

literacy and increase broadband adoption. The programs were managed by the “Freedom Rings Partnership,” a joint venture headed by two lead partners, the City of Philadelphia and the Urban Affairs Coalition, and supported by other entities such as universities, the New America Foundation and a coalition of community-based organizations.

The data for this project was primarily obtained in the period between August 2011 and December 2013. I completed approximately 400 hours of participant observation in both the public computer centers (PCC) and broadband adoption training programs (SBA), 18 semi-structured interviews with participants and staff and I collected 150 documents pertaining to the KEYSPOts (as I will describe later). A more detailed overview of the partnership and program design is provided in Chapter 5. My primary sites of research included:

1. *Critical Path*. Affiliated with Philadelphia FIGHT. The public computing center was observed.
2. *The Community College of Philadelphia Center for Business and Industry*. Affiliated with the Philadelphia Housing Authority and Drexel University. Novice and intermediate computer training classes for PHA residents were observed.
3. *Families First*. Affiliated with People’s Emergency Center. GED classes for young mothers were observed.
4. *The Media & Communications Institute*. Affiliated with the Media Mobilizing Project. Digital content creation workshops were observed.
5. *Mercy Ministries*. Affiliated with the Free Library of Philadelphia. The public computing center (“Hotspot”) was observed.

6. *The Village of Arts and Humanities*. Affiliated with People's Emergency Center. Digital music production classes for youth were observed.
7. *Waterview Recreation Center*. Affiliated with Philadelphia Parks & Recreation. The public computing center was observed.

In addition to these primary research sites, where applicable, participant observation was also conducted at affiliated program activities, such as conferences, presentations, workshops and open roundtable discussions. When possible, I also observed local events of interest, such as church gatherings or community meetings. In adherence to Rutgers Institutional Review Board (IRB) protocols, participant names and identifying details have been changed in this dissertation to preserve confidentiality. Some participants received a \$25 gift card for their interview participation. Notably, I was also a member of the grant partnership's "research working group," so I attended planning meetings with other partners conducting research on KEYSPOTs, including The New America Foundation's Open Technology Institute (OTI) and Drexel University. Where relevant, I have included findings from their KEYSPOT reports as well.

### **Methodology: The Ethnographic Research Process**

Having discussed my sites of research, I will now turn to my research methodology—ethnography. Ethnographic research seeks to study people within their environments and as a method does not encourage researcher detachment, but rather the goal is to achieve deeper immersion and social interaction (Emerson, Fretz & Shaw, 2011). As I will demonstrate in this project, the social, economic and political issues facing KEYSPOT visitors like Joanne and Mr. Wilson in the wake of the broader urban crisis were very complex. Thus, learning about participants' economic lives required

time, but more importantly, necessitated gaining the trust of participants. As a methodology, ethnography allowed me time and space to attempt to capture this complexity. Now, I will expand on how social interactions and establishing trust helped shape the research process before moving into the practices and procedures utilized to collect my data.

### **Researcher Stance**

Although ethnographic research seeks to study people within their environments, it is important to flag here that, “immersion is not merging” (Emerson, Fretz & Shaw, 2011, p. 43). In other words, I unavoidably brought my own life experience or “stance” into the social process, and thus, the research process. To elaborate on this point, as Emerson, Fretz & Shaw (2011) explain:

On a fundamental level, a researcher’s stance in fieldwork and note writing originates her outlook on life. Prior experience, training and commitments influence this stance, predisposing the fieldworker to feel, think and act towards people in more or less patterned ways. Whether from a particular gender, social, cultural, political or theoretical position or orientation, the fieldworker not only interacts with and responds to people in the setting from her own orientation but also writes her fieldnotes by seeing and framing events accordingly (p. 90.)

In other words, as an ethnographer I am not – and cannot be – an impartial observer.

Thus, in the writing process (and analysis phase), I was sensitive to my own position in the social world I studied, and attempted to use this position as a tool for developing complex reflections and understandings (Wolfinger, 2002). This is especially important to note in a study of the economic lives of urban Philadelphians, as I shared very different

economic, educational or racial privileges from my participants (Liebow, 1967). Rather than writing or editing these issues out while constructing fieldnotes, instead I made a point to include them so that I could improve and deepen my analysis. As a practical example of why this is so important, I would emphasize that my stance influenced the ways in which I built rapport with participants, a subject I will turn to now.

### **Building Rapport**

As discussed, I entered the BTOP Freedom Rings Partnership (FRP) KEYSPOT sites and established relationships with participants during the two years of ethnographic fieldwork. Developing a good “rapport” with my participants was critical for a few reasons (Blumer, 1967). Many KEYSPOT visitors were members of marginalized groups, such as former prisoners or homeless persons, and thus understandably wary of new people that had not earned their trust. Through building rapport, I was permitted more nuanced insights into participant’s lives. As issues around money and finances can be particularly taboo with strangers, building connections was crucial to gain valuable research data on both the barriers to formal work and the emergence of informal “liquid labor” practices. In fact, I would argue that I was only able to see and learn of these practices precisely because of the rapport and trust I earned from participants over time. Otherwise, many would have been reluctant to describe these practices, as some were engaging in them to avoid taxes or not reporting the income to social services. I would also add here that my relationship with KEYSPOT lab assistants and digital trainers was vital in building rapport, as I will explain in the next section.

### **Subjectivity Statement**

Having just discussed the roles of stance and building rapport during ethnographic fieldwork, I will now provide a more specific statement on my own subjectivity in my research sites. This is important because my position and interaction with participants was not only critical to building rapport, but as an ethnographic researcher, I was the instrument through which the data was obtained. More specifically, my gender and racial privileges not only impacted the interactions I had with participants, but also the type of information I had access to regarding their economic lives and work practices. That being stated, now I will discuss how I obtained data, as it relates directly to my subjectivity statement.

As valued members of their respective communities, KEYSPOt digital trainers were the primary access point through which I met and developed relationships with KEYSPOt program participants. However, first, in order to gain the trust of trainers, I had to demonstrate my helpfulness and ability to be a supportive presence in the field, rather than a detached researcher burdening their time. I found this was necessary because many trainers initially expressed their negative experiences with academic researchers in the past, indicating that researchers often appeared aloof or acted as if they were “above” others. Thus, I quickly learned that to gain trust, I would need to engage in helpful roles in the site, demonstrating to both trainers and participants that I did not feel I was of higher-status.

As it turned out, when I asked how I could be of the most use, trainers typically directed me to assist in gendered roles such as helping with childcare, cleaning the lab, and supporting them with simple tasks like making copies or coffee. Most notably one of my primary “jobs” in my research sites was to care for young children so that their



parents could use the computers. Indeed, caring for children was one of the primary ways I earned the trust of families visiting KEYSPOTs. This undoubtedly helped me build the rapport necessary to learn about their economic lives, especially the liquid labor practices they were engaging in to make ends meet. Some of the ways I supported parents with childcare while they visited KEYSPOTs was by helping school-aged children with their homework or reading books to them. Some parents were concerned about letting their children browse the computers unattended, so I would occasionally also supervise their children as they watched online content. For children ages three and under, I usually entertained them with games or simply cradled them in my arms as they napped. Notably, participants cited lack of childcare access as one of their primary obstacles to visiting the labs and to participating in future digital training courses. In this way, my ability to practically respond to childcare obstacles allowed me insight into participants' economic lives and kept participants in the lab. Yet, I would underscore that these findings were made possible due to my own *gender* and *gendered work* in the field. As I will argue in Chapter 2, reproductive labor was a major motivation for parents to pursue informal digital work practices. And, quite remarkably, performing reproductive labor was how I developed rapport in the field, as I will also consider in Chapter 7. Now that I have reviewed the role of stance and support in the research process, I will provide more background on the data collection practices and procedures that guided the research process.

### **Writing Fieldnotes**

In the initial phase of my research, I conducted participant observation. More specifically, I observed KEYSPOT labs and training programs, recording notes or

“fieldnotes” that depicted physical spaces, interactions with participants, and participant interactions with each other. In these fieldnotes, I utilized “thick description,” or detailed descriptions that could better represent the micro-processes of participants’ everyday lives (Geertz, 1973). While the broader research questions I reviewed earlier provided the underlying structure for the study, I also attempted to discern local meanings, or the ways in which the participants themselves understood and made sense of their economic and social world (Garfinkel & Sacks, 1970; Geertz, 1983). In other words, I sought to better understand how participants viewed their economic lives and how they articulated their relationship to ICTs.

### **Semi-Structured Interviews**

As the second research component, for interviews I revisited the initial research questions and used both acquired knowledge of the fieldsites and the social relationships I developed in the field to identify the best candidates for interview. In doing so, I considered how particular participants could enhance –or complicate – the research questions. While draft interview questions were developed (see Appendix I), I utilized a semi-structured interview approach. To provide more background, semi-structured interviewing is more open-ended, and allows for greater flexibility in the interview interaction (Bernard, 2002). For example, in an interview, I could receive an unanticipated answer from a participant. Rather than ignoring this response or simply moving to the next question, I followed the detour through probing follow-up questions, which permitted greater context and enriched my understanding of local meanings (Bernard, 2002). In doing so, however, I was also attentive to the overarching themes of the study and research questions (see Appendix II). As the objective of this project was to

better understand barriers to formal work and informal or invisible digital work practices, this semi-structured technique was vital. Said differently, I needed to map out what these practices were before I delved more deeply into what they meant, or, how they were connected to each other.

### **Document Collection**

As the third component, I collected documents available within the research fieldsites throughout my two years in the field. Documents collected included: meeting agendas, program reports, marketing materials, course materials, informational flyers, sample resumes, job postings, handouts, creative materials (e.g., digital music produced in sites), website screenshots and other documents. Some of these original documents are included in Chapter 6 in a discussion of jobs advertised through KEYSPOTs. All documents were dated and the site origin was also noted. When useful, descriptions of the documents collected were incorporated into my fieldnotes. I also collected documents connected to BTOP more broadly, including National Telecommunications Infrastructure Association (NTIA) reports, BTOP reports, federal ARRA reports, and others which addressed issues of work or digital labor for the poor and working class. A number of these documents are analyzed in Chapter 4 and Chapter 5.

### **Ethnographic Research Analysis**

Following data collection, the fieldnotes from participant observation, transcribed semi-structured interviews and scanned documents were entered into NVivo 10 qualitative research software. All data were subsequently “coded” through NVivo 10 for themes or categories. This coding process followed two stages. First, data was reviewed line-by-line for any general themes or ideas, or “open-coded.” In this phase, all meanings

were considered, “no matter how varied or disparate” (Emerson, Fretz & Shaw 2011, p. 172). In the second “focused coding” stage, the data was analyzed for themes connecting directly to the initial research questions. Drawing on both open and focused codes, individual research memos were then written to analyze and synthesize the research findings (Strauss & Corbin, 1990). These individual memos were then revised, edited, and integrated into a single thematic narrative (Emerson, Fretz & Shaw, 2011). When possible, excerpts from fieldnotes, interview quotes or primary documents collected are included to reinforce particular analytic points. I also want to note that I have bolded key ideas in these quotes to help the reader follow my main points, as some of the blocks of text from participants’ responses are long and therefore could be confusing for readers. I will now turn to the larger challenges of conducting urban ethnography, specifically the possible pitfalls to be avoided.

### **The Pitfalls of Urban Ethnography**

Although I have addressed issue of subjectivity in fieldsites, it is pertinent to include some of Loïc Wacquant’s (2002) “pitfalls” of urban ethnography, especially considering that he makes an important critique of Mitchell Duneier’s (1999) ethnographic study, *Sidewalk*, that focuses on the informal economy. To provide more background on Duneier’s project, his book investigates the economic and social worlds of informal book dealers in New York City (as I will discuss later in Chapter 3 as well). To return to Wacquant, he addresses Duneier’s study but also offers an important critique of two other prominent urban ethnographies that I will not review later—*Code of the Street: Decency, Violence, and the Moral Life of the Inner City* by Elijah Anderson (1999) and *No Shame in My Game: The Working Poor in the Inner City* authored by Katherine

Newman (1999). Using these three texts as examples, Wacquant (2002) outlines some common urban ethnographic “pitfalls.” Those most relevant to this study are that an urban ethnographic researcher must be aware of producing research that does not challenge the structural conditions that contribute to poverty and accordingly generates overly romantic narratives of urban life. In other words, Wacquant (2002) argues that these three ethnographic studies glamourized and sensationalized urban life, overlooking the ways in which economic, social and political inequality shape urban communities and constrain economic opportunity. As a result, these studies unintentionally reproduced stereotypes of urban families and contributed to a political discourse that celebrates “personal responsibility,” a subject I will also address in Chapter 2.

These concerns are extremely relevant to this study. For example, considering these pitfalls, I endeavored to avoid romanticizing, for instance, the informal practices or the participants. For example, Joanne’s informal online work practices undoubtedly included components of creativity and ingenuity. Yet, I did not lose sight of the fact that they were necessary for her survival in difficult economic circumstances and therefore I situated them within a structural critique of advanced capitalism. Further, the theoretical frames I will present in the following chapter –Marxist feminism, liquid modernity and the concept of “digital myths” – provide a strong critical theoretical frame for analyzing non-wage and informal labor and its unique exploitation in the information economy.

However, most importantly, I had to consider reproducing stereotypes of urban life in significant ways in this project. My initial participants were working class single mothers and caregivers, thus when I first proposed this project I wanted to focus on how the reproductive labor of “single mothers” was motivating these digital work practices.

However, in the process of data analysis, I realized I had overlooked the ways in which *fathers* were also engaging in these liquid labor practices to help care for their families. While it was definitely true that male caregivers were more likely to have a partner to share reproductive labor responsibilities than women, to exclude their economic lives from the study would have trapped my research and participants in a raced and gendered framework unfaithful to my data. In other words, though it may be true that “urban single mothers” are a group deserving of exclusive attention and theorizing in other projects or my own future research, given my questions and data collected in this study, I decided it was appropriate to expand my focus to consider mothers and fathers. Thus, considering Wacquant (2002), I repositioned this study to focus on the economic lives of the working class and reproductive labor more broadly, therefore avoiding the pitfall of relying heavily on a top-down frame of the “urban single mother” when it did not accurately represent the full range of these practices observed at least in my particular fieldsites.

### **Key Terms**

I also want to outline some key terms that I use throughout this dissertation to offer a foundational vocabulary for the project. This is not an exhaustive list of key terms, and I do not include my own key terms that I intend to contribute as core arguments—such as “policymakers” which I define in Chapter 4. Instead, these are more general terms in the field that are repeated often throughout the project. The terms that I will review include: 1) information economy; 2) digital labor; 3) informal economy; 4) digital divide; 5) digital workforce divide; 6) labor; 7) work; 8) working class; 9) entrepreneur; 10) reproductive labor; 11) neoliberalism; 12) globalization; and, 13) urban crisis. Notably, these definitions are somewhat abbreviated as I will explore each in more depth later,

nonetheless, they can offer an initial roadmap for the reader to move more easily through the project.

### **Information Economy**

To begin, throughout this project, I refer to the “information economy” drawing on Porat (1977) and Castells (1989). In utilizing this term, I refer to the ways in which the current economy is increasingly driven by information creation and information sharing. Further, the “information economy” is distinct from the *industrial economy* in that the production and development of goods and services has been profoundly altered by the introduction of Information Communication Technologies (ICTs). This is not to suggest that the information economy has replaced the industrial economy or is unconnected to it; I only refer to the “information economy” to capture these changing relationships between capital and labor. I will discuss this concept in more depth in Chapter 2 in relation to Bauman’s (2000) theory of liquid modernity.

### **Digital Labor**

Aligned with Fuchs (2010, 2012, 2014) and Scholz (2013), in this dissertation I use the broader term “digital labor” to refer to a range of emerging online activities that may not immediately be recognized as “work,” but nonetheless generate profit for the information economy. For example, creating open source software online is digital labor as is creating a Facebook fan page or writing e-books as Joanne does. Notably, Lazzarato (1996) and Hardt & Negri (2001, 2005, 2009) describe this as “immaterial labor” however I do not use this term, because as mentioned earlier, I will argue in this study that focusing on “immaterial labor” can ignore the ways in which digital and material economies interact. One subset of immaterial labor practices is “affective labor,”

meaning when value is extracted from our social and communal labor on sites like Facebook or Twitter (Weeks, 2009).

### **Informal Economy**

As the literature review in Chapter 3 will demonstrate, “informal economy” is a broad term that can refer to many practices, sectors, and categorizations. As Losby, Else and Kingslow likewise (2002) point out, many terms are used to refer to these extra market activities in academic literature. The informal economy has also been termed the “irregular economy” (Ferman & Ferman, 1973), the “underground economy” (Simon & Witte, 1982), the “shadow economy” (Frey, Weck & Pommerehne, 1981;); the “reserve economy” (Swaminathan, 1991); and the “social factory” (Tronti, 1973). However, my definition of the “informal economy” will be guided by Marxist feminist theory which states that the informal labor is: 1) Unwaged or unsalaried; 2) Generating hidden surplus labor that is linked to the formal sector; 3) Outside the scope of commodity production; 4) Generated without direct recognition from the state or private business, such as tax identification; and, 5) Produced without union protection or connected benefits such as health insurance (James, 2012).

### **Digital Divide**

The metaphor of the “digital divide” is meant to describe discrepancies in information access, specifically in terms of access to ICTs. In other words, this term refers to a gap or divide between those with internet access and those without. As I will discuss in Chapter 3, for some scholars the “digital divide” also refers to a gap of digital skills. Others have conceptualized this divide as one of economic, social and political inequality.



## **Digital Workforce Divide**

Aligned with scholars such as Rodino-Colocino (2006), I will use the term “digital workforce divide” to refer to the ways in which ICT access and the information economy more broadly have reshaped the U.S. workforce. To elaborate on this point, Rodino-Colocino (2006) suggests that overreliance on term “digital divide” may obscure a growing digital labor force divide. As an example of how the “digital workforce divide” operates, in Chapter 3 I will discuss Google’s usage of low-paid, low-skilled digital book scanners who are isolated from the “Google campus” and are not permitted to interact with the high-skilled tech employees.

## **Labor**

It is also important to define the terms “labor” and “work” which are used frequently throughout this dissertation. This project draws heavily on Raymond Williams’ (1976) useful definitions (and distinctions) between these concepts. First, whereas in early English the word “labor” was associated with pain or toil (e.g., labor of tilling the earth or labor of giving birth), eighteenth and nineteenth century economic theorists and scholars like Marx, Locke, Malthus and Smith used the term to apply to capitalist relations. More specifically, though in early English the word “labor” referred to all productive work and implied hardship and toil, political economy studies positioned labor within the framework of commodity production (Williams, 1976). In other words, “labor” in political economy –and correspondingly in this project –should be more closely understood as resulting from the interaction between capital and materials to produce material or immaterial commodities.

## **Work**

In contrast to the above definition of “labor”, in early English the term “work” carried a wider range of applications and was somewhat less strongly associated with pain or toil, and referred to both paid and unpaid employment (Williams, 1976). For example, “working” in the garden could equally mean for personal financial profit or for personal enjoyment (Williams, 1976). Thus, as Williams (1976) points out, all laborers would be considered workers but not all workers are laborers. Following from this, my dissertation uses the term “work” to refer to a wider set of activities that may or may not be related to commodity production whereas labor is tied more directly to capitalist relations and the market. Williams also points out that in English a “job” is formalized work for payment – another term utilized in this project in a similar capacity.

## **Working Class**

Yet, drawing on Marxist theory, “working class” should be considered a separate (though related) concept which refers to the productive class of workers in capitalist societies who do not own the means of production and thus must sell their labor power for wages. Though I do not draw heavily on the term in this project, Marx (1996) also referred to this group as the “proletariat.” In other words, most broadly I intend “working class” to describe an economic relationship between classes of workers in advanced capitalism or an economic position in society. This is a subject that will be considered further in Chapter 2.

## **Liquid Labor**

As I mentioned earlier in this chapter, drawing on Bauman’s (2000) concept of “liquid modernity,” I propose the rise of informal online labor – or liquid labor – as a

framework for understanding the complex issues surrounding precarious work and the information economy in advanced capitalism. More precisely, “liquid labor” recalls flexible, low-financial risk work practices that function as kind of super precarious, highly exploited online labor. This type of labor is uniquely shaped by social and class position in addition to access to ICTs. Therefore, I have selected “liquid labor” as a more appropriate classification than “immaterial labor” or “affective labor” to draw attention to the ways in which class location and digital access interact to generate precarity. Moreover, “liquid labor” advocates for a materialist understanding and interpretation of risk and entrepreneurship, a term I will now consider.

### **Entrepreneur**

As I will discuss later in this project, “entrepreneurial activity” is a term frequently used in broadband programs, but one that is vague to the point of abstraction. As Nelson (2012) points out, this lack of specificity makes it difficult to evaluate *who is* and *who is not* an entrepreneur. For instance, he reports that Merriam Webster defines “entrepreneur” as, “one who organizes, manages, and assumes the risks of a business or enterprise.” In contrast, dictionary.com explains the term to mean, “a person who organizes and manages any enterprise, especially a business, usually with considerable initiative and risk.” I assert that *risk* is the most important dimension when considering who is or who is not an “entrepreneur.” As I will discuss in Chapter 7, liquid laborers like Joanne are *not* entrepreneurs as they must mitigate financial risk and do not have formal access to capital.

### **Reproductive Labor**

I will use the term “reproductive labor” throughout this project and discuss it in depth in Chapter 2. The term “reproductive labor” refers to the labor required to reproduce the worker and the workforce. For example, the wage extracts work from a housewife as well, who must daily *reproduce* the labor power of her husband by preparing meals, folding laundry, cleaning the house, and caring for the children (Federici, 2012, p. 8). In other words, capitalism requires the unwaged reproductive labor of women (and men) –not only to contain the cost of labor power –but to also supply and support a new generation of workers (James, 2012). Said plainly, unwaged reproductive work *enables and supports* waged productive work.

### **Neoliberalism**

In this dissertation, I will argue that broadband projects like BTOP are, in fact, shaped by the discourses of “neoliberalism.” To explain, according to David Harvey (2005), “neoliberalism” is a theory of politics and economics that argues human wellbeing can be achieved through a focus on individualism and free market principles. This philosophy accordingly holds individuals accountable for their welfare, rather than society or the state (Harvey, 2005). Said differently, “neoliberalism” is focused on themes like personal responsibility and self-sufficiency.

### **Globalization**

Most broadly, “globalization” refers to the increasing global connectedness between businesses, governments, economies, cultures and populations. In this project, I am interested in the role that ICTs have played in globalization and its impact on the economy. Furthermore, I focus on how – and why –globalization and automation together have resulted in a restructuring of the relationship between capital and labor. For

instance, in Chapter 5, I will argue that post-industrial cities like Philadelphia have been among the hardest hit by globalization and the shift to an information and service based economy (Bell, 1976; Castells, 1989; Cohen, 1981; Harvey, 2006; Hodos, 2002; Sassen, 1991).

### **Urban Crisis**

The “urban crisis” and how it has impacted the city of Philadelphia is a subject I will take up in depth in Chapter 5. However, to provide an abbreviated definition, the urban crisis refers to the economic, social and political crises facing many major U.S. cities, particularly Rust Belt cities that once served as manufacturing or industrial strongholds. Scholars have recognized that a confluence of factors –including the shift to ICTs, deindustrialization, retrenchment, and depopulation –are responsible for the problems of poverty and inequality plaguing many urban communities in the U.S. (Jargowsky, 1996; Sugrue, 2005).

### **Limitations**

Having created working definitions for this study, it is important to note that the themes of the information economy, digital labor, and the digital divide are quite broad. Thus, to narrow the scope of this study, it is important to discuss the limitations or boundaries of the research. First, given the definition of the information economy and informal economy previously discussed, I want to flag that this study will be confined to intersections between economic practices and ICTs. Therefore, promoting informal services such as housekeeping on a website or via social media would be discussed. However, participants promoting these services through word-of-mouth only would be outside the scope of this particular project. Second, this study is primarily focused on the

economic lives of KEYSPOt job seekers in the period when data collection began (2011) to present. As such, I will examine possible barriers to formal economic opportunities and informal activities only among this group of participants. Third, the study of policy documents and discussion around the goals of labor will center on BTOP through ARRA. When necessary, I will connect on a limited basis to broader patterns of legislation to provide necessary history or background information contained in either BTOP or ARRA, such as the *Falling Through the Net* series in Chapter 4. However, these discussions will be included only to motivate the larger argument around BTOP and KEYSPOts. Finally, as an ethnographic project, I did not conduct surveys or other mixed methods research on these digital labor practices within the sites. However, as I mentioned earlier, other KEYSPOt partners including the New American Foundation and Drexel University did conduct survey and focus group research on the same population, so I will refer to those conclusions when useful.

### **Outline of Study**

Having presented the stakes of the project, research questions, background on my fieldsites and methodology, as well as key terms, I will now provide a brief overview of each dissertation chapter, highlighting key ideas and insights. To more fully situate this analysis, Chapter 2 offers a social-theoretical framework for positioning the economic lives practices of poor and working-class participants in BTOP, drawing on Marxist feminism, Bauman's (2000) sociological arguments on "liquid modernity," and Mosco's (2004) cultural arguments regarding "digital myths." Current literature in the field is reviewed in Chapter 3 to allow us to better understand the emergence of these new online work practices, the larger socioeconomic context in which these practices have evolved,

and the policy discourses underpinning BTOP. Next, Chapter 4 examines the history of BTOP and the evolution of thinking around economic opportunity to analyze how the goals of digital labor were developed at the U.S. federal and local levels. To situate my project within a precise social, economic, and political landscape, Chapter 5 traces the history of technology programs in Philadelphia and the city's urban crisis. Following this, Chapter 6 examines the digital work skills participants obtained in KEYSPOT programs and then addresses some of the formal economy barriers facing job-seekers. Finally, in Chapter 7, I detail the "liquid labor" practices of four participants –Joanne, Sky, Deric and Ron –to bring my framework to life. I will synthesize some key themes from their stories, arguing that the participants engage in these liquid labor strategies because they provide flexibility, minimize financial risk and are more conducive to reproductive labor roles. Finally, I will offer some broader implications of these findings on the economic lives of BTOP participants, consider areas of possible resistance and intervention, and offer some concluding thoughts and potential areas of future research beyond this dissertation.

## Chapter 2

### Reproductive Labor, Liquid Modernity and Digital Myth-Making

#### Introduction

Whereas Chapter 1 presented the broader stakes of this dissertation –outlining my research questions and sketching out themes and terminology central to the project – this chapter presents a social-theoretical framework for analyzing the economic lives of poor and working class BTOP participants who engage in “liquid labor” like Joanne. Further, this framework allows us to better understand the disconnect between BTOP policies and practices, thus better accounting for Mr. Wilson’s experiences with technology. This framework is rooted in a critical foundation and draws on three theoretical areas: Marxist feminism, liquid modernity and digital myths. I have built this interconnected framework to respond to the research questions detailed in the last chapter. These questions can be condensed as investigating: 1) economic lives and online work practices (“practices”); 2) the relationship between these practices and the contemporary information economy (“social and economic context”); and, 3) the goals of digital labor as outlined in broadband policy and programs (“policy discourses”). So, to be more specific on this point, the Marxist feminist theory helps to better explain and explore these new online work *practices* and precarious economic arrangements. The theory of liquid modernity situates these practices and participants’ economic lives within the *social and economic context* of the contemporary information economy. Finally, to address the emergence of these practices within the context of the Freedom Rings Partnership and KEYSPOTs, the theory of “digital myths” sheds light on some of the common *policy discourses* that underpin broadband programs like BTOP and thus motivate the goals of digital labor.



This critical theoretical scaffolding also complements an inductive urban ethnographic approach.

In summation, the first foundation draws on a Marxist feminist framework to better understand the impediments working class parents face to finding well paid work, tracing the connections between unwaged labor and *social reproduction*. Second, key concepts taken from Bauman's (2000) "liquid modernity" situate the research within the context of the contemporary information economy, revealing how the rollback of social programs coupled with discourses of neoliberalism have pushed workers to embrace flexible, financially risk-averse "survival" strategies (Sassen, 2003). Third, I review Mosco's (2004) "digital myths" that offers a lens through which we can critically evaluate the policy discourses which underpin BTOP and thus how the goals of digital labor were presented and developed therein. Finally, the conclusion summarizes my key theoretical planks, reviews their relationship to the research questions, and sets the stage for the literature review chapter.

### **Marxist Feminism – Digital Labor Practices**

To turn to my first theoretical plank, I argue that Marxist feminist theory sheds light on the economic lives of BTOP participants and the emergence these new digital work *practices* as it focuses on how the necessity of *reproductive labor* can generate new working arrangements across gender, racial and class lines. To make this argument, first I will define reproductive labor and discuss the broader significance of the theory. Next, I will turn to the relationship between reproductive labor, ICTs and the dismantling of the welfare state. Finally, I will detail other specific factors shaping labor practices, such as the lack of affordable childcare access.

## Reproductive Labor: The *Wages for Housework* Movement

To begin, what do I mean by “reproductive labor” and why is the theory significant? Marxist feminists such as Selma James (2012), Mariarosa Dalla Costa (1999), and Silvia Federici (2012) formed the international Wages for Housework (WfH) campaign in the 1960’s – 1980’s to draw attention to this issue of *reproductive labor* in modern capitalism (Altbach, 1980). WfH was a broad movement of feminists with varied political identifications ranging from Marxist, liberal, and anarchist<sup>1</sup> who simply used housework as a starting point to protest – and highlight – the necessity of unpaid domestic labor. To elaborate, what they intended to point out is that the wage extracts work from the housewife as well, who must daily *reproduce* the labor power of her husband through caring for the children while he is at work, preparing meals for the family, folding laundry, cleaning the house and soothing the stresses of his day (Federici, 2012, p. 8). So, this feminist inspired movement was not about “a lump of money” (Federici, 2012, p. 12) or housewives specifically, rather, it is a political perspective on the foundational role of *reproductive labor* in capitalist society. In other words, although reproductive labor is foundational to the economy, it is degraded, made structurally invisible and uncompensated – an argument I make throughout this project, but with a particular focus on class issues.

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<sup>1</sup> It is important to note that WfH activists were divided on the role that unions should play in their activism, particularly due to concerns that unions were dominated by ‘masculine interests’ and that domestic workers had faced an uphill battle in their attempt to be recognized and receive union protections (da Motta, 1999, p. 127; James, 2012, p. 65). However, James (2012) later revises her position in 1972, saying that her, “critique of the unions was too absolute. It takes no account of the possibility of a mass takeover by members....we must remind ourselves that a great deal is at stake in unions....they open the possibility of reclaiming our own unions” (p. 61). Federici (2012), however, continued to maintain an anti-union position.

Before I move on, I should add here that the WfH movement was for the most part associated with the *autonomist* Marxist movement and distanced itself from earlier *socialist feminist* theories. To provide background, socialist feminism championed traditional labor movements and organizations (such as unions) as the best mechanism to protect the interests of working people. Conversely, autonomist Marxist movements embraced a decentralized organizing approach and critiqued socialist feminism as overly hierarchical, claiming that traditional Marxism promoted a top-down approach to resistance rather than a more grassroots, bottom-up approach. I would point out that the WfH movement's critiques of the inadequacies of traditional labor unions in supporting women workers were valid and important, specifically in their discussions of the failure of unions to advocate for immigrant women and domestic workers (da Motta, 1999; Federici, 2012; James, 2012). That being said, beyond the conclusion the subject of labor's political resistance and organizing strategies is outside of the scope of this project, thus, I will also introduce some relevant socialist feminist scholarship later. Nonetheless, as I am drawing from this framework, it is useful to highlight and draw attention to these origins before proceeding.

So, to return the key theoretical points that I will draw on, the WfH movement emphasized that this inability to conceive of value producing work outside of commodity production was a blind spot in Marx's analysis of capital. To explain Marx's original arguments on the subject, in his Introduction to Part III of *Capital Vol. III* that deals with 'Reproduction and Circulation of Social Capital,' Marx (1992) describes the relationship between the commodity and social reproduction. Here Marx claims that in capitalism, the commodity form is produced and reproduced through the *individual worker*:

....the circuits of individual capitals intertwine, presuppose and necessitate one another, and form, precisely in this interlacing, the movement of the total of social capital. Just as in the simple circulation of commodities the total metamorphosis of a commodity appeared as a link in the series of metamorphoses in the world of commodities, so now the metamorphosis of the individual capital appears as a link in the metamorphosis of social capital. (p. 357-358).

In this excerpt I have provided, Marx is suggesting that you cannot divide the living individual from their labor power. Yet, he does not consider the role of non-workers (wives) in reproducing the individual worker. Marxist feminists in the WfH movement therefore point out that if you cannot divide the individual worker from their labor power, it follows that it is impossible to sort out and isolate the components of “productive” and “reproductive” work. Said differently, WfH contends that capitalism required the unwaged reproductive labor of women –not only to contain the cost of labor power –but to supply and support new generations of workers (James, 2012). Said plainly, unwaged reproductive work *enables and supports* waged productive work.

In this way, whereas classical political economy defines a commodity as something that is owned and can be legally exchanged, Marxist feminists in WfH pointed out that housework – and the work of reproduction more broadly –was always necessary to produce workers but not visible in the commodity form until the 1950’s – 1970’s when women left the home in vast numbers to enter the formal labor market. As middle and upper-class women left the home (and thus their reproductive roles) to enter the workforce, poor and working-class workers (primarily women) shifted into their shoes, acting as careworkers, nannies, cooks and maids. Therefore, this important reproductive

labor remained invisible to capital only up until the point at which it was no longer performed for free (James, 2012, p. 45). Again, it was poor and working-class individuals who came to occupy these reproductive roles vacated by middle and upper-class women, signaling a “double movement” as they continued to reproduce their own families but also the middle and upper-class families they now worked for (Weeks, 2009). In this way, unwaged or low-waged workers from the most vulnerable populations became responsible for helping reproduce waged workers – coincidentally one of the reasons why opportunities for low-wage work in service and domestic sector opportunities abound, an issue I will explore in Chapter 6 (Dalla Costa & Dalla Costa, 1999, p. 29; James, 2012). Yet, what is more important here is that the necessity of reproductive labor following the exit of middle and upper-class women from the home and entrance into the workforce resulted in a reorganization of work across gender, racial and class lines. Said another way, the profound shifts in reproductive labor generated and motivated a new set of exploitative working arrangements, such as the liquid labor practices I identify in this project.

### **Neoliberalism and the “Third Layer” –Degrading Reproductive Labor**

I would point out here that the perspective of Marxist Feminism, like Feminist Economics<sup>2</sup>, is not restricted to studies of women and gender, though it is interested in

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<sup>2</sup> Most broadly, feminist economics “challenges economic policies that treat women as invisible” (Nelson, 2010, p. 96). Similar to Sandra Harding’s (1986) argument regarding the nature of science, they contend that economics tends to be male-biased in its definition and methods and thus ignores (or worse obscures) the work of women. Rather than simply sorting “women” out as a variable in existing approaches to economics, feminist economists place women at the center of the research question to attempt to expose or uncover new insights regarding the nature of the economy, also investigating issues of race and class – James’s (2012) “third layer.”

those of course. More broadly, the movement called attention to the important *reproductive labor* that propels and props up the foundation of the capitalist system. Yet, the WfH movement also revealed the function of the wage in striking divisions within the working class, starting with the relation between women and men, but also in “third world” and immigrant populations as well – groups James (2012) referred to as the “third layer” (Altbach, 1980; Ascher, 1974; Benston, 1969; Caffentzis, 1999; Dalla Costa, 1999; da Motta, 1999; Morton, 1970). In recalling the “third layer,” James (2012) proposed that reproductive labor is degraded more generally by capital, however when it intersects with other issues – such as *racial and class* disparities – its role is further diminished. This is a key claim I am drawing on in this project. To elaborate on the point, as advances in information technology and globalization worked together to open the markets to new pools of exploitable workers, capital’s need to reproduce the workforce changed. In the previous period – a period which Bauman (2000) refers to as “solid modernity,” as I will turn to in the next section– capital was anchored to location and thus relied on the welfare state and social support programs in advanced economies to sustain the working class and keep them as a “reserve army” of cheap labor in any given territory (Dyer Witheford, 1999). Yet, in this new era of “liquid modernity” (Bauman, 2000), capital could easily flee workers and seek that cheap labor elsewhere. As a result, the need to sustain the working class in “advanced economies” diminished and thus public and governmental support for social programs withered. In other words, as globalization offered U.S. corporations access to cheaper foreign labor, governmental systems supporting and reproducing the domestic labor force weakened. This is a line of argumentation that

Bauman (2000) develops in more depth and that I will address in the next section of this chapter.

To return to the broader Marxist feminist theories regarding reproductive labor and the working class, critical scholars have suggested that this is one of the goals of neoliberal capitalism in the contemporary information economy: to diminish carework and make the needs of social reproduction for the poor “invisible” (Abel & Nelson, 1990; Folbre, 1994, 2001; England & Folbre; Fisher & Tronto, 1990, p. 35). For example, as will be reviewed in Chapter 3 and Chapter 5, Grabham and Smith (2010) argue that the retrenchment of the welfare state and a new policy shift in the 1990’s away from “welfare” programs for poor families and towards “workfare” programs in the U.S. that required work as a condition of social support signaled this dismissal and degradation of reproductive labor (Grabham & Smith, 2010, p. 84 -90). Therefore, building on Marxist feminist thought, I will assert in this project that public policy no longer recognizes reproductive responsibilities due to the values of neoliberalism, but also because trends of globalization have eased capital’s access to cheap labor. This is the kind of labor my participants visiting KEYSPOTs performed – and thus sustaining these workers through social programs was no longer a priority. I would highlight here that the timing of these welfare policy shifts in the 1990’s coincides *exactly* with the expansion of ICTs and the advance of globalization. As a related point, in the contemporary information economy, the very necessary work of parenting and reproduction is more likely to be degraded and devalued in the type of low-skilled, low-status jobs performed by poor and working parents like Joanne.

Many of the Marxist feminists of the period writing on the “crisis of social reproduction” trained their sights on the “third world” impact or on how these reproductive labor trends influenced immigrant populations (Dalla Costa & Dalla Costa, 1999; da Motta, 1999; Federici, 2012). For instance, these authors point out that immigrant careworkers serving middle and upper-class families must spend time apart from their own children (in some cases, their families may even be living overseas) and often receive meager pay and no benefits. I, however, contend that this crisis of reproduction and degradation of reproductive labor is more expansive than they have theorized, as childcare issues also dramatically shape the fortunes of poor native-born U.S. workers who can legally work in the country’s formal sector. As an example, I will argue in Chapter 6 that many of the formal sector opportunities available to KEYSPOOT job seekers did not provide a living wage and were in no way conducive to parenting, offering undesirable hours and inflexible family leave policies. Because these available formal sector opportunities were unfriendly to parents, some job-seekers decided to forego the formal economy altogether or to supplement their income with opportunities in the informal sector. Therefore, these new liquid labor practices were borne out of the necessity of reproductive labor: participants like Joanne sought arrangements that would allow them to properly care for and support their families.

### **Considering Reproductive Labor in the Context of BTOP**

As discussed earlier, whereas the WfH movement attempted to distance itself from earlier socialist feminist thought, I would underscore that the subject of reproductive labor was also important to socialist feminist scholars, though I am not heavily pulling from these ideas due to their inattention to issues such as race. One



socialist feminist thinker who engaged with these issues of reproductive labor in early 1900's Russia was Alexandra Kollontai (1984) who criticized the "free love" principles of contemporary feminist movements of the period. Aligned with my research focus, she suggested that only when state supported childcare was accessible would working women be truly emancipated (Kollontai, 1984). In other words, more than fifty years before WfH, Kollontai (1984) drew attention to the reproductive labor functions of women and identified widespread imbalances in childcare support as a factor furthering inequalities between men and women, but likewise, between the social classes. Draper (2011) argues that as members of the working class, early feminists<sup>3</sup> like Kollontai (1984) had a different perspective on the feminist movements of their time and therefore were able to begin to conceptualize the relationship between capital and social reproduction, a cause later taken up and developed by autonomist feminists in the WfH campaign. In any case, I bring up Kollontai's (1984) contribution because it dovetails with my argument that reproductive labor is not only necessary for capital production, but that it is degraded along class lines. Moreover, her direct call for the state to recognize this necessity of *childcare* is one that I will echo throughout this project and address in my conclusion chapter as well.

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<sup>3</sup> Draper (2011) also traces the junctures and tensions between proletarian and bourgeois feminist movements from the era of the French Revolution to present day, focusing on early Marxist Feminists such as Claire Lacombe, Clara Zetkin, Rosa Luxemburg (2008), and Alexandra Kollontai (1984). In contrast to such feminist contemporaries as the British writer Mary Wollstonecraft, instead of advocating for women's right, the Marxist feminists took those rights by organizing in the street and setting up their own political meetings. For example, Claire Lacombe's pamphlets promoted her organized protests demanding relief measures for the poor (Draper, 2011, p. 64).

But although Marxist feminism provides us with a toolkit to investigate the relationship between reproductive work, and unwaged work and lack of childcare support, it does not provide us with the compass needed to navigate all of the contemporary issues framing this study, such as the rise of precarious work, neoliberalism, globalization, and the pace of technological change. Therefore, as already discussed, key concepts taken from Bauman's (2000) sociological arguments on "liquid modernity" will be utilized to better respond to my research question on the relationship between the economic lives of participants and the information economy. I suggest that Bauman's (2000) concepts better position the research within current global and local capital shifts that have produced the conditions in which informal labor is generated, for example tracing the connection between neoliberalism and globalization to diminished job opportunities for participants like Mr. Wilson. Additionally, this theory maintains that the breakdown of durable institutions and the rollback of social programs have made these new precarious working arrangements a necessity (Sassen, 2003). Ultimately, though, my goal is to demonstrate that Bauman's (2000) insights help better explain how the needs of reproduction and childcare interact within a broader network of participant choices and economic calculations, choices that attempt to maximize flexibility and minimize personal economic risk.

### **Social and Economic Context: Liquid Labor in the Information Economy**

To pivot to my second theoretical plank, in his book, *Liquid Modernity*, sociologist Zygmunt Bauman (2000) explains that "modernity" has been marked by a passage from solid structures to flexible, liquid structures. To provide more detail, according to Bauman (2000), the defining features of the current "liquid" age are a

declining investment in stable and durable structures (such as institutions like libraries and social support programs) and an increase in globalization, deregulation and privatization. I contend that this theory can offer insight into the relationship between these emerging liquid labor practices like Joanne's that I have identified and the contemporary information economy. Thus, first I will present Bauman's (2000) conception of "solid modernity," otherwise known as the industrial period, focusing on how social support systems were maintained to help reproduce the labor force and furthermore how this safety net supported individual risk-taking. Second, I will turn to "liquid modernity," describing its defining characteristics and stressing connections that establish the link back to Marxist feminism and reproductive labor. Finally, I will argue that Bauman's (2000) overarching insights about liquid modernity, especially his arguments relating to flexible work and risk-reduction behaviors, help us to better understand the economic lives of BTOP participants in the context of the information economy.

### **Solid Modernity: Durable Structures, Support in Risk-Taking**

To appreciate the relevance of Bauman's discussion of liquid modernity, it is important to first define the preceding period as well – solid modernity –as this concept lays the groundwork for Chapter 5 where the economic transitions of Philadelphia and the urban crisis are discussed in more depth. Bauman (2000) describes the period of solid modernity –later referred to interchangeably in this project with the "industrial" period – as an era characterized by erecting heavy and durable structures, territorial conquest, and developing plans for social progress. Here "solid" is used to invoke the heavy machinery of the industrial factories as well as the weight of expanding railways and other

transportation infrastructures. The term “solid modernity” also conjures the anchoring properties of industrial time, as in this period, the clock began to measure labor and keep track of a worker’s progress (or lack thereof) (Thompson, 1967). In this era, organized labor in advanced economies was also robust, forming a strong counterweight to the ruling class interests.

In sum, in the solid stage, both capital and labor were bound together in a specific time and space in the United States. Therefore, connecting to the Marxist feminist arguments presented earlier, the welfare state’s role was crucial, as it was needed to maintain and support a healthy supply of inexpensive reserve labor for capital in advanced economies. Likewise, social support institutions were vital to new businesses and promoting innovations. In short, the welfare state was, “collective insurance against misfortune [that] made [workers] resourceful enough to develop their potential in full and muster the courage to take risks” (Bauman, 2000, p. 145). Bauman’s (2000) point on “the courage to take risks” is one that I would emphasize, as it describes solid modernity as an era in which poor families felt more supported in risk-taking because there was a social safety net to catch him. Further, alongside Karl Polanyi (1944), Bauman (2000) additionally suggested that labor in this “solid” period was more fixed not only in time and space, but to the physical body of the worker. This conception of a “solid” period can help inform a study of the digital and informalized economy as it highlights the ways the information economy has disrupted the relationship between productive and reproductive labor, but also how ICTs have decoupled time, space, and the body of the laborer in advanced economies. Said differently, this theory helps identify the economic and social changes that have encouraged a new set of online work practices in Philadelphia.

### **Liquid Modernity: Reproductive Labor in the Information Economy**

So, if the previous period was “solid,” how should our current era be described? Similar to Hardt & Negri’s argument in *Empire* (2001), Bauman (2000) suggests that we are now entering a phase of “liquid modernity.” According to Bauman (2000), the emergence of the liquid era is, in fact, a response to the “solidification” of the previous stage just described. For example, labor unions were built up by the poor and working class in the industrial period as a rejoinder to the organization of capital. To flee these constraints and build more profitable structures, it was necessary for capital to “melt down” and “dissolve” the old forms and erect new forms. Thus, as Bauman (2000) suggests, capital and labor are permanently locked in a series of strategies and counter tactics (DeCerteau, 1984). In other words, capital is constantly executing new strategies to obtain higher profits and connect to new markets; thus, new plans were developed to respond to the constraints imposed on capital in the era of solid modernity.

Digital technology was one of the key forces aiding capital in melting down these old social and economic systems for profit. This was in part because technology loosened capital from the old constraints I identified: time, space, and the body of the worker. Capital (and power) could now easily flee protected workers or unfavorable regulations in advanced economies like the U.S. and seek out more profitable territories or countries. To expand on my earlier point linked with the Marxist feminist critique, the seemingly limitless global supply of cheap reserve labor – available either behind computer screens or coordinated through them– rendered U.S. social support programs of the past less useful to capital, as it did not have to consider *reproducing* a local workforce. The subsequent rollback of social support programs destabilized working class communities

across the U.S. and poor families were particularly hard hit by these changes. To revisit my earlier point on Marxist feminism, the necessity of reproduction among the urban poor was thus degraded and welfare programs shifted to workfare programs. In this way, I am arguing here that reproductive labor and liquid modernity are yoked together. I therefore maintain that liquid labor practices emerged out of the necessity of reproduction and childcare needs. As Bauman (2000) explains, another side-effect of the decoupling of labor has meant that governments have little to no security about capital investment and thus privatization and deregulation (including of telecommunications) is offered as an incentive. This is a point Mosco (2004) makes as well, which I will turn to later in this chapter.

### **Liquid Labor: The New Flexible, Risk-Averse Digital Worker**

To return to liquid modernity, Bauman (2000) claims that this social and economic transition is also a reaction to a fear – real or imagined– that solid structures limit the power and movement of the free individual (Bauman, 2000, p. 5). As discussed as a key term in Chapter 1, Harvey (2005) has termed this shift “neoliberalism,” or the worldview that heavy governmental support and durable structures *limit* individual choices and that the individual alone should be responsible for her/his own welfare and wellbeing. So, in addition to the technological changes I have already mentioned, wider cultural changes associated with neoliberalism have also ushered in the era of liquid modernity. Said another way, because individuals like Joanne do not (or cannot in the case of many KEYSPOOT job seekers) rely on solid structures or steady incomes, according to the values of neoliberalism, they must make economic opportunities for themselves with any tools available, such as through engaging in digital “liquid labor”

practices. As a related corollary –and particularly germane to this project –the shift to the cult of the individual and its overarching philosophy has meant that rather than see racial, gender or class disparities as operating in larger entrenched patterns of structural oppression, any disparities can *instead* be viewed as resulting either from a lack of individual connection (*digital access*) or ability (*digital skills*). My point here is that the values of neoliberalism also shape broadband policy, an issue Mosco (2004) addresses and that I will turn to consider later in this chapter.

My conclusion regarding liquid modernity is that, as a response to this constellation of socioeconomic changes, precarious U.S. workers in the new information economy strive to be liquid and flexible, never relying on a single job or an institution to provide long term support. In contrast to solid modernity, as Bauman (2000) explains, work in the age of liquid modernity can be characterized by, “short-term contracts, rolling contracts or no contracts, positions with no in-built security” (p. 147). Along the same lines, Sennett (1998) describes this shift as one towards workforce “flexibility.” Therefore, in this state of perpetual uncertainty and instability, U.S. workers have become more like “tinkerers” (Bauman, 2000, p. 139) or “players” (Bauman, 2000, p. 147) balancing their objectives and focusing on short-term goals. Or as one of my participants, Deric, said about work in the information economy: “you’ve got to hustle.” In a similar vein, sociologist Ulrich Beck (2000) submits that this new “world of work” is characterized by uncertainty, precariousness and *risk*.

Whereas in solid modernity workers felt more protected to take some economic risks, I contend that in the era of neoliberalism, those at the economic margins who have the least protections have become financially *risk averse*. Or as Bauman (2000) clarifies,

when you have no social safety net to catch you, the “responsibility resting on one’s own shoulders’ portends a paralyzing fear of risk and failure” (Bauman, 2000, p. 19).

However, this is an argument I am making that is contrary to a standard view in the field of digital labor studies. While risk is embraced as an entrepreneurial value and particularly celebrated among the high-tech minority (Neff, 2012; Rumberger & Levin, 1985), the poor and working class occupy a very different position in the economy and are thus bound by a different decision matrix, particularly when it comes to risk. In other words, I propose a materialist understanding of risk. For example, the liquid laborers I will later introduce – Joanne, Sky, Deric and Ron – were unwilling to take great financial risks in their business ventures because they feared it would lead to economic ruin.

Instead, they pursued flexible strategies, relying on small cash exchanges (hence my term “liquid labor”) and made only small up-front investments in their enterprises. At the same time, liquid laborers assumed other risks: they invested considerable time into their ventures without knowing if they would ever earn any income. In other words, while I agree with Beck (2000) and Deuze (2006) that “risk” is a defining feature of liquid life, I suggest that “liquid laborers” assume the most risk, circulate in the most precarious survival circuits (Sassen, 2003), and contend with the greatest life uncertainties.

Also drawing on Bauman’s (2000) theories, media scholar Mark Deuze (2006, 2011) applies the concept of “liquid modernity” to analyze how media has catalyzed a collapse between work and leisure, production and consumption (Deuze, 2006, 2011; Jenkins, 2006). Following from this, he argues that in the modern media landscape, all workers are subsumed into the precarity of liquid modernity:



This also means that the precarity of contemporary life through media extends to each and every one of us, and cannot be said to be beholden to a particular group, race, class or gender – even though life’s current precariousness means different things to different people in different settings (Deuze, 2006, p. 12).

In this quote, Deuze (2006) rightly suggests that all workers are vulnerable to the precarities of global capitalism, including the shifts to contracted, part-time and flex-work. While Deuze (2006) acknowledges that this means “different things to different people” and that some segments of the population do not have access to ICTs, he goes on to cite Wikipedia editors and open source software programmers as evidence that we all engage in “participatory cooperation” online (p. 12). I would point out that much in the same way as Jenkins (2006), these examples emphasize a classed type of online engagement and, moreover, ignore the inherent power imbalances that surround the acquisition of –and interaction with –technologies (Eubanks, 2011). Therefore, I am asserting in this dissertation that how precarity is experienced by “different people” is, in fact, of the utmost importance. So, in contrast to Deuze (2006, 2011), I highlight Bauman’s (2000) discussion of the breakdown of durable social support institutions in my dissertation, as I contend that the dissolution of the welfare state has played a very significant role in the shift to precarious work, particularly for the American working class.

In sum, where Marxist feminism clarifies and historicizes the relationship between reproductive labor and precarious low/non-wage labor, Bauman (2000) situates the trends of precarious work within the contemporary information economy, the breakdown of social support, and discourses of neoliberalism. Additionally, Bauman

(2000) helps us better understand why liquid laborers value flexibility and avoid financial risk-taking. Yet, how is it that these unusual online work practices are occurring in the context of federally funded broadband programs focused on job skills and job training? Why does Mr. Wilson cite his job loss as the reason he will not adopt broadband? Mosco (2004) contributes some relevant concepts for thinking about the cultural and symbolic significance of contemporary broadband programs intended to address economic turbulence in the era of liquid modernity. Mosco's (2004) theory is particularly useful in helping us better understand these digital practices and attitudes, and following from this, the program's unintended consequences.

### **Work and Digital Myths: Policy Discourses of Broadband Programs**

So, how do we understand the economic lives of BTOP participants not only in the context of liquid modernity, but in the more specific context of the Freedom Rings Partnership? What are some possible explanations for the gap between policy intentions around digital labor and these on-the-ground digital labor practices, a gap I have termed in this project as one occurring between "policymakers" and "policytakers"? In his book, *The Digital Sublime: Myth, Power and Cyberspace*, Vincent Mosco (2004) provides a useful template for analyzing the common *policy discourses* that underpin broadband programs like BTOP and thus motivate the goals of workforce development. More specifically, he argues that computer technologies should be understood not simply as material (the technologies themselves) or political (accompanied by regulations, programs and policies) but also as cultural because they occupy a realm of "myth" (p. 10). To explain, according to Mosco (2004), to analyze contemporary broadband programs, it is necessary to consider the "central myths" of the digital sublime (p. 2) that

underpin them, such as the myth that digital technology can proffer a quick and easy solution to a complex array of social problems like poverty and inequality (p. 2). Further, Mosco's theory can contribute something unique alongside Marxist feminism's arguments on *reproductive labor* and Bauman's concept of *liquid modernity* as it provides an explanation of how and why technology programs endure, even as discourses of neoliberalism and individualism fuel policies of retrenchment and government funds for programs are slashed.

### **What Are "Digital Myths?" - Why Broadband Programs Endure**

Before I apply this theory to my analysis of BTOP policy and KEYSPOOT program participants, how does Mosco (2004) define a "digital myth"? It is important to clarify that digital myths are *not* deceptions or falsehoods, rather, they are important structuring principles that inform and shape our reality. Consequently, they provide a sense of meaning – validating that our historical moment is special– and help us imagine that the tools we build will be uniquely transformative. These myths, developing Bauman's (2000) insights on liquid modernity, are that all new major technologies signify a new era and transcend power/material conditions (Mosco, 2004). Through tracing the discourses surrounding the evolution of various technologies, such as electricity and the radio, Mosco (2004) reveals that such "myths" remain consistent over time. The grounding insight here is critical: although digital technology may reorganize labor in liquid modernity in significant and measurable ways, it is important to distinguish between the real, measurable changes from the more generalized (and inbuilt) myths of constant progress and change. In this way, an ethnographic study of the real ways digital technology is utilized in the economic lives of everyday people like Joanne

or Mr. Wilson is useful, as it breaks apart actual technological *practices* from technological *myths*.

To return to Mosco's (2004) point on how this relates to broadband policies around workforce development, he argues that these myths directly shape our thinking around the types of economic opportunity new technologies can (or cannot) provide. The digital myth suggests that as ICTs help decouple capital from the constraints of time, space, and the body of the worker in advanced economies, businesses will boom and workers will grow rich (Mosco, 2004, p. 89). This is the myth of the internet providing "riches" that I will further examine further in Chapter 4. Mosco (2004) explains that this assumption of "riches" –as well as the celebration of "virtual corporations" (p. 15) and "flexible specialization" (p. 89) (to echo Bauman, 2000) –is a consequence of our innate belief that technological development is "linear" and therefore always represents human progress. Said differently, the myth of linearity and progress impedes our ability to fully critique the emergence of new technologies because their diffusion is viewed as both inevitable and natural. As a practical example, in this framework, Mr. Wilson's attitudes and beliefs towards technology would be immediately viewed as "backwards" or "old-fashioned," even though his beliefs have been shaped by his unique economic position in the information economy and the loss of his job at the bowling alley.

Thus, while Bauman (2000) argues that durable governmental structures and investments in social programs are dissolving in the transition to liquid modernity, Mosco (2004) helps explain why programs like BTOP can endure. Mosco (2004) argues that technology is one of the areas in which government can maintain relevance – as such, politicians want to be associated "with the totems of cyberspace" (p. 43) and therefore "a

political photo opportunity often includes a computer” (p. 43). Why is this the case? Mosco (2000) indicates that because ICTs are a tool that is seen to provide individuals with unprecedented access to free and low-cost information for self-education and for expanding their personal economic opportunities, digital technology is *uniquely compatible* with the undercurrents of neoliberalism and individualism in our society. Said differently, technology programs are so palatable to the public and policymakers precisely because they fit with the overarching values of neoliberalism. In short, these programs suggest that with the right technological *access* and *skills*, individuals can forge new economic opportunities to lift themselves out of poverty. Of course, as an added bonus, once individuals obtain said digital access and skills and have pulled themselves up by their bootstraps (so to speak), the government can effectively retrench the welfare state even further.

In this way, Mosco (2004) argues that cyberspace provides a “mythic gloss” (p. 15) to the individualism narrative. Under this dominant narrative, poor and working-class liquid laborers like Joanne or Deric would be heralded as self-sufficient digital entrepreneurs rather than viewed as struggling parents circulating in a set of precarious dead-end survival strategies (Sassen, 2003). Therefore, these digital myths are particularly powerful and enduring because as Mosco (2004) points out:

“It is a story about how ever smaller, faster, cheaper, and better computer communication technologies help to realize, with little effort, those seemingly impossible dreams of democracy and community with practically no pressure on the natural environment.” (p. 31)

As Mosco explains above, governmental programs like BTOP are popular and easier to sell to the public because digital myths tell us that broadband access is a “smaller, faster, cheaper” solution for addressing a range of societal problems, such as promoting political engagement or expanding economic opportunities for the poor. And, as I will address in Chapter 4, this myth that technologies can overcome power structures and extant material conditions is imbedded in many of the *policy discourses* around BTOP and the related KEYSPOTs programs. Finally, while I am focusing on Mosco’s (2004) contribution for my theoretical framework, in the next chapter where I map extant scholarship I will also review the research of related scholars who build on these arguments to explain how myths may also operate as ideologies in technology policy.

### **Conclusion**

To better ground this analysis, this chapter presented a critical framework for positioning the economic lives of poor and working-class participants like Joanne or Mr. Wilson in BTOP. As discussed, this framework draws on three primary theoretical areas: Marxist feminism, liquid modernity and digital myths. This framework has been built to respond to the research questions presented in Chapter 1, with Marxist feminism exploring the relationship between digital work *practices* and reproductive labor. Bauman’s (2000) concept of liquid modernity grounds these practices within the *social and economic context* of the contemporary information economy whereas “digital myths” sheds light on the *policy discourses* that motivate the goals of digital labor as articulated through ARRA policy and related broadband adoption programs.

In this chapter, first the primary framework –a Marxist feminist approach –was presented. This section traced the connections between productive and reproductive

work, focusing on how the necessity of *reproductive labor* can generate new working arrangements for participants like Joanne across gender, racial and class lines. Further, I discussed how the needs of social reproduction are degraded in public policy in the era of liquid modernity and likewise how childcare needs are dismissed and diminished in the low-skilled, low-status jobs accessible to KEYSPOT job-seekers. Lastly, drawing on Kollontai (1984), I argued that lack of affordable childcare access is a major obstacle for working class families and shapes their economic lives and thus the type of work they pursue, including opportunities in the informal sector.

Second, key concepts taken from Bauman's (2000) sociological arguments on "liquid modernity" were offered to position the research within the context of the contemporary information economy, including the global and local shifts that create the conditions in which liquid labor develops. As presented, Bauman (2000) argued that the liquid era has been characterized by dismantling durable structures like the welfare state as well as by a trending towards globalization, deregulation, privatization and neoliberalism. Whereas in the industrial era (solid modernity), a worker was more fixed to time and place, today capital – aided by digital technology – can easily seek cheap labor globally, flowing through borders and boundaries. As a response to these social and economic changes, American workers in liquid modernity must become more flexible and adaptable, never relying on a single job or an institution to provide long-term support. With no social support safety net, liquid laborers must also learn to mitigate financial risk.

Lastly, Mosco's (2004) concept of "digital myths" was discussed. I asserted that this theory is useful for investigating the cultural and symbolic significance of

contemporary broadband programs, particularly in understanding how the goals of digital labor are presented and developed. The digital myth – that technologies can transcend power and material conditions – is especially relevant, as it implies that broadband access (and associated programs) can break down structural and economic barriers. Said differently, technology programs fit within the discourses of neoliberalism, suggesting that if given the right *access* and *skills*, low-income individuals can pull themselves out of poverty. Broadband programs receive wide governmental support, even in the era of retrenchment, largely due to this belief. The myth of linearity and constant social progress also impedes our ability to critically evaluate new technologies, as scholars are more likely to focus on the benefits of digital inclusion rather than the ways technologies may oppress poor communities or have constrained economic opportunities for participants like Mr. Wilson.

While these three theoretical frameworks presented lend my dissertation shape and purpose, the next chapter, Chapter 3, will provide a review of relevant literature in the field. While the literature review chapter is intended to better orient and ground the project, I also reinforce my possible areas of contribution to the current research in digital labor and digital divide studies. Building on the theoretical framework I have herein detailed, the areas of scholarship that I will now turn to are digital labor, the digital divide, the digital workforce divide, informal work and relevant urban ethnographies.



## **Chapter 3**

### **Previous Scholarship**

#### **Introduction**

The three frameworks presented in Chapter 2 serve as the theoretical foundation for this project, however this study is situated within –and informed by –a larger body of scholarship as well. In short, extant research in the fields of digital labor, digital inequality, the digital workforce divide, and urban economic survival strategies are central to this study. Thus, it is necessary to delve into this wider body of literature which can better categorize forms of digital labor; explain sources of digital labor exploitation; contextualize digital inequality and policy implications; address barriers to employment in the formal informational economy; and, closely explore informal economic survival strategies.

Therefore, in this chapter, first I will review related research in digital labor studies. This research helps to situate liquid labor and informal digital work within the context of contemporary information economy. I will concentrate on digital labor practices but also possible sources of exploitation. I will address feminist, autonomist Marxist, structuralist Marxist and cultural studies critiques of “immaterial” and “affective” labor. Considering possible user motivations for engaging in precarious digital work is also relevant to my project, particularly reviewing the scholarship on the ideology of “risk-taking” as it directly intersects with Bauman’s (2000) theory. Following from this, I will explore research that argues that digital laborers accept their exploitative conditions in the “hope” that such work can lead to more rewarding work or better formal opportunities.

Second, I will review the digital inequality scholarship, as it provides a roadmap to trace how the goals of digital labor have evolved in U.S. broadband policy and programs like KEYSPOTs. Thus, to interpret the larger goals of ICT workforce development projects like BTOP, I begin by outlining the relevant academic and policy literature, exploring the transition from a digital “access” to a digital “skills” policy focus. I here also give attention to critical research that pushes back on the strict “access” and “skills” focus and highlights some of the structural limitations to economic opportunity, as these limitations profoundly shape interactions between low-income participants like Mr. Wilson and ICTs. I also touch on the implications of technology policy embracing the undercurrents of individualism Mosco (2004) touches on, such as policy research that has promoted privatization and ICT deregulation efforts. I argue this embrace of neoliberalism played a key role in how the goals of digital labor were conceptualized in both the BTOP and KEYSPOT programs.

Third, I will examine the growing digital workforce divide literature (Rodino-Colocino, 2006) as this research marks the disconnect between how work is defined in technology policy and what work can in reality be attained by low-income job seekers like Joanne who visited KEYSPOTs. This framework of a “digital workforce divide” rather than a “digital divide” helps to highlight structural barriers to economic opportunity and complicates the “access” and “skills” policy focus. It also better addresses the “digital myths” that Mosco (2004) cautions policymakers about. Yet, how do the digital workforce divide trends connect to the information economy more broadly? Here, I will be emphasizing that although the tech economy offers unprecedented opportunities, these benefits are reaped primarily by a “high tech minority” (Rumberger

& Levin, 1985). In other words, this project is aligned with scholars who suggest that low-status and low-skilled precarious workers perform critical tasks and generate massive wealth for the digital economy through their exploited online labor, yet, these workers can remain functionally invisible. I will also consider research that explores how this workforce divide specifically impacts marginalized groups (like those attending KEYSPOTS) across class, race and gender lines.

Lastly, I will investigate the impediments to formal work for low-income urban communities like those visiting KEYSPOTS by looking closely at scholarship that considers the economic lives of the urban poor; the impact of workforce churn; globalization; the retrenchment of the welfare state; and, unionization issues. The flexible, low-risk survival strategies necessitated by these conditions will be analyzed, and special attention will be given to research that can provide clarity on why reproductive labor shapes informal practices (and accordingly liquid labor) for participants like Joanne. I end my review with this area of scholarship because it links back nicely to the exploitation of digital labor literature, providing deeper insight into the linked relationships between the economic lives of BTOP participants and the contemporary information economy. Having sketched out the key research areas I will review, I will now turn to my first area – digital labor studies.

### **The Exploitation of Digital Labor**

The emergence of online work is a significant feature in the economic lives of KEYSPOT participants, and therefore a critical dimension of this dissertation. So, what is the relationship between informal work or “liquid labor” and the contemporary information economy in advanced capitalism? Are these new online work practices I

have touched on vis-à-vis Joanne exploitative or liberating – do they abuse vulnerable users or instead provide tools for economic empowerment and creative expression? These subjects are taken up and debated extensively by the scholars I will review in this chapter. However, before I delve into this research, it is important to highlight pertinent arguments from Chapter 2 that connect to this literature. For example, Bauman (2000) claims that we are now entering a period of “liquid modernity” where durable institutions and welfare state protections are being dismantled. The impact of this shift is that labor has been decoupled from place, time and the body of the laborer. Aided by ICTs, capital can now easily flee protected union workers in the U.S. and seek cheap labor abroad. And as outlined by Mosco (2004), the exploitation of this labor has proliferated because the myth of the digital sublime suggests that technology offers a route out of poverty. In other words, the exploitative dimensions of digital technology – crystallized in Mr. Wilson’s experience – are often overlooked and underexamined. So, building on Bauman (2000) and Mosco (2004), to better situate liquid labor practices within the contemporary information economy, first I will present the “immaterial labor” and “affective labor” scholarship that categorizes these new practices. Then I will move to scholarship that can speak to the possible motivations behind pursuing digital labor, especially in light of some of the exploitative dimensions of this work that the immaterial and affective labor scholars describe.

### **Conceptualizing Digital Labor: Immaterial Labor**

So, whereas this project focuses more narrowly on the economic lives and online work practices of poor and working-class participants through the context of KEYSPOTS in BTOP, media studies researchers have examined how digital labor practices take shape

among different populations, industries, countries and cultural communities. Although scholars have taken positions for and against the emergence of digital labor, the standard view is that digital labor is now fundamental to the production of value in the modern informational economy. To explain, “digital labor” practices range from creating open-source software, writing a blog, or even creating e-books like Joanne did. However, rather than refer to these new forms as “digital labor,” Hardt and Negri (2001, 2005, 2009) and Lazzarato (1996) and describe this as “immaterial labor,” a kind of digital labor that commodifies information. Scholars like Terranova (2000) have emphasized that the skills needed to produce this immaterial labor are often self-taught and that the tools utilized to produce such value may be owned by an individual rather than a company, organization, or institution. I would note again here that one of the reasons I am not using the term “immaterial” in my study is because I am arguing that “liquid labor” practices significantly incorporate both immaterial and material elements. For example, Joanne created both immaterial (e-books) and material products (political buttons). However, it is important to add that whereas “immaterial labor” is the dominant term in the field, scholars have sought to categorize and mark these emerging forms in various ways. These terms include simply “digital labour” (Fuchs, 2010; Scholz, 2013) but also “hope labor” (Kuehn and Corrigan, 2013), “aspirational labor” (Duffy, 2015), “venture labor” (Neff, 2012), “playbor” (Bulut, 2014; Kücklich, 2005) and “passionate labor” (Postigo, 2007).

How do scholars in these fields appraise the impact of “immaterial labor”? In the critical digital labor camp, Marxist scholars such as Andrejevic (2008) and Fuchs (2010, 2012, 2014) complain that immaterial labor is inherently exploitative. Conversely,

autonomist Marxist scholars (who champion a bottom-up approach to resistance as discussed in Chapter 2) and cultural studies scholars (who focus on how specific communities create cultural artifacts and messages) insist that this critique is too harsh and dismisses the participatory pleasures such digital labor can provide as well as the potential to generate cultural or social value (Alessandrini, 2012; Arvidsson, 2009, Jenkins, 2006; Virno, 2004). I recognize that liquid labor has cultural value –Joanne’s e-books make an important cultural contribution– yet, this project is aligned with critical scholars like Fuchs (2010, 2012, 2014), as the autonomist Marxist and cultural studies accounts do not address how issues of digital access and social class can uniquely shape digital practices. In other words, these accounts overlook the ways in which Joanne’s practices are shaped by her social and economic position and the fact that they are part of her complex set of urban survival strategies.

### **Conceptualizing Digital Labor: Affective Labor**

To pivot here and provide more detailed scholarship on immaterial labor, one subset of immaterial labor practices that has been the subject of ongoing debate among feminist media scholars –and interacts with Marxist feminist theories on reproductive labor –is “affective labor.” In short, these scholars insist that “affective labor” is unique, because it is when value is extracted from our social and communal “labor” on sites like Facebook or Twitter (Weeks, 2009). As a simple example, when we engage in a conversation with a friend on Facebook, this is profitable for Facebook as they can in turn sell this data to advertisers. Terranova (2000) subsequently explains that in this way, the production of “affects” has now been subsumed into the logic of capitalism. Channeling Bauman (2000), Fuchs (2014) argues that this sale of our affective labor has collapsed the

boundaries between work and play –rendering them “liquid” (Fuchs, 2014, p. 7).

Furthermore, as digital technology helps capital improve the efficiency with which it can capture “affects” and make them profitable (recalling the Marxist feminist point) the boundaries between productive and reproductive work similarly begin to blur. In other words, the affective labor scholars point out that we generate economic value online even when simply chatting with our friends on social media sites like Facebook.

I would also highlight here that in this affective labor literature, the conception of the “housewifized labor” (Fuchs, 2014) or “digital housewife” (Jarrett, 2015) is meant to draw a link between the affective, creative online labor of women and social reproduction. Said another way, these scholars are echoing the types of critiques of the invisible, exploited work of the housewife as also expressed by Marxist feminists in the Wages of Housework campaign as I addressed in Chapter 2. In other words, this line of argumentation suggests that the contemporary media user is exploited much in the same manner as the traditional housewife, as the material and immaterial labor produced as a result of the media user’s online interactions is captured by capital to sell products and likewise gain profitable audience data (Jarrett, 2015; Turow, 2008). Andrejevic (2008), Fuchs (2014) and Mies (1986) draw on a slightly more relaxed conception of the “housewife” arguing that it is more generally a type of “super-exploitation” of precarious digital workers– such as fans in the case of Andrejevic (2008) or call center workers in the case of Fuchs (2014). In contrast, however, this project is more closely aligned with scholars like Jarrett (2015) and Ouelette and Wilson (2011, p. 559), as they argue that such work should be understood as shaped by factors like gender. However, I would add

that my assertion in this project is that the dimensions of class and race also deserve more attention in such affective labor studies and digital labor scholarship more widely.

To emphasize my main points, although I agree on all the above points around the gendered division of digital labor and the possible forms of super-exploitation, the primary focus of this previous research is on middle-class users who through their enjoyment and online interaction generate economic value. As an example, according to Fortunati (2007), sites such as Facebook, Twitter, MySpace extract economic value from the sociability, friendship, or the “affect” of women which can result in alienation (p. 426). Yet, this research does not consider how lack of access to ICTs or mobile access could change affective labor and correspondingly its exploitation online. Furthermore, the immaterial labor literature overwhelmingly focuses on middle class users and/or those with consistent ICT access. For instance, Jenkin’s (2008) framework that views immaterial labor as “participatory media culture” obscures the time and resources (like ICT access) needed to participate in this culture to begin with. Further, it does not consider that those who are most likely to find economic success in immaterial creative production are those who already have social or economic privileges. Said differently, I am arguing that in its overwhelming focus on sites of cultural and creative production, immaterial and affective labor scholarship is often afflicted with one of the following blindspots: 1) assuming regular broadband access; or, 2) downplaying or ignoring the roles of gender, race and class in structuring relationships with technology. Because while liquid laborers like Joanne may find value and emotional reward in digital labor, the socioeconomic context that necessitates such work is of great consequence. Therefore, my position is aligned with critical Marxist scholars like Fuchs (2014) who



appropriately observes that just because work feels fun does not mean that it is not exploitative (p. 133).

### **The Slippery Promises of Liquid Labor**

Given the exploitative conditions already discussed in the context of the immaterial and affective labor literature, the question remains: why do individuals choose to engage in online work? What other factors may motivate liquid laborers like Joanne? Whereas individual workers of course enter into digital labor for many personal and professional reasons, scholars like Neff (2012) argue that cultural shifts towards neoliberalism and a related celebration of risk and entrepreneurialism may keep digital laborers devoted to such work, even as it may provide little to no pay. Others like Kuehn & Corrigan (2013) suggest that digital laborers continue to engage in precarious work due to a “hope” that it will eventually payoff and they will find a better opportunity, such as a full-time job with benefits. To preface an argument that I make later in this study, I suggest that whereas liquid laborers like Joanne may perceive themselves as entrepreneurs, per Bauman (2000), they are in fact economically risk-averse and engage in flexible practices due to structural limitations. Said another way, it is important to consider the materialist dimension of risk. Through presenting the experience of liquid laborers like Sky in Chapter 7, I will side with scholars who have argued that precarious workers are motivated by the “hope” that their labor will eventually payoff and they will transition into a stable job. That being said, I will now turn to consider these positions and related scholarship in greater depth.

**Risk and digital labor.** In her book, *Venture Labor: Work and the Burden of Risk in Innovative Industries*, Neff (2012) argues that an “ideology of risk” is deeply

embedded within capitalism and particularly within the information economy. To explain, per Neff (2012) this ideology tells us that smart risk-taking, hard work, and determination are always rewarded. This is again connected to neoliberalism – economic inequality is viewed through this framework not a societal failure, but rather, a failure of “personal pluck.” To make her argument, Neff (2012) draws on the embrace of entrepreneurial values among Silicon Valley high tech workers during the dot com boom. Among this group of workers, she suggests, precarious digital labor became highly casualized and even celebrated – financial risk-taking and hovering on a precipice between economic fortune and destruction was framed as “cool” (Neff, 2012). Aligned with Bauman (2000), she suggests that in the modern era (liquid modernity) in which individuals face declining protections and job instability, entrepreneurialism and risk-taking behavior emerges, in part, due to a lack of economic options. Yet, I would point out that the high-tech workers Neff (2012) analyzed are located in a more privileged gender, race, and class position relative to the KEYSLOT job seekers in my study. So, although the embrace of self-reliance strategies more broadly that I discuss later in this project are quite similar among Neff’s (2012) participants and my own, the participants’ underlying motivations and justifications for engaging in precarious digital work are quite different. Accordingly, I will argue that my participants worked, instead, to mitigate financial risk through their liquid labor practices. Nonetheless, I introduce Neff’s (2012) work for her useful attention to this dimension of risk and because that point of divergence among my participants seems significant. Thus, Neff’s (2012) findings gleaned from a more economic privileged set of participants reinforces how class position can shape these motivations for precarious labor.

**“Hopes” and “aspirations” for better work.** I have already reviewed some of the ways in which digital labor can be exploitative. I want to underscore that precarious digital labor, however, is not promoted as exploitation – in addition to Neff (2012), other digital labor scholars insist that it is promoted as a path to better work. For instance, it can be framed as a path to finding more rewarding work in the formal sector– work you “love” –or a chance to create a desirable, stable job for yourself in the informal sector (Bulut, 2014, p. 254, Duffy, 2015; p. 2, Postigo, 2007). But what is more important here is that the underlying motivation for pursuing informal digital opportunities may not be to acquire an immediate or concrete reward, but rather the motivation is the “hope” (Kuehn & Corrigan, 2013) that it will lead to formal work; or, an “aspiration” (Duffy, 2015) that it can translate to more fulfilling work. This was a similar motivation guiding a participant in my study who I will introduce later, Sky, who was a part-time model and aspiring fashion designer.

To return to the extant literature and expand on the arguments from studies in this area, in their research on the digital labor of unpaid bloggers for Sports Blog Nation (SBN) and consumer reviewers for Yelp, Kuehn and Corrigan (2013) argued that the participants interpreted their informal digital work as “stepping-stones” to future opportunities, including full-time jobs (Kuehn & Corrigan, 2013, p. 14). And Duffy (2015) found a similar motivation in her study of the digital labor of online fashion and beauty bloggers who “aspired” for greater financial gain and recognition. Connecting to Neff’s (2012) insights as well, Bulut (2014) suggests that video game testers are motivated to engage in precarious digital labor because it is “cool” and –similar to Duffy’s (2015) fashion bloggers – game testers articulate that it is work they are very

“passionate” about (Bulut, 2014, p. 241). Yet, as these scholars point out, herein lies an unfortunate paradox. To gain full employment, better working conditions, or a fulfilling job, a “hope” laborer must first readily perform work either for free or for meager pay. As such, “hope labor” should be understood not only as a *motivation* for the digital worker but also as a circular *feedback loop* reinforcing exploitative labor conditions. Said differently, an individual’s willingness to participate in the circuit of exploitation only adds to an already large pool of cheap labor, effectively decreasing the likelihood that she/he will ever receive better compensation. In short, digital laborers may be caught in a vicious cycle.

Nonetheless, similarly to the immaterial labor and affective labor scholarship, the hope/aspirational labor literature captures the various practices and personal motivations for pursuing flexible working arrangements among elite or middle-class laborers. For instance, in her study of successful beauty bloggers, Duffy (2015) points out that her most successful participants conform to “heteronormative standards of beauty” and tended to have racial and class privileges (Duffy, 2015, p. 13 – 14). Therefore, while this previous literature is useful at helping us better understand the “hope” motivations driving participants in my dissertation like Joanne or Sky, it does not provide insight into how the immaterial or informal economy is utilized by the poor and working class more specifically. In sum, I am arguing that this significant literature gap in the immaterial, affective, and “hope” labor literature reinforces the potential contribution of this study. I suggest that my project can shed light on the intersection of digital labor with other class related factors like poverty and digital inequality, a subject I will turn to now.

## **The Informational City and the Digital Divide**

In my review of previous research examining digital labor and its relationship to the contemporary information economy, I have emphasized that my study examines a different group of digital laborers – poor and working-class users who visit KEYSPOTs due to lack of broadband access and/or digital skills. Thus, building on this research, this project is also located within a larger literature on digital inequality, or a literature which seeks to address how the lack of broadband access can potentially shape economic, social or cultural opportunities. It is likewise critical to include the digital inequality research in my review as it helps better explain how the goals of digital labor evolved in broadband policy, and correspondingly, in BTOP programs like KEYSPOTs. In this section, I will explore the policy shift from a broadband “access” focus (first wave) to a broadband “skills” focus (second wave). I will then highlight critical research that complicates the “access” and “skills” model (third wave). Finally, I will investigate how the embrace of privatization and deregulation in policy scholarship may have shaped the goals of digital labor as articulated in U.S. broadband policy, and by extension, BTOP.

### **What is the Digital Divide?**

To better contextualize the goals of digital labor as articulated in U.S. broadband policy and investigate the mismatch between policymakers –and what I will term “policytakers” in Chapter 4 –it is useful to first review the broader scholarship that examines the intersection of broadband access and inequality, known as the digital divide. What is the digital divide? The metaphor is meant to describe discrepancies in information access, specifically in terms of access to Information Communication Technologies (ICTs). To fully understand the term and its usage in policy, however, it is

useful to provide some background on the principle of universal service. The concept of universal service, i.e. universal access to “wire and radio communication,” was a central piece of legislation in the Federal Communications Commission’s (FCC) *Communications Act of 1934* (Federal Communications, 1934). To summarize, policymakers of the period argued that because communication technologies such as the telephone or radio were central to economic opportunity and political participation, efforts should be made to ensure they are accessible to all Americans. The subsequent digital divide research began from a similar concept of universal service, arguing that a social contract around ICTs would be needed, as they similarly facilitate “opportunity, participation and prosperity” (Schement, 2009, p. 3). While universal service continued to serve as a guiding principle, these specific themes of “participation” and economic “prosperity” were very important foundational concepts that shaped the early goals of U.S. broadband programs as well<sup>4</sup>. I draw attention to these frames because I will discuss both further in Chapter 4 and Chapter 5, as they shaped the underlying goals of broadband policy, and accordingly the BTOP and KEYSPOT programs (Schement & Curtis, 1997).

### **The First Wave: Investigating Digital Access**

Following from the concept of universal service, the first wave of scholarship around the digital divide primarily explored issues of broadband access. Early federal reports began to discuss government intervention and policy for “universal service” –and particularly germane to this project –economic activity. These included the now famous

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<sup>4</sup> The subsequent FCC *Telecommunications Act of 1996* decision began to adopt principles guiding universal service for telecommunications (Federal Telecommunications, 1996).

*Falling Through the Net* series as well as the U.S. Department of Commerce reports on the *Digital Economy* in the 1990's, both of which will be discussed in more depth in Chapter 4. This theme of access to technology as necessary to locate economic opportunities filtered down to the scholarly literature and influenced program development and future policy papers on the digital divide. As Hoffman, Novak and Schlosser (2001) argue, the U.S. government explicitly proclaimed in these early documents that technology strengthens economic opportunity, focusing more heavily on the “prosperity” dimension of universal service rather than political “participation.” The BTOP project more broadly through ARRA continued to borrow this language and ideas around digital labor, and again the impact of these discourses will likewise be examined in more depth in Chapter 4.

To return to the extant scholarship, later first wave U.S. digital divide research began to examine how economic disparities influenced Internet adoption. For example, a federal survey of about 54,000 households conducted in October 2009 revealed glaring demographic disparities in broadband access and adoption rates (National Telecommunications and Information Administration, 2010). For instance, Jansen (2010) concluded that about 95% of Americans who live in households earning \$75,000 or more annually go online “at least occasionally.” By contrast, just 70% of household members earning less than \$75,000 reported similar Internet usage (Jansen, 2010). In this sense, impediments to prosperity – such as poverty – began to be considered by scholars in the digital access focused research.

While income is pertinent to digital access, notably some research in this camp concluded that “technophobia” keeps potential users from obtaining a broadband

connection (Digital Impact Group, 2009). However, this project is more aligned with the view of third wave critical research, as I will argue throughout this study that “technophobia” (for instance) is an insufficient explanation for non-adoption. To elaborate, alongside Eubanks (2011), Wolfson et al. (2017) and Wyatt (2008), I insist that poor and working-class individuals – such as Mr. Wilson – may resist or reject technology if they have not benefited politically, socially, or economically from digital tools. In other words, while I am attuned to how economic disparities shape the online habits and work practices of KEYSPOOT job seekers, this project intends to contribute an alternative social and political framework to analyze how economic and class position may shape interactions with, and attitudes around, technology.

### **Second Wave: Digital Skills for Digital Jobs**

Moving beyond issues of an access “divide” or digital prosperity, second wave researchers critiqued the scope of first wave scholarship as too limited, as it failed to advocate for policies that would in fact help marginalized communities use digital tools once access was established. Accordingly, this new second wave literature, attempted to “redefine” (Gumpert & Drucker, 2002) and “go beyond” (Jung, Qiu & Kim, 2001; Mossberger, Tolbert & Stansbury, 2003) previous frameworks. Thus, this groups of scholars focused on skills issues like digital literacy and resource richness, and likewise explored qualitative differences in the use of technologies (Hargittai, 2008; Mossberger et al., 2003; Sevron, 2002; Warschauer, 2003). In short, rather than see access as the aim of broadband programs, the skills focused scholars asserted that the goal should be to



promote “meaningful use” of ICTs<sup>5</sup> (Mossberger et al., 2003). Henceforth, scholars such as Mossberger Tolbert, Bowen and Jimenez (2012) argued that researchers should view the digital divide problem as “multidimensional,” as it is influenced by a divide of access and skills as well as economic opportunity and democratic participation (Mossberger et al., 2012, p. 1.) The conclusions derived from second wave research shaped the goals of future broadband programs like BTOP, as this research raised the possibility that targeted digital skills training programs could promote economic opportunity –and in doing so, serve as a partial solution to some of the problems presented by widespread workforce volatility and unemployment in the era of liquid modernity.

Some digital divide scholars would, of course, correctly point out that obtaining digital skills has always been a policy priority for the U.S. government, particularly in digital education. For instance, the e-rate program established in the 1990’s connected eligible schools and libraries with discounted ICT access. And the National Telecommunications Infrastructure Administration’s (NTIA) research reports in the 1990’s, including the *Falling Through the Net* series to be investigated in Chapter 4, indicated that poor and working-class minority urban residents with online skills were more likely to use the internet to engage in workforce related tasks (Compaine, 2001, p. 41). Ultimately, however, it is important to emphasize that second wave scholarship expanded this interest by arguing that not only can broadband give poor and working-class individuals access to job postings or online educational opportunities, but that imparting digital skills can, in fact, help low income Americans obtain better jobs

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<sup>5</sup> Strover (2014) also points out that the terminology of “meaningful use” is a derivative of language from the health field, often utilized in discussions around technology and health search.

(Mossberger et al., 2012, p. 80). By extension, it was implied that a digital skills education would improve the capabilities of the U.S. workforce and could thus advance the interests of the national economy incrementally (Mossberger et al., 2012, p. 5).

While I would agree that scholarship in the areas of digital access and skills has been fundamental in the effort to craft useful and data driven policy and that the goals of political participation are especially important to marginalized communities (as I will address in the next chapter), the broader issue is that whereas access was a more concrete goal, “skills” was obviously less defined. Who decides what counts for “meaningful use,” for example? Is it meaningful to use the internet to search for a formal sector job and less meaningful to use it to watch YouTube music videos, for instance? In many cases, those who defined what was “meaningful” were more aligned with the policymaker perspective and thus had a different economic and social position relative to poor and working-class users like Joanne or Mr. Wilson, the group I term the “policymakers” in Chapter 4. This unfortunately reinforced a top-down approach to crafting broadband training programs for economic development that were, in many cases, out of sync with the economic lives of intended participants. As a result, programs were inattentive to the myriad structural and social impediments to finding formal work in the contemporary information economy, a subject I explore in this project. So, although the skills focused research provided creative ideas on how to use training to improve economic conditions for low-income communities, it has fallen short in its ability track and understand how such skills are utilized within the contemporary information economy. Furthermore, it has often overlooked how technology is integrated into the everyday economic lives of poor and working people, like Joanne or Mr. Wilson.

As another challenge, some of the access and skills centered scholarship addressed ICT issues primarily through the technological lens, without deeper attention to the surrounding structural issues that impacted both ICT access and digital skills. Further, some of this research ignored the role of deregulation and privatization in contributing to digital inequalities. For example, second wave scholars such as Fan, Dey and Peng (2006) were more likely to advocate business partnerships as needed to promote the acquisition of workforce development skills. In contrast, third wave research highlighted some of the negative impacts of deregulation and corporate partnerships to develop broadband infrastructure and likewise shape the goals and mission of skills training programs. I bring this up here as I will expand on this point more in the next chapter, as I will (for example) demonstrate how a Microsoft associated consulting firm – The Arnold Group (2011) –played a role in shaping the goals of the KEYSPOt program.

### **The Third Wave: Critiquing the “Access” and “Skills” Focus**

Though it is true that the above first and second wave literature offers an introduction to key themes and issues surrounding digital workforce development policy and the goals of digital labor, much of this scholarship does not focus on the type of structural inequalities that impact many BTOP and thus KEYSPOt participants. Thus, in an effort to offer a more nuanced picture of the intersection between economic, social, political, and digital exclusion, some critical digital divide scholars studying urban community technology centers advocate for replacing the term “digital divide” with “digital inequality” (Kvasny & Keil, 2006; Warschauer, 2003). As a related point, Eubanks (2011) critiques the language of the “digital divide” as a starting point, as it perpetuates a reductionist narrative that implies two separate but equal groups without

acknowledging the role of power, privilege, and exploitation in shaping ICT access and interaction. As critical media studies scholar Rodino-Colocino (2012) notes, women-targeted broadband programs that insist computer skills training can improve both self-esteem and job prospects, “lets wider structural imbalances....off the hook” (p. 519). In other words, Rodino-Colocino (2012) and others point out that the “access” and “skills” focus risks overlooking the underlying issues of economic inequality that frame an individual’s interaction with ICTs. Thus, building on this critical research, this study will use the terminology of “digital inequality” where applicable. I suggest that this language is better aligned with a critical study of the role of structural imbalances in perpetuating inequality, and thus can position Joanne and Mr. Wilson’s experience within a larger system of economic oppression and political marginalization.

**Discourses of individualism and neoliberalism.** Recognizing the shortcomings in some of the first and second wave studies that address access and skills – and closely aligned with Mosco’s (2004) fundamental claims regarding the myth of the digital sublime– Clark, Demont-Heinrich and Webber (2004) observed that digital divide debates are often shaped by a discourse of individualism. Said differently, rather than examining the structural issues that can contribute to the lack of digital access (like lack of education) or telling the lived experiences of those without digital resources, conversations about broadband access and technology skills tend to focus on the individual or on themes of self-reliance. In a similar vein, Gunkel (2003) asserts that discussions of the digital divide also have an underlying technological determinism, or a belief that technologies –rather than social relationships–determine the future. As Light (2001) emphasizes, when complex social and economic problems are reduced to

technological issues, more investment in technology comes to be viewed as the primary solution. As I will argue later, siding with scholars such as Stevenson (2008), this line of thinking and the subsequent embrace of neoliberalism is reproduced in the federal *Falling Through the Net* policy reports on the digital divide. Investing in more technology and deregulating ICTs is pursued, while other state solutions – such as improving education, raising the minimum wage, and expanding nutritional support programs – are ignored (Stevenson, 2009). However, I would add here that I intend to expand on Stevenson’s (2008) central claim around the discourses of neoliberalism in *Falling Through the Net* through also contributing an analysis of BTOP and KEYSPOTs.

The above arguments from Clark et al. (2004), Gunkel (2003), Light (2001) and Stevenson (2008) are aligned with Mosco’s (2004) arguments about the myth of the digital sublime: investment in developing the “skills” capacity of an individual is ideologically compatible with the values of neoliberalism and individualism, as it proposes self-work as a path out of poverty. It also feeds into the narrative that skills programs will reduce the need for social programs in the future, a claim that I will rebut through the stories of KEYSPOT participants like Dinah in Chapter 6 and Deric in Chapter 7. Considering how these visions shape the allocation of federal resources is crucial, as it also foreshadows the disconnect between how policy is defined and the on the ground realities that limit economic opportunities for poor and working class urban Americans. In other words, it begins to expose the deeper disconnect between policymakers and “policytakers.”

**Structural impediment to finding economic opportunities.** The second wave research focus on digital skills also obscures the fundamental structural impediments to

finding new economic opportunities in the information economy. As a case in point, in their study of digital access and skills training programs in the city of Austin, Staubhaar, Tufecki, Spence and Rojas (2012) report that the modern informational city – or the “technopolis” – does not necessarily translate into higher earnings for all city residents. To elaborate, the Austin study found that digital access and skills were not the primary factors preventing participants from successfully obtaining jobs in the tech field (Staubhaar et al., 2012). Other factors were equally, if not more important, such as educational requirements and social connections (Staubhaar et al., 2012, p. 26). Furthermore, the authors argued that high tech cities may, paradoxically, adversely impact poor and working urban people by raising rents and the cost of living for all residents (Staubhaar et al., 2012, p.17). Underscoring the impediments that poor and working-class jobseekers like those visiting KEYSPOt confront, Tufecki (2012) reminds us that, “...it is not plausible for most of these people to obtain higher paid employment – there simply are not enough jobs” (p.105). In making this commentary, Tufecki (2012) urges us to consider that there is what I term in this study a broader “digital workforce divide” (borrowing from scholars like Rodino-Colocino, 2006) that operates alongside established patterns of digital inequality, constraining opportunities for low-income communities. Said differently, while digital access and skills are useful in promoting economic opportunity, skills alone cannot fundamentally alter the nature of the information economy, nor provide the needed social connections or higher educational degrees that many high-skilled, good paying jobs require.

Understanding this troubled terrain and the wider context is incredibly crucial to analyzing KEYSPOts, as ARRA utilized BTOP access and skills training programs with

the understanding that this would help combat joblessness in the wake of the Great Recession (Tufekci, 2012, p. 85). These broadband programs, therefore, were predicated on the assumption that there were better jobs awaiting workers *after* they acquired the right digital skills (Tufekci, 2012). As Tufekci (2012) warns us, this premise is faulty in that it “conflates two topics”: the digital access and skills barriers with the employment barriers introduced by the broader restructuring of the labor market in the era of liquid modernity (p. 85). From this perspective, policymakers overlook the role that ICTs have played more widely in diminishing job opportunities for low-skilled workers like Mr. Wilson and undercutting wages, a subject I will consider in greater depth in Chapter 6. We can begin to see how the access/skills approach fails to appreciate some critical dimensions of the digital labor problem, resulting in a set of unintended consequences and new working arrangements which includes the emergence of the liquid labor practices I catalog.

### **Access and Skills Policy: Embracing Privatization and Deregulation**

Having now reviewed the first, second and third wave scholarship around digital inequality, I will now briefly turn to policy research that has addressed how privatization practices and deregulation can shape the goals of digital labor. When it comes to the topic of broadband programs, as I will address in Chapter 4, another problem with maintaining the emphasis on access and skills is that state and national broadband training efforts can inadvertently serve marketing and deregulation ends rather than social goals. To provide more background on this line of argumentation, Cooper and Kimmelman (2001) complain that through allowing media deregulation, the Telecommunications Act of 1996 had a part in creating “monopolistic conditions” in which broadband became less

affordable, worsening digital inequality (p. 199). As a practical example of how this relates to programs connected to KEYSPOTs, in their study of the RUS (Rural Utilities Service) ARRA broadband deployment projects, LaRose, Strover, Gregg and Straubhaar (2011) found that the threat of establishing public or subsidized telecommunications services actually “stimulated” corporate investment in building infrastructure in rural regions they had previously ignored (p. 97). In other words, the problem of digital inequality in rural regions was only addressed by the ICT industry when the government threatened to intervene. Therefore, in this project, I side with critical scholars like Lenert, Christensen, Tufekci and Gustafson (2012): the free market is unconcerned with “equity or fairness of the distribution of resources” and thus incompatible with the original ambition of universal service or serving marginalized communities (Lenert et al., 2012, p.117). Furthermore, partnering with industry on social programs often benefits the more powerful players in the ICT and technology industry, to the detriment of innovation or competition. For instance, the Gates Foundation’s 1995 project to offer free Microsoft Word in public libraries was critiqued as expanding the influence of the Microsoft corporation, possibly undermining growing open-source software movements (Lessig, 2002; Rodino-Colocino, 2006; Stevenson, 2008).

To reconnect to Philadelphia, as will be discussed in Chapter 4 and 5, ICT provider solutions –such as the Comcast Internet Essentials program offering low cost broadband to BTOP participants –reflected the private-sector’s solution to the complex social and political issues surrounding digital access. In fact, municipal WiFi or a mesh network would have been a much more sustainable solution for low-income Philadelphians, and it was always unclear if Comcast’s rates would increase or hold



steady over time. This is sadly ironic, because as I will present in Chapter 4, Comcast itself consistently lobbied against these moves towards community WiFi in an earlier period. In other words, Comcast helped cause the need for such broadband programs by their actions against the WiFi initiative, yet later offered the solution –as part of receiving FCC approval of their NBC Universal corporate merger –which only further solidified their future power in the media markets. I bring this up in the literature review because in Chapter 4, I argue that industry is often a key stakeholder in broadband programs like KEYSPOts and therefore plays an important role in defining the goals of digital labor. In all these ways, this critical turn – led by scholars who have contested the definition of “digital divide,” challenged the undercurrents of individualism and technological determinism in the dominant literature. This critical digital inequality research likewise considered the role of private sector influence. Therefore, this critical scholarship foregrounds my study of the economic lives of BTOP participants. Having addressed this literature, I will now turn to consider other pertinent scholarship that can attend to the economic lives of KEYSPOt visitors.

### **The Digital Workforce Divide**

In my above review of the digital inequality literature that provides more insight into how the goals of digital labor have been conceptualized and developed in U.S. broadband policy, I have referred to a “disconnect” between this policy and the on-the-ground economic realities facing KEYSPOt job seekers. So, how can we better understand their economic realities? What are the impediments to finding formal work and, more importantly, can research shed light into how these barriers may connect to the contemporary information economy? The widening pay gap between “high-skilled” and

“low-skilled” workers has led policymakers and many digital divide researchers to conclude that access or digital skills are one of the key differentiating factors (Mossberger, et al., 2012, p. 60; Tufecki, 2012, p. 88). Yet, as Rodino-Colocino (2006) points out, digital divide scholarship often overestimates the impact of broadband access and skills in locating new digital opportunities and underemphasizes the wider digital labor force divide. In other words, as she rightly suggests, policymakers –and scholars for that matter –have been overly attentive to the digital divide and inattentive to a growing digital workforce divide. Building on these insights, I emphasize in this project that the digital workforce divide is not an “access” or even “skills” divide, but has formed due to other factors as well, including a shift to workforce outsourcing, decentralization, and flexible specialization (Qiu, 2009). In this section, I will henceforth investigate research that looks at divisions between high-tech and low-tech workers, how the digital workforce divide impacts unionization efforts, and the “dangerous flexibility” of these new working arrangements.

### **The High-Tech Minority**

Media scholars and policymakers alike are in general agreement that the high-tech sector offers extraordinary economic opportunities. However, as I will argue in this project, these opportunities are for a small subset of workers with very particular training and skills. Alvin Toffler (1980) and Robert Reich (1992) have termed this small subset of highly skilled workers the “symbolic analysts” who are more likely to be white, male, and in industries like tech or finance. Daniel Bell (1976) referred to this group as the “knowledge class.” Adding to this categorization, Milton (2004) insists that high-tech workers also include, “systems analysts, hardware and software engineers, computer

scientists and programmers, and webmasters” (Milton, 2004, p. 151). Russell Rumberger and Henry Levin (1985) aptly refer to this group as the “high-tech minority,” as this small group of well compensated and highly-skilled employees is supported by a sizeable second group of workers –a “low-tech majority” –which includes an assortment low-wage, part-time, contracted, and informal precarious workers. This is relevant to my thesis, as I will argue in Chapter 6 and Chapter 7 that KEYSPOT jobseekers are among this second highly exploited group of workers.

### **The High-Tech, Low-Tech Majority**

That being said, how did a low-tech majority emerge in the context of a seemingly booming high-tech sector? Said differently, how did the tech industry boom in the 1990’s not benefit all U.S. workers? The answer to this question has been partly addressed by Bauman (2000), who argues that the advancement of ICTs gave birth to the tech boom, but also helped decouple capital from time, space, and the body of the laborer. In other words, following the introduction of ICTs, capital could easily flee burdensome regulations in advanced economies or protected workers to seek cheap labor available behind computer screens scattered across the globe. Computer technology also helps capital more easily coordinate global industrial work. As Anderson and Cavanagh (2004) point out, deepening global debt contributed to this process – as the labor costs in developing economies declined, global outsourcing became more profitable. So, for example, high-tech firms began to rapidly outsource work like website development, and these opportunities were offered for lower pay, on a contingent basis, and provided no benefits like health insurance or a retirement plan (Castells, 1989; Rodino-Colocino, 2006). As Dyer-Witthford (1999) explains, these trends precipitated labor restructuring

on a global scale, because while companies continued to rely on some permanent employees to manage projects and key assets – “the high-tech minority” per Rumberger and Levin (1985) – this elite core was supported by a sprawling network of precarious and contingent workers (p. 80).

The precarious, contingent workers generating profit for the high-tech minority occupy many different positions and roles, as critical technology scholars have pointed out. Some are in more high-skilled roles such as website development, as I addressed, however, low-skilled workers are also central to the high-tech sector. For instance, these low-skilled workers include those who directly interface with technology or technological goods such as product assemblers, warehouse fulfillment staff, data entry workers, mechanical turkers<sup>6</sup> and call center handlers (Dyer-Witthford, 1999; Fuchs, 2014; Jarrett, 2015; Qiu, 2009; Sassen, 2003). Yet, low-skilled workers, such as janitors and landscapers, also play a role in maintaining the spaces and offices utilized by high tech minority staff (Dyer-Witthford, 1999; Fuchs, 2014; Sassen, 2003). Now reproductive laborers are increasingly offered as “perks” to elite employees as well, laboring as housekeepers, nannies, or providing meals to the busy tech professionals (Ritchel, 2012). This rise in reproductive labor as “perks” intersects the larger argument I am developing in this project, as it underscores how reproductive labor is increasingly degraded along race, class and gender lines in the contemporary information economy. To be more specific, the high-tech minority employees are offered reproductive labor support,

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<sup>6</sup> Mechanical turkers perform rote tasks online for low pay, such as answering questions, writing copy or answering surveys. For example, Amazon mechanical turk provides a crowdsourcing marketplace allowing businesses access to individuals who are willing to perform tasks that cannot be automated by computer.

whereas the kinds of positions available to KEYSPOT job seekers were in no way conducive to parenting or reproductive labor needs. However, to return to the low-tech majority more widely, on average, these positions are dominated by women of color and immigrants, and the positions do not afford salaries, health benefits, paid leave, retirement plans, or union protections (Dyer-Witheford, 1999). This class of workers is, therefore, extremely vulnerable to exploitation, wage loss and wage-theft. And as I will discuss in Chapter 7, I am arguing by extension that liquid laborers like Joanne are exploited by this workforce divide, because (for example) her e-books provide surplus value for high-tech giants like Amazon (Fuchs, 2010).

### **Silicon Valley and the Myth of the Digital Sublime**

However, to further illustrate how this pervasive “digital workforce divide” operates, nowhere is this divide more apparent than in the global high-tech capital of Silicon Valley. The region is overflowing with the “high tech minority” Rumberger and Levin (1985) refer to – the Valley is dominated by white, male, high-skilled workers and notably has the highest concentration of PhDs and engineers in the world (Castells, 1989; Dyer-Witheford, 1999, p. 96 – 97). These workers enjoy high wages and high-status perks not afforded to the multitude of precarious workers who support their labor. As another concrete example, and as I referenced briefly in the key terms section of Chapter 1, this is epitomized in the separate badges of different classes of workers at influential information technology corporations like Google: low-wage digital book scanners are not permitted to enjoy the same Google benefits –or even interact with – high-level staff (Davis, 1998; Harris, 1998; Goldsmith, 2013; Wilson, 2011; Worker Center, 2001). Dyer-Witheford (1999) makes a crucial observation that this type of social and cultural

isolation workforce is, in fact, a strategy utilized by tech corporations to “distance themselves from unsightly super-exploitation” (Dyer-Witthford, 1999, p. 97). Echoing Mosco’s (2004) arguments about digital myths, Fuchs (2014) points out that Silicon Valley has its own associated mythology that shields it from scrutiny– Silicon Valley is a story about “how the computer makes dreams come true” (p. 213). Alongside Fuchs (2014), I would argue that in addition to shaping narratives underpinning broadband policy, the myth of the digital sublime (Mosco, 2004) also served to shield Silicon Valley from criticisms of its role in the exploitation of U.S. and global workers.

### **The Digital Workforce Divide and Unionization**

Can the low-tech majority unionize to resist these exploitative arrangements I have presented? The digital workforce divide and proliferation of flexible and precarious working arrangements has unfortunately also complicated the unionization of workers or the ability of the low-tech majority to contest their exploitation. As will be addressed in Chapter 5, in the late U.S. industrial period between the 1950’s – early 1970’s, unions were more robust and could do more to support the interests of the working class<sup>7</sup>. Yet, unfortunately, trends in technological automation have undermined unions. As Dyer-Witthford (1999) suggests, this was well illustrated when the acceleration of flight pattern computerization played a major role in defeating the union of professional air traffic controllers (PATCO) during their historic 1981 strike, resulting in the dismissal of thousands of workers (Dyer-Witthford, 1999, p. 94). Technological developments have also thwarted efforts to successfully organize workers like the participants in my study

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<sup>7</sup> It is important to add that scholars like Kabeer, Milward and Sudarshan (2013) point out that unions did not equally serve the interests of some marginalized groups, such as women or minorities (Edin & Lein, 1997; Kabeer, Milward & Sudarshan 2013, p. 260).

who increasingly occupy part-time or contingent roles and may be physically separated from each other (Chaison, 2004; Pizzigati, Yentzer & Henderson, 2004). As another complication, the sectors that are fast gaining jobs in the contemporary information economy – such as service work and domestic work –are not traditionally protected by unions. As a case in point, Chaison (2004) determined that between 1984 and 1997, the childcare, finance and retail sectors gained 26 million jobs with only 5% of these workers supported by a union. In contrast, the industries suffering the greatest job losses in the same period, such the auto industry, were overwhelmingly afforded union protections (Chaison, 2004, p. 90). In Chapter 6, I will argue that the sectors in which KEYSPOt job seekers were able to locate opportunities were primarily in these non-union sectors, such as service work, carework and domestic work. In any case, I present this research as a counterpoint to overly celebratory accounts of technology's ability to advance the economic position of poor and working-class Americans and, instead, reinforce the diminished protections for vulnerable workers like those visiting KEYSPOts.

### **The Dangerous Flexibility of the Digital Workforce Divide**

Although I have argued that high-tech workers hold a very privileged position in the contemporary information economy, I want to emphasize that they are not entirely insulated from its dangerous flexibility. To take a case in point, the forces of globalization can and do impact highly skilled laborers. For instance, as I mentioned earlier, high-tech work such as coding and software development can easily be outsourced. In fact, the H1-B1 temporary visa process in the U.S. has recently come under renewed scrutiny due to public accusations that corporations abuse the immigration system in order to replace high skilled U.S. employees with cheaper foreign workers

(Preston, 2015). This was brought into national attention in a highly-publicized incident involving Disney in which approximately 250 U.S. data analysts and engineers responsible for monitoring park operations even participated in training their foreign replacements who arrived via the global outsourcing firm, HCL America (Preston, 2015). Thus, through utilizing outsourcing or contracting firms like HCL America, Infosys, and Tata Consultancy Services, corporations like Disney are quickly connected to cheaper foreign high-tech workers. As Dyer-Witheford (1999) points out, at the same time, by using contracting firms they are also disassociated from foreign workers, as they often remain employees of their original firm. That being stated, it is certainly true that the plight of these high-skilled tech workers garnered national attention whereas low-skilled labor outsourcing often does not.

Yet, for all these reasons, the digital workforce divide should *not* be understood as a static chasm between high-tech and low-tech workers, but rather a complex system of exploitation, in which the interaction of ICTs, immaterial labor, globalization, flexible work and values of neoliberalism result in highly variable patterns of inequality. My conclusion, then, is that pursuing a study of digital inequality through the lens of a “digital workforce divide” rather than strictly a “digital skills divide” or “digital access divide” offers a new framework for analyzing digital work and better contextualizes the relationship between online work and the contemporary information economy (Rodino-Colocino, 2006). It likewise clarifies the disconnect between how work is defined in policy and what work can actually be obtained for jobseekers like those visiting KEYSPOts. Such a framework also challenges some of the underlying assumptions and tendencies surrounding digital labor in U.S. technology policy – such as an embrace of



the myth of digital “riches” and a shift towards private sector solutions – to be considered further in Chapter 5. So, unfortunately, the high-tech sector is no panacea to the problems of widening economic inequality and the urban crisis, as I will address in Chapter 4. In sum, when we focus on the “digital workforce divide” rather than only through the standard lens of a “digital divide,” we can begin to consider some of the exploitative conditions facing low-skilled workers in the contemporary U.S. information economy and the process whereby many low-income individuals are pushed towards the economic margins, as I will now consider.

### **The Informal Economy, Workfare and Urban Survival Strategies**

Now that I have addressed the disconnect between the goals of digital labor and framed some of the digital workforce divide shifts that are shaping the economic lives of many urban workers like Joanne or Mr. Wilson, the question remains: are there additional impediments to finding formal work? Why do KEYSPOOT job seekers like Joanne pursue opportunities in the informal sector, especially given the possibilities of exploitation I have already addressed? I will now turn to consider scholarship that traces global and local informal economy research, or how new relations between capital and labor – and neoliberal social policies – may push participants like Joanne into the informal sector. In other words, this academic scholarship helps anchor this project within urban survival strategies and more specifically the informal economy, a significant dimension in the economic lives of participants and thus a key contribution of this project.

### **Informal Economy: Global to Urban Focus**

Academic interest in the U.S. urban informal economy has surged since the 1970’s, however early scholarship focused on the usage of the informal economy among

“developing” regions rather than on the role informal economies played in advanced or post-industrial nations. Anthropologists like Geertz (1963), Malinowski (1979) and Mauss (2000) used ethnographic methods to document and analyze the informal trade systems and “gift” economies of native peoples in Papua New Guinea, Polynesia/Melanesia and Indonesia respectively. But in his study of the urban labor market in Ghana, British anthropologist Keith Hart (1973) was the first researcher to carry urban informal sector<sup>8</sup> study into academic sphere. In its application, the “informal sector” referred to developing economies that tended to incorporate both a mainstream formal economy and an unofficial or unsanctioned economy (Doeringer & Piore, 1971). Though my urban research is not focused on “developing economies” or global economies, I do borrow a key term from Devey et al.’s (2006) research on the South African informal economy. To explain, Devey et al. (2006) lament that when workers have no opportunities for upward mobility they tend to, “circulate between the formal and informal economies in a process of ‘churning’ driven by economic insecurity rather than material gain” (Meagher, 2013, p. 8). As mentioned in Chapter 1, the concept of “churn” is useful for analyzing the informal economy in Philadelphia, because as I will demonstrate in Chapter 6 and Chapter 7, low-income parents often cycle between the formal to the informal sectors due to bleak economic prospects. So, I want to flag that I do borrow this specific term from Devey et al.’s (2006) study of developing economies.

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<sup>8</sup> As discussed in the key terms section in Chapter 1, many terms have been used to refer to these extra-market activities. The literature is thus marked by disagreement over the conceptual definition of informal work. This dispute was fueled by academic debates on the phenomenon; in short, the underlying interests of stakeholders shaped their research motivations for studying informal labor practices.

To return to the informal sector, the study of the “informal economy” did not gain widespread popularity in the United States until Ferman and Ferman’s (1973) study of informal economic exchange as a means of survival among the urban poor in America’s cities. Further urban ethnographic studies by Dow (1977), Lowenthal (1975) and Stack (1974) also highlighted the informal and underground economies in the U.S. Regarding more current research, Duneier’s (1999) ethnographic study of sidewalk book dealers in New York City addressed the social world of informal economic actors. But although Duneier (1999) offers a rich ethnographic portrait of the everyday lived experience of informal workers, as I mentioned in Chapter 1 in the context of urban ethnography as a research methodology, scholars such as Wacquant (2002) have rightly responded that this account is overly romantic in discussing the “rehabilitative” effects of the street economy. In other words, to apply this critique to my study, while we can celebrate the creativity of Joanne’s informal practices, they should be contextualized as a necessary urban survival strategy. Therefore, taking a more critical approach more in line with this project, Robert Fairbanks (2009) suggests that the emergence of informal drug-recovery houses in Philadelphia not only reflects survival mechanisms, but also connects to the broader urban crisis and neoliberal labor restructuring. Notably, this is a similar argument to the one I will advance in Chapter 5 on the urban crisis.

### **The Informal Economy and Advanced Capitalism**

It is important to note, however, that in this same period of scholarship, transnational economic bodies such as the International Monetary Fund (IMF) saw the informal economy as a threat to private sector development and accordingly emphasized the detrimental impact of unregulated cash exchanges on the mainstream economy

(Cowell, 1990). Taking a similar position, many federal and state-based research studies focused on the informal economy examined tax evasion (Cowell, 1990). However, in contrast to the IMF or state perspectives, critical scholars in the “informal economy” field began to examine how the exploitative nature of a free market global information economy may *create the conditions* under which economic survival strategies become a necessity—for example, cobbling together part-time opportunities due to a lack of opportunities in the formal sector. In other words, there has been a more recent recognition that the informal economy may offer marginalized and displaced workers in the U.S. new strategies for survival in the context of global labor restructuring, and thus may soon constitute “a major structural feature of society” (Portes, Castells, & Benton, 1989; Tickamyer & Bohon, 2000; Stack, 1974). To elaborate, as Sassen (2003) explains in alignment with the digital workforce divide scholarship, these new exploitative conditions primarily arise because informalization is increasingly used to increase corporate profits, such as exploiting subcontracting or global outsourcing. Whereas scholars like Watson (2009) saw the informal economy as disrupting neoliberalism through alternative arrangements of power, I argue alongside Portes et al. (1989) that, in fact, these practices are exploitative and their emergence in Rust Belt cities like Philadelphia signals a larger transformation taking place within the contemporary information economy. So, although the usage of the informal economy may seem trivial as it appears limited to developing economies or appears only at the fringes of advanced economies, I argue that the emergence of liquid labor should be understood as a potentially significant feature of urban economies in the context of advanced capitalism.

## **Workfare, Reproductive Labor and Informal Work**

Having discussed the informal economy scholarship more broadly, what additional impediments exist to finding formal work, particularly for poor and working-class parents in Philadelphia? While Chapter 5 will chart the history of the urban crisis in Philadelphia as it relates to the emergence of informal work, it is important to also briefly touch on some of the relevant contemporary research on informal survival strategies among urban families. More specifically, this research reinforces the Marxist feminist position that reproductive labor has been degraded along race, class and gender lines in the era of retrenchment. In the case of low-income urban parents, urban sociologist and anthropologist Edin and Lein (1997) explain that the retrenchment of the welfare state throughout the 1970's and 1980's and the subsequent transition to "workfare" programs in the 1990's left many parents with less income overall with which to feed their families and pay their bills. To explain further, "welfare" cash assistance for those living in poverty was replaced with "workfare," requiring parents to take jobs or participate in workforce training to receive support. Siding with Bauman (2000), Daly (2003) reminds us that the welfare state used to be understood as a type of "social insurance" to insulate individual members of society from risks such as job loss or disability (Daly, 2003, p. 71). However, workfare was more compatible with the values of neoliberalism which identified the individual alone as responsible for her/his own wellbeing. As another example of unintended policy consequences, I would argue that the rise of workfare was another major factor pushing low-income parents and caregivers like Joanne who visited KEYSPOTs to pursue opportunities in the informal sector.

**Workfare as a carousel, not a ladder.** To further explain how workfare policy changes impacted poor families following the 1990's, according to Collins (2008), the positions available through "workfare" were often part-time and highly casualized, without needed benefits like health insurance, paid family leave, a retirement plan, or disability protections (Collins, 2008, p. 141). Thus, unsurprisingly, research has indicated that many parents leaving the welfare system for workfare continued to live near the poverty levels as they only had access to jobs that were strict, low-status and low-paying (Acker, Morgen, Heath, Barry, Gonzalez & Weigt, 2001; Boushey, Brocht, Gundersen, Bernstein 2001; Cancian, Haveman, Meyeter & Wolfe; 2002; London, Scott & Hunter, 2004; Morgen, Acker, Weigt & Gonzalez, 2006). In other words, these workfare positions were incompatible with the needs of working families and did not provide participants a living wage. In fact, Collins (2008) suggests that workfare may have even resulted in "downward job mobility" as it only reinforced a job history of low-status work and carried a stigma because the work was still considered "public assistance" (Collins, 2008, p. 142). Therefore, rather than translate into steady economic support, workfare programs may have only worsened labor "churn" as poor and working-class individuals cycled in and out of the bottom of the labor market (Collins, 2008, p. 140; Daly, 2003; Devey et al., 2006). For all these reasons, workfare programs contributed to labor instability among urban Americans like those visiting KEYSPOTs, as they could not offer low income families a "ladder leading upward to better wages" but instead workfare acted more as a "carousel on which they went around in circles" (Edin & Lein, 1997, p. 131). This scholarship underscores how shifting policy priorities and retrenchment limited economic opportunity for low-income urban families.

I want to include Weigt's (2006) point here as well –undesirable low-wage formal sector work is not sought out by poor and working-class individuals, it is “enforced” through social policies like workfare (Weigt, 2006, p. 337). Thus, political scientists and anthropologists alike have argued that welfare policies have historically played an important role in supplying capital with a ready reserve of exploitable workers. In short, intentionally or not, workfare maintains a kind of economic racism as it confines marginalized populations to undesirable, low-skilled, and low-wage jobs (Piven & Cloward, 1971; Stack, 1974; Valentine, 1971; Willhelm, 1971). In other words, considering how social policy changes like workfare shape the economic lives of the urban poor can also add richness to our understanding of the digital workforce divide.

**The economic paradoxes of workfare.** As will be examined in depth in Chapter 5, whereas post-workfare urban parents technically earned more income overall due to taking on more jobs, Edin and Lein (1997) describe several factors that may have ultimately pushed mothers like Joanne to pursue informal work. First, in order to obtain jobs as was required through workfare, families necessarily incurred additional expenses, such as the cost of transportation to and from work, and – most relevant to my arguments –the cost of childcare (Edin & Lein, 1997). Second, as families earned additional income from official workfare programs or other formal sector work, their federal subsidies for housing and food stamps were reduced. Third, depending on their income levels, working class parents could also lose their Medicaid eligibility (Edin & Lein, 1997). Said differently, although more income was generated overall in workfare, with every dollar earned, additional costs are incurred and other social support assistance in the form of housing assistance, food stamps and Medicaid are reduced or withdrawn entirely.

Therefore, I contend that these challenges frame the economic barriers facing urban job seekers like those visiting KEYSPOts.

**Urban survival strategies.** Given the ways in which workfare could paradoxically worsen economic circumstances, scholars insist that many urban families devised a complex set of survival strategies to make ends meet and still retain food stamps and housing credits (Edin & Lein, 1997, p. 19). These strategies included pursuing informal work, but also receiving help from friends and family, soliciting financial support from a partner, seeking aid and food from charities or other community organizations, selling foodstamps for cash, or even buying stolen groceries or toiletries (Edin & Lein, 1997). As Edin and Lein (1997) explain, the survival strategies pursued – and accordingly informal work practices – are shaped not just by an individual, but by neighborhood characteristics, the type of community resources available, and family social networks (Edin & Lein, 1997, p. 146). Accordingly, Edin and Lein (1997) refine our understanding of informal exchange in urban communities, arguing that informal work practices are shaped by: 1) The strength of the local labor market; 2) The size of the city; 3) The characteristics of the underground economy; 4) Local welfare practices; and, 5) The composition of charitable organizations (Edin & Lein, 1997, p. 180). In other words, following from Edin and Lein (1997), the liquid labor strategies I analyze in the context of this project should be understood as just one survival tool – albeit it a highly valuable one – in a larger toolbox of urban survival strategies. This scholarship also importantly reveals how retrenchment and government policy directly shape economic practices.



**Reproductive labor and informal work.** I would also include Losby et al. (2002) and Nelson's (1999) points as relevant to my project, as they argue that reproductive labor responsibilities like childcare or elder care are a major determining factor in whether or not a person enters the informal economy (Losby et al., 2002; Nelson, 1999). Because whereas working-class urban parents desperately need flexible jobs as they cannot afford childcare – or have access to childcare support like the elite high-tech workers I referenced earlier – the low-wage jobs available to them are strict, stressful, require long hours and night shifts, and are physically demanding (Butler & Nevin, 1997; Kurz, 2002; London, Scott, & Hunter 2002; Shulman, 2003; Weigt, 2006). So, although scholars like Dignard and Havet (1995) take a more positive view of these informal arrangements and argue families choose this work because it is compatible with childcare responsibilities, my project reinforces Moser's (1984) position: poor and working-class families are also *forced* into informal work because of the policies like workfare and the composition of jobs available to them. In other words, childcare issues are also a major determinant of economic strategies and interactions. This is one of the major themes of my dissertation as well.

In summary, to connect back to the Marxist feminist arguments from Chapter 2, as Grabham and Smith (2010) argue, the retrenchment of the welfare state and a new focus on “workfare” in public policy likewise elevated the importance of “working” and diminished the importance of social reproduction and the work of mothering (Grabham & Smith, 2010, p. 84 - 90). Critical feminist scholars have suggested that this is one of the goals of neoliberal capitalism and the retrenchment of the welfare state: to diminish carework and render social reproduction “invisible” (Abel & Nelson, 1990; England &

Folbre, 2002; Fisher & Tronto, 1990; Folbre, 1994, 2001). Kabeer et al. (2013) also contribute an important observation here, and that is that parents –and mothers in particular –may not compartmentalize their productive informal economic work and their reproductive labor. Instead, liquid laborers like Joanne may articulate their activities “in terms of a looser concept: that of family survival or livelihood” (Kabeer, et al., 2013, p. 252). In short, urban informal economy scholarship and research on urban survival strategies provides deeper context for a study of working class economic lives, which is necessary to begin to differentiate between liquid labor practices and the “immaterial” or “affective” labor of middle and upper-class individuals. I would also add that whereas the flexible high-tech workforce was once heralded as a path to greater equality as it would enable individuals to better balance work and reproductive labor responsibilities, the low-tech workforce has not benefitted from these new configurations, or from the trends of automation and computerization (Duffy, 2015; Proctor-Thomson, 2013; Toffler, 1980).

### **Conclusion**

So, what is my contribution, specifically, to the extant literature focusing on BTOP programs? As of now, the emerging research published on BTOP has primarily been quantitative in nature and focused on broad outcomes rather than examining the special characteristics of local BTOP programs. Some scholars in this group found no conclusive evidence that BTOP resulted in higher adoption rates (Hauge & Prieger, 2015) whereas others argue that Internet access programs like BTOP have improved the daily lives of target populations (Jayakar & Park, 2012) and that BTOP has been successful in moving the federal broadband vision forward (LaRose, Bauer, DeMaagd, Chew, Ma & Jung, 2014). However more aligned with this research, Schejter and Nonnecke (2012) did

conduct a qualitative study of the “information use environments” of poor and working-class urban BTOP center users in a Midwestern city to better understand broadband usage patterns and information needs (p. 2). They both advocated for future programs that can “enhance social capital,” a finding that resonates well with Staubhaar et al. (2012) and my study (Schejter & Nonnecke, 2012, p. 26). Research specifically focused on Philadelphia’s Freedom Rings Partnership found that the KEYSPOt project increased digital literacy, helped users retain jobs, and increased broadband adoption across the city in moderate numbers (ASR Analytics, 2012a). As my ethnographic project focuses on how digital access and training impacts the everyday lives of urban program participants, it can offer more detailed, granular insights into the benefits and consequences of broadband policy.

In conclusion, as discussed, this study is positioned within a larger body of scholarship in the fields of digital labor, digital inequality, the digital workforce divide, and informal urban survival strategies. Therefore, first I reviewed related research in digital labor to situate liquid labor and informal digital work within the context of the contemporary information economy, focusing on immaterial, affective and hope labor. Second, I presented the digital inequality scholarship to trace how the goals of digital labor have evolved in policy, charting the transition from a digital “access” to a digital “skills” focus. Further, I incorporated critical research perspectives. Third, I turned to the digital workforce divide literature, as this research marks the disconnect between policy and economic realities, exposing how the high-tech sector can exploit low-tech workers. Finally, I considered impediments to formal work, looking at scholarship that addressed

informal sector labor trends, the rise of workfare, and the survival strategies utilized by low-income urban parents.

In the next chapter, Chapter 4, I will trace the history of BTOP, including the evolution of thinking around opportunity in the new economy. In this way, the following chapter will connect to the digital inequality and digital workforce divide scholarship, analyzing specifically how the goals of digital labor were being presented and developed at the U.S. federal and local levels. This history is important to review, as it explains the gap between policymakers and “policytakers.” In other words, Chapter 4 examines the disconnect between digital workforce policy and the on-the-ground economic realities facing Philadelphians like Joanne or Mr. Wilson.

## Chapter 4

### Setting the Stage: The Broadband Technology Opportunities Program

#### Introduction

As discussed in Chapter 3, this project is situated within a larger research area centered around digital labor, digital inequality, the digital workforce divide, and the informal work performed by working families in the informational city. This chapter will take a pivot and trace the history of BTOP and the evolution of thinking around economic opportunity in the new economy to better analyze how the goals of digital labor were being presented and developed at the U.S. federal and local levels. This history explains the divergence between digital workforce policy and the on-the-ground economic realities facing Philadelphians like Joanne or Mr. Wilson— what I call the disconnect between “policymakers” and “policytakers.” Accordingly, the impact of the Great Recession on economic opportunity will be discussed, paying special attention to the ways underemployment/unemployment forced many marginalized workers into new working arrangements, including informalization. Second, the history of American Recovery and Reinvestment Act (ARRA) and the emergence of the Broadband Technology Opportunities Program (BTOP) will be detailed, with a focus on the program’s goals around job creation. Third, the key federal reports *Falling Through the Net* and *The Digital Economy* will be investigated, as these documents show how the stakes of digital inclusion were altered in response to the changing composition of the global information economy and the rise of neoliberalism. Lastly, how the goals of digital labor were refined – and in some cases, resisted – by the Philadelphia Freedom Rings Partnership and accordingly KEYSPOts itself will be addressed.

In short, this chapter first presents the views and visions shaping digital workforce solutions engineered by the “policymakers” and next focuses on some on the assumptions and obstacles engendered through such policy, or the stance of the “policytakers.” In this way, connecting to Mosco’s (2004) theory, I will argue that this divergence between policy and the economic lives of BTOP participants is rooted in the myth of the digital sublime. Said differently, this gap between policy vision and economic reality creates the space for “unintended policy consequences,” and begins to explain how and why new working configurations, like informal digital labor practices, emerged in the context of the KEYSPOt program. I also emphasize the tensions between the policy goals of economic prosperity versus the aims of political participation and community engagement, as this underscores the tensions between public and private sector stakeholders (Schement, 2002, 2009). Having summarized the key arguments developed in this chapter, I will now begin with BTOP.

### **BTOP and the Impact of the Great Recession of 2007 - 2009**

As a starting point, how and why did the Broadband Technology Opportunities Program (BTOP) begin? Following the U.S. subprime mortgage collapse in August of 2007, global financial markets continued to cool as a result of declining confidence in core banking institutions and tightening credit conditions. The historic 2008 default of the U.S. investment bank Lehman Brothers and the government-backed rescue of insurance giant American International Group (AIG) signaled the depth of the crisis; industrial production in developing and advanced economies plummeted and both profits and wages fell (International Monetary Fund, 2009). It is in response to this crisis that the federal government and policymakers drafted plans and approved a U.S. economic

stimulus plan in 2009, termed the “American Recovery and Reinvestment Act” (ARRA). Approximately \$7-billion distributed through the stimulus act was designated for broadband Internet infrastructure development and related programs, such as the federal Broadband Technology Opportunities Program (BTOP) and also the Broadband Initiatives Program (BIP), administered by the Rural Utilities Service (RUS) in rural areas. After three first-round proposals proved unsuccessful, The Office of Information Technology for the City of Philadelphia (OIT) and the Urban Affairs Coalition (UAC) served as anchor institutions to submit proposals to receive BTOP Broadband Infrastructure and Public Computer Centers (PCC) and Sustainable Broadband Adoption (SBA) funds. These grants were successful –with PCC being awarded \$6.4 million and SBA receiving \$11.8 million. Thus, in concert with institutions such as The Free Library of Philadelphia, Drexel University, and multiple community-based organizations, the Philadelphia *Freedom Rings Partnership* and the associated KEYSPOT broadband program was formed to address the Great Recession. I will discuss the Philadelphia project specifically in more depth in Chapter 5.

What is a “recession”? According to the United States Bureau of Labor Statistics, a recession itself is defined as “a general slowdown in economic activity, a downturn in the business cycle, a reduction in the amount of goods and services produced and sold” (U.S. Bureau of Labor Statistics, 2012, p. 1). While the U.S. economy may have suffered the most deeply during the 2007 – 2009 recession, the crisis likewise had international repercussions as the global economy experienced its most significant downturn in 50 years (International Monetary Fund, 2009, p. 11). Economic activity contracted by 1.3% in 2009 and the world’s advanced economies experienced an unprecedented 7% decline

in real GDP (International Monetary Fund, 2009, xv). In 2007, the U.S. unemployment rate was 5%, however, by the end of the recession the unemployment rate had climbed to 10% (U.S. Bureau of Labor Statistics, 2012, p. 2).

Thus, while by all measures every American business and worker was impacted by the crisis, some segments of the population (such as the KEYSPOOT program participants) experienced the effects more harshly. These impacted groups included minority communities, men, and also those with less education. To elaborate, African Americans and Hispanic populations experienced the highest rates of job loss; at the end of 2009, unemployment rates were 15.5% for African Americans and 12.5% for Hispanics (Taylor et al., p. 22, 25). Men lost jobs at a higher rate than women and workers ages 16 to 24 were more likely to lose jobs than any other demographic (Elsby, Hobijn & ahin, 2010, p. 3; Taylor et al., 2010, p. 1). Further, Americans with a high school education or less were more adversely impacted than those with an undergraduate degree or more education (Elsby, Hobijn & ahin, 2010, p. 3; Taylor et al., 2010, p. 1.) Regarding household wealth loss, proportionally middle-aged adults suffered due to a drop in their retirement account investments and weakened house value, all resulting from the mortgage crisis and housing bubble (Taylor et al., 2010). Yet, it is important to highlight that African American and Hispanic homeowners of all ages were greatly impacted by the housing crisis, as these groups were more likely to fall victim to subprime loans and experience property foreclosures (Taylor et al., 2010, p. 13). I present this background because more broadly it paints a picture of the financial challenges facing working class Americans in the period, and the landscape framing their economic lives. Furthermore, it explains some of the wider instabilities and limitations within the



formal economy during this period (to be discussed in detail in Chapter 6) and helps us understand why precarious workers like Joanne may have willingly (or unwillingly) detached from the formal labor market and pursued opportunities in the informal sector.

The unemployment crisis during the Great Recession was also unique in that it was accompanied by a record rise in underemployment/employment reduction and long-term unemployment, also contributing to formal economy erosion (Elsby, Hobijn & ahin, 2010, p. 4). Underemployed workers are defined as “part-time workers who say they want to work full-time but have not been able to find a full-time job” (Taylor et al., 2010, p. 59). According to a 2010 Pew survey, half of all part-time workers surveyed (47%) indicated that they wanted or were seeking full time work (Taylor et al., 2010, p. 66). Regarding reduced working opportunities, the same study found that 42% of workers had experienced either reduced hours (28%); pay cuts (23%); forced unpaid leave (12%); or, had full-time jobs converted to part-time (11%) (Taylor et al., 2010, p. 59). While all U.S. workers were impacted by these employment trends, again marginalized communities that make up the focus of this study were the most adversely impacted, as African Americans were more like to have hours cut than white Americans; (42% vs. 22%); be forced into unpaid leave (19% vs. 10%); or, have their full-time work converted into part-time (17% vs. 9%) (Taylor et al., 2010, p. 59). Hispanics were nearly twice as likely as their white counterparts to report that their work hours were cut (40% vs. 22%) (Taylor et al., 2010, p. 59). I would highlight here that long-term unemployment also became more pervasive in this timeframe. As the Pew report explains, “an unfortunate consequence of long-term unemployment is that it feeds upon itself,” meaning that the unemployed become less likely to find work with every passing month and thus more likely to become

detached from the formal economy altogether (Taylor et al., 2010, p. 19). In other words, I argue that these trends of underemployment/employment reduction and long-term unemployment contributed to new working arrangements, including the shift to the informal digital economy witnessed in the Philadelphia KEYSPOOT project.

As a related point, I would add that the Great Recession arrived following a thirty-year trend of deepening wage inequality. These widening inequalities resulted from a web of interconnected factors reviewed in Chapter 2 and 3, such as globalization, a shift to technological computing, offshoring and a decline in U.S. manufacturing (Goldin & Katz, 2008; Goode & Maskvosky, 2001; Massey & Denton, 1990; Massey & Eggers, 1990; Sugrue, 2005; Wilson, 1996). As already considered in the context of a broader “digital-workforce divide” in Chapter 3, whereas the shift to digital technology has been celebrated as an economic boon for U.S. workers, in reality it has had a polarizing effect. For instance, there have been gains in “high-end, high-skill jobs” and in low-wage service sector work, while opportunities in manufacturing and middle management have dwindled<sup>9</sup> (Autor, Katz, & Kearney, 2006; Castells, 1989; Cohen, 1981; Harvey, 2006; Hodos, 2002; Katz, 2010; Rodino-Colocino, 2006; Sassen, 1991). Katz (2010) makes a critical point that will be elaborated on in Chapter 5 as well, that while historically the U.S. economy has benefitted from its highly mobile workforce, in the last two decades many low-skilled or deskilled workers have become trapped in communities that offer limited access to jobs (Sassen, 2009). So, whereas workforce churn has increased, worker mobility has declined in the wake of the Great Recession, resulting from factors like the

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<sup>9</sup> Katz (2010) argues that an influx of construction work opportunities for poor and working-class men during the housing market boom of 2002–2006 may have somewhat obscured these trends.

housing market crisis, the subprime mortgage crisis, and enduring credit market issues (Frey, 2009; Katz, 2010). This is yet another facet of the complicated economic circumstances shaping the economic lives of low-income Philadelphians, an environment that is pushing many into the informal economy.

While negative in human terms, the impact of the Great Recession was not uniformly negative in economic terms. Though output fell during this period, the amount of real GDP produced by one hour of labor –or labor productivity –increased. (U.S. Bureau of Labor Statistics, 2012, p. 16). Additionally, whereas consumer spending declined in every other category, consumer spending in healthcare increased (U.S. Bureau of Labor Statistics, 2012, p. 15). These two points underscore that these two “silver linings” did not necessarily bode well for the typical American worker: increased productivity means that workers were expected to work harder for the same or lower wages. I would add that healthcare is by no means a luxury item and yet costs grew in an already difficult economic period. This is pertinent to the arguments I am developing in this dissertation, because as I will detail in Chapter 7, informal digital laborers like Sky struggled due to lack of access to affordable healthcare. Again, this highlights the precarious, difficult economic conditions in which many low-income urban Americans found themselves during the timeframe of the BTOP grant project, and how retrenchment and lack of social services can interact together to influence a family’s financial decisions.

### **The History of the Broadband Technology Opportunities Program (BTOP)**

Now that I have provided more context around the Great Recession and how it impacted the economic lives of working-class Americans, I will now provide more

background on BTOP. To reverse these recession trends I have outlined above, economic bodies such as the IMF recommended policy reforms (in addition to temporary government stimulus packages like the Broadband Technology Opportunities Program) that could develop infrastructure and deliver the most economic “bang for the buck” (International Monetary Fund, 2009, xix). Therefore, it is in response to the 2007 – 2009 economic crisis that the federal government as well policymakers drafted and approved a U.S. economic stimulus plan in 2009 termed the “American Recovery and Reinvestment Act” (ARRA). However, it is important to note that the ARRA “stimulus” plan of 2009 in the Obama administration came after the 2008 Emergency Economy Stabilization Act under the Bush administration– also referred to as the “bailout” – which authorized the U.S. Treasury to respond to the housing market collapse by spending up to \$700 billion to purchase mortgage backed securities and infuse cash to the flagging banks. Though the financial markets responded well to this economic stabilization measure, public interest groups and organized labor perceived that this action was simply rewarding the very institutions responsible for predatory lending practices. This is useful to flag because, as I discussed earlier in this chapter, poor families were the most likely to be impacted by the subprime mortgage crisis. In other words, it is important to contrast the two measures, as the 2008 Emergency Economic Stabilization Act focused on the markets whereas the 2009 ARRA targeted economic investment and infrastructure.

To return to the ARRA, the act most broadly represented the federal government’s policy response to the Great Recession and its objectives in the short-term were to preserve and create jobs and likewise to provide assistance to the unemployed while also investing in long-term development of U.S. infrastructure. Other forms of

assistance included expanding social support programs during the crisis, such as the Supplemental Nutrition Assistance Program (SNAP), otherwise known as food stamps. Though, in my view, this social support and infrastructure expansion was too limited, a subject I will address later in Chapter 6 and Chapter 7. Other ARRA goals included increasing U.S. energy efficiency and stabilizing state and city budgets (ARRA, 2009, HR 1). More specifically, the act's goals were outlined as follows:

- 1) To preserve and create jobs and promote economic recovery;
- 2) To assist those most impacted by the recession;
- 3) To provide investments needed to increase economic efficiency by spurring technological advances in science and health;
- 4) To invest in transportation, environmental protection, and other infrastructure that will provide long-term economic benefits; and,
- 5) To stabilize state and local government budgets, in order to minimize and avoid reductions in essential services and counterproductive state and local tax increases (ARRA, 2009, p. 123).

Notably, recovery here is defined by “preserving, creating, and assisting” and balanced with themes such as “efficiency, minimize.” These connections and tensions are important, as they represent themes that filter down to the BTOP program itself. Moreover, echoing scholars like Mosco (2009) as well as Golding (2000), Feenberg (2009), and Winner (1986), these themes represent technology as a vehicle for progress, development, and social support.

To expand on my last point, whereas policymakers saw developing technology access and skills as a means to jumpstart the formal economy, it is less discussed that

policymakers saw as an added benefit that wired communities increase institutional efficiencies. As it relates to public policy, Stone (1988) explains that “efficiency” is defined as the “ratio between input and output, effort and results, expenditure and income, or cost and resulting benefit” (p. 61). Said differently, “efficient” policy (in theory) allocates new resources or restructures existing resources to extract the maximum possible value (Stone, 1988). Repeatedly, BTOP documents suggested that broadband allows for greater efficiencies. As a practical example, a 2012 NTIA funded BTOP progress study championed Internet access as a direct means to reduce healthcare costs for the U.S. (ASR Analytics, 2012b, p. 35). Whereas ICT policy is closely associated with institutional efficiency, to reconnect to an earlier point aligned with Mosco (2004), it is also associated with increased individual efficiency. As this line of reasoning goes, providing computer access and digital skills can give an individual the tools necessary to become self-sufficient and self-sustaining. In this way, as I will expand on later in this chapter, we can see the language around broadband and institutional efficiencies as dovetailing with – and structured by – the discourses of neoliberalism.

However, to return to BTOP, approximately \$7 billion of the funds distributed through the ARRA were designated for broadband Internet infrastructure development and related programs, including the federal Broadband Technology Opportunities Program (BTOP) supporting the Philadelphia project, but also the Broadband Initiatives Program (BIP) administered by the Rural Utilities Service (RUS) in rural areas. In total, NTIA and RUS announced awards for 553 projects, approximately \$6 billion for grant funding and \$1 billion in loan funding (Kruger, 2013, p. 2). Only state or political agencies, nonprofits, or “other entities” in the public interest were eligible to apply for a

Broadband Technology Opportunities Program grant (ARRA, 2009, HR 399). Given the scale of this federal investment, I would argue that research about the role of the programs in the everyday economic lives of low-income Americans is useful in its ability to help us better understand any potential benefits or limitations to guide future policy.

So, how were BTOP funding decisions made? The grant applications for BTOP were subsequently evaluated in a few ways. For instance, grants were judged by their ability to acquire equipment or instruments; construct and deploy broadband infrastructure; ensure access by community “anchor institutions”; deploy Internet projects that increased public safety; and, support education and economic development by supplying access to low-income, unemployed, elderly, and other “vulnerable populations” (ARRA, 2009, HR 400). Other secondary BTOP goals included increasing digital education, broadband awareness, training, access, and providing equipment to schools, libraries, and healthcare providers (ARRA, 2009, HR 398 – 399). Finally, “job-creating strategic facilities” in targeted communities were prioritized (ARRA, 2009, HR 398 – 399). In their study evaluating the economic impact of BTOP, Hauge and Prieger (2015) analyzed BTOP grant applications for the frequency of “target” statements linking to all of the aforementioned goals<sup>10</sup>. Hauge and Prieger (2015) found that “workforce development” was the most cited target statement and was referenced 963 times comprising 20% of all citations, with “mapping” and “digital literacy” ranked as second and third with 916 (18% of total) and 887 (17% of total) citations respectively (Hauge & Prieger, p. 6559). Other economic target statements in grant applications included “small

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<sup>10</sup> The authors identified target statements such as “workforce development”, “public housing”, “senior citizens”, and “homeless” (Hauge & Prieger, p. 6559).

business” with 119 citations, or around 3% of the total citations (Hauge & Prieger, p. 6559). So, this underscores that “access” and “skills” were intimately tied to economic opportunity; a grantees ability to convincingly argue for “workforce development” was a major determining factor influencing funding deliberations. Additionally, BTOP grantees were required to publish quarterly reports on their success in meeting all the ARRA defined benchmarks.

In brief, the goals of the BTOP program were both to provide broadband access to Americans in underserved communities and to improve broadband infrastructure. While home broadband access was discussed, acquiring access through community sites was emphasized. The position that broadband access at home should be balanced with other community access options like KEYSPOts connects to the U.S. government’s policy position –developed over time in their well-known 1990’s white paper series *Falling Through the Net* – that achieving total home broadband penetration was not a feasible policy strategy (ARRA, 2009, HR 398 – 399). I will turn to these reports in the next section, as the goals of digital labor were in many ways formed and solidified in this three-part set of reports as well as in a series of “companion” papers on the digital economy. Tracing this history offers a window into the thinking of leaders and policymakers in a key transitional period in which the U.S. government began to respond to significant shifts in the growth of online computing, work practices, as well as the changing composition of the U.S. economy. In sum, these neoliberal discourses reveal the embrace of the “myth of the digital sublime” Mosco (2009) references, the myth that technologies can overcome power structures and material conditions. In other words, these reports lay the foundation for my larger point that the dominant discourse suggested



that with the appropriate *access* and *skills*, individuals can forge new economic opportunities, even in the most difficult circumstances, to lift themselves out of poverty.

However, following from Schement and Curtis (1997), there is an “essential tension” underlying the goals of broadband policy more broadly that I would like to address (p. 132). To explain, this tension is due to policy’s inability to discern whether information should be viewed as a *commodity*, and thus governed by free market principles or if, conversely, it is a *public resource* and thus must be supported by governmental programs (Schement & Curtis, 1997). Whereas this can be a tension between political interests or governing factions (Republican or Democrat), I would underscore that imposing this as the dominant frame is overly simplistic, as it does not account for the ways in which neoliberal ideology and the embrace of market-driven solutions has influenced technology policy positions on both the American right and left (Schement & Curtis, 1997). Indeed, the Telecommunications Act of 1996 that deregulated the media and loosened ownership restrictions was passed under the Democrat-aligned Clinton administration. Therefore, we can instead view these policy tensions as shifting between the twin goals of “prosperity” and political “participation,” as I referenced in the digital inequality literature review section of Chapter 3 (Schement, 2009). These goals of prosperity and participation can be complementary, but also contradictory. In this way, I assert that the myth of the digital sublime (Mosco, 2004) – that technology offers a cheap and efficient solution to complex urban problems like poverty – operates as an internal discourse within policy whereas the tensions surrounding political prosperity/participation act as external forces steering the decision making and the allocation of resources. What is at stake as these “tensions” exert influence over the

policymaking process is whether programs benefit only economic interests “prosperity,” or, instead, provide communities with tools for political “participation” and engagement (Schement, 2009; Wolfson, Crowell, Reyes & Bach, 2017). This larger question of the tensions between these aims is one in that I will consider in the conclusion chapter of this dissertation as well.

### ***Falling Through the Net and The Digital Economy***

To begin to trace the evolution of these internal policy discourses around “prosperity” or workforce issues, I would argue that the federal government’s response and relationship to Internet technology and the information economy was first sketched out and developed in a three-part set of reports produced in 1995, 1998, and 1999 respectively entitled *Falling Through the Net*. The documents after 1995 were also bolstered by a set of companion reports on the *Digital Economy* in 1998 and 1999, and thus the later installments in the *Falling Through the Net* series should be understood in relationship to those priorities and positions as well. A deep dive into these reports is useful, as these early Internet and digital economy policy reports are, in many ways, a sort of origin story for BTOP and the goals of digital labor, capturing shifts in language and priorities still underpinning the federal programs almost 20 years later. These reports track the evolution of the concepts used to locate and describe digital inequalities, delineate shifting policy goals and programs, and as Stevenson (2009) notes, they also mark a swing towards neoliberalism and the embrace of private sector solutions to the problems of digital access. That being said, I will now turn to an analysis of the first *Falling Through the Net* policy report.

### ***Falling Through the Net: The Promise of “Riches” in the Information Age***

To begin, the July 1995 *Falling Through the Net* report was the earliest installment and was entitled, “A Survey of the Have Nots’ in Rural and Urban America.” This initial report began to develop the policy argument that because digital access – just like telephone access – was a vital telecommunications tool necessary for economic, social, and political engagement, it should necessarily fall under the existing categorical principle of “universal service” that I discussed in Chapter 3. To restate, the principle of universal service, or the rights of citizens to access communication technology, was a central piece of legislation in the Federal Communications Commission’s (FCC) *Communications Act of 1934* around “wire and radio communication” (Federal Communications, 1934). The 1995 *Falling Through the Net* report underscored the importance of information seeking and information practices in the evolving “Information Age” and made the link between digital technology and economic prosperity insisting that, “While a standard telephone line can be an individual’s pathway to the riches of the Information Age, a personal computer and modem are rapidly becoming the keys to the vault” (McConnaughey, Nila, Sloan, Baxter, Alvarez & Francesconi, 1995, para 3). Therefore, the idea that a personal computer might serve as the “keys to the vault” of economic prosperity became the standard view in federal broadband policy. This repeats the “prosperity” goal of early universal service policies, yet the political “participation” function of broadband also received some attention in this first report (Schement, 2009).

In this early document, I would underline that those without Internet access were characterized as “have-nots” or the “information disadvantaged.” The report also

presented economic data to demonstrate that the urban and rural poor were lagging in computer penetration rates (McConnaughey et al., 1995, para 5). Aligned with the perspectives of digital divide scholars regarding access issues discussed in Chapter 3 (Hoffman et al, 2001; Jansen, 2010), the report noted that such groups – including low-income Americans, minorities, young and less educated users –were the most “enthusiastic” users of digital technology services that “facilitate economic uplift and empowerment.” These economic uplift activities were defined as: 1) Searching for employment opportunities; 2) Engaging in educational activities; and, 3) Accessing government reports (McConnaughey et al., 1995, para 10). Aligned with studies like Compaine (2001) already discussed in the literature review, the connection was made between education and online use; the report highlighted that low-income (\$10,000-\$14,999) Internet users in urban, rural, and central cities were among the groups most likely to enroll in online classes (McConnaughey et al., 1995, para 11). More generally, I would highlight that the first report advocated policies that could provide “public ‘safety nets’” to “complement the long-term strategy” of home Internet access for all Americans (McConnaughey et al., 1995, para 17). Notably, future reports would back away from the home broadband goals and shift towards advocacy for “safety nets,” such as making broadband access available in community access centers (‘CACs’) like libraries.

To move on from the first report, the second 1998 installment of the series subtitled “New Data on the Digital Divide,” expanded on the argument that digital policy should adhere to the principles of universal service. However, the language used was slightly different, as it focused more on the U.S. as an “information society,” internet access as the “information superhighway,” and discussed how the country could develop

its own “information infrastructure” (McConnaughey, Lader, Chin & Everette, 1998, para 2). This report used both “digital divide” and “have nots” to discuss unconnected Americans; the repeated use of the term “digital divide” underscores the growing fear that the gap was widening, rather than closing, even as digital technology became more affordable. However, I would point out here that this language also downplays the economic and power disparities captured in the language of “have-nots” or the “information disadvantaged” from the earlier report. This change also signaled the future diminished focus on community power and political participation in broadband policy. In sum, the language of “have-nots” implies there are also “have-mores” and perhaps even “information advantaged,” terms that would better speak to the power and structural imbalances at the heart of digital inequality (Eubanks, 2011).

And now, lastly, the final 1999 report, “Defining the Digital Divide” was the most extensive of the three reports, totaling 127 pages and firmly positioned digital access<sup>11</sup> in the realm of an emerging global digital economy. This report argues that in this new paradigm, U.S. workers would need not only access, but digital skills to stay competitive. More specifically, the report argues that digital access is critical as the country must ensure workers are “highly-skilled, well-educated” and “technology-literate” if we are to remain a leader in the world economy (McConnaughey et al., 1999, para 5). Further, embracing the view that information is a commodity, the private sector<sup>12</sup> is seen as the

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<sup>11</sup> The report also highlights that the U.S. “internet churn” rate is 15%, referring to the percentage of individuals that were once digitally connected to the internet, but became unconnected due to fact that they could either no longer afford access and/or could not replace a faulty computer (McConnaughey et al., 1999, p. 39). In this way, the report did complicate and further understanding of “access” as a multidimensional issue.

<sup>12</sup> Again, pursuing private industry solutions to public telecommunications infrastructure was very much aligned with the *Telecommunications Act of 1996* passed under President

appropriate partner for the federal government to work with in order to achieve the policy goals of digital inclusion with such statements as, “we look forward to working with the private sector to bring the riches of the Information Age to everyone” (McConnaughey et al., 1999, para 7). Thus, while the initial *Falling Through the Net* report sketched out the U.S. policy role in broadband development, the last report takes a notable pivot, asserting that the private sector should take the lead – a position that would be reinforced through the *Digital Economy* companion reports as well. In sum, this last installment of *Falling Through the Net* embraces private sector solutions and goes the furthest for drawing a link between economic “riches” and digital access, also charting a policy shift from “access” towards “skills.” However, as I alluded to earlier, I assert that the *Falling Through the Net* series should be understood alongside the influential *Digital Economy* policy series as well.

### ***The Digital Economy: Digital Skills for a Global Stage***

The first *Digital Economy* report in 1998 –produced by a special project group in the U.S. Department of Commerce –reiterated some of the themes of the *Falling Through the Net* series, including overlooking the digital workforce divide, stressing “skills” training, and promoting globalization and private sector involvement. These influential reports also bolstered the position that information is a commodity and contributed to the decline in focus on issues of broadband and political participation. The report began on an optimistic note regarding the state of the economy, citing a shrinking budget deficit, lower interest rates, and lower barriers to international trade as the first proof of the new

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Bill Clinton which included Internet in spectrum allotment but also deregulated broadcasting and telecommunications markets and loosened media ownership requirements.

economic promise of the digital era (Margherio, Henry, Cooke, Montes & Hughes, 1998, p. 1). The report suggested that the expansion of information technology had allowed for job growth by increasing the demand for programmers, systems analysts, computer scientists and engineers. As the report argues, these high-paying private sector jobs earn workers an average of \$46,000 per year compared to the national average of that time of \$28,000 (Margherio et al., 1998, p. 6, 46). While this appears positive on the surface, as addressed in the previous chapter, this focus on the “high-tech minority” (in the words of Rumberger & Levin, 1985) overlooked a growing digital workforce divide (Rodino-Colocino, 2006) intersecting with the digital divide. While the report anticipates that the new economy will create jobs, it cautions that if American workers are not sufficiently “skilled” for these new opportunities, they will migrate abroad – marking the move from an “access” to a “skills” policy focus (Margherio et al., 1998, p. 51). For instance, the report, again, emphasized that the private sector will take a lead role in the digital economy and policies of deregulation are championed. Channeling liquid modernity (Bauman, 2000), the report also heralds a shift to “less rigid organizational structure” and promotes the shift towards globalization, advocating for a “seamless global marketplace” (Margherio et al., 1998, p. 48 - 50).

Moving on, the second “Emerging Digital Economy” report in 1999 repeats some of these same themes from the first report, focusing on globalization, flexibilization, digital skills and the private sector. However, while acknowledging that the technology sector offers high paying jobs, however, this report voices concern that the U.S. lead in the utilization of digital technology is “diminishing” and includes a discussion on the intersection between the digital economy and emerging digital workforce divides (Henry,

Cooke, Buckley, Dumagan, Gill, Pastore & LaPorte, 1999, p. 1). Reiterating the assertions of Devey et al. (2006) who understand the informal economy as emerging from wider labor instability or “churn,” the report also flags that digital technology has caused a “churn” effect (Henry et al., 1999, p. 37). To put it another way, whereas jobs are quickly gained in the tech field, they are just as quickly lost in other industries, resulting in grave instability for U.S. workers who must constantly be retrained and develop new skills to keep pace with workforce demands (Henry et al., 1999). I would argue that this further highlights the emerging digital workforce divide: there is great demand for high-paid “core IT workers” but wage gaps between technology industry workers and other workers had begun to widen (Henry et al., 1999, Introduction, Para 11 – 12). Yet, this report strangely still advocates for continued deregulation and positions information as a commodity, rather than public resource, even as it admits the digital gap is not closing and that the current solutions are insufficient (Henry et al., 1999, p. 7). This reinforces Lenert et al.’s (2012) position that the free market is unconcerned with “equity” and is thus a poor partner for achieving the goals of universal service (Lenert et al., 2012, p.117; Schement, 2002).

To sum up my key points, through a close read of the *Falling Through the Net* and companion *Digital Economy* series, we see how the goals of digital labor begin to take shape. To be more specific, first the reports all chart a broadening of overall policy goals, as the goal of ICT access and “universal service” is expanded to also incorporate digital skills. Second, aligned with Mosco’s concept of the myth of the digital sublime (2004), the reports associates ICTs with economic prosperity – literally “riches.” Third, the language of “have-nots” is abandoned for the term “digital divide,” which I contend is



less attentive to political participation and the role of power and structural imbalances in generating broadband access disparities to begin with. Fourth, the papers each promote globalization, flexibilization, and deregulation. While the last *Digital Economy* white paper does recognize the possible problems of a “digital workforce divide” and labor “churn,” like all the other reports, it ultimately promotes information as a commodity, championing private sector solutions to the enduring problems of digital inequality. As I will address later in this chapter, these tensions between the public (information-as-resource) and private (information-as-commodity) solutions influenced the Freedom Rings Partnership as well, specifically in the program’s relationship to Comcast and their “Internet Essentials” low-cost home Internet program (Schement, 2009; Schement & Curtis, 1997). I would add that Chapter 5 will address the role the private sector played in crippling Philadelphia’s municipal WiFi project – Wireless Philadelphia – in 2005.

In other words, I am arguing in this chapter that broader national policy prescriptions iterated and refined in the 1990’s that pulled programs towards the “prosperity” pole later constrained local government’s ability to address digital access problems and the dimension of political participation. In short, these reports track the evolution of the concepts used to locate and describe digital inequalities, delineate shifting policy goals and programs, and mark a swing towards neoliberalism seen in the embrace of private sector solutions to the problems of digital access. Although these themes filtered down to the Freedom Rings Partnership programs as well, it is important to underscore that the discourses were differentiated through multiple stakeholders and “layers” of the partnership, the policymakers and the policytakers, as I will now consider.

### **The Freedom Rings Partnership: Defining and Differentiating Digital Labor**

While federal policy played a central role in determining how “work” was discussed and setting the parameters of the related ICT discussions around prosperity and political participation, the goals of digital labor were refined – and in some cases, resisted – within the Philadelphia Freedom Rings Partnership (FRP) itself. Said another way, whereas we can understand both the *Falling Through the Net* and *Digital Economy* series as engineered by the “policymakers” we will now examine how those stances bear out on the ground for broadband access and training programs –the stance of the “policytakers.” So, although it is true that the goals of digital labor were molded by federal BTOP policy visions, they were in many ways refined and differentiated through multiple layers of the Philadelphia partnership including through lead partners, marketing staff, community organizations, specific KEYSPOTs, and digital trainers/computer assistants. While the lead FRP partners enjoyed the most control over the policy visions, individual partners also shaped the mission and discussions around economic opportunity, workforce development and political participation. These planning goals were often complementary, but could be contradictory. To be more specific, visions were negotiated by various FRP stakeholders through internal discussions, formal planning and working groups, private reports, and public marketing materials and strategies. Notably, as I will demonstrate, stakeholders also differed in their conceptualization of information as a commodity or, alternatively, as a resource necessary for political engagement (Schement & Curtis, 1997).

Therefore, to explore this and build on how digital labor was conceptualized, this section will first examine the Philadelphia partnership’s collective priority on community

engagement. Second, I will provide the technology industry perspective that focused on “efficiencies,” embraced neoliberalism, and reinforced prevailing digital myths (Mosco, 2004). Third, I will analyze the public marketing approach that balanced ARRA visions with the needs of prospective KEYSPOT visitors. And finally, I will present the on-the-ground community organization visions that pushed back and resisted the federal, local, and technology industry positions around workforce development. In short, I argue that as you move through different layers of the partnership, a gap between federal priorities and local needs begins to come into view. In this way, those closest to the on-the-ground economic realities, such as community organizations, digital trainers or participants— the “policymakers” – were more likely to refine or reinterpret policy to address the social, political and economic needs of their communities. In sum, while the goals of economic development were built through federal visions, outlined by BTOP, refined by the FRP partners, and guided by the private sector, they were somewhat complicated by marketing efforts, and often revised by on-the-ground organizations.

### **Freedom Rings Partnership: Overall Goals and Program Evaluation**

In this way, as a starting point to begin to analyze the Freedom Rings Partnership’s conception of workforce development – as well as touch on the tensions between “prosperity” and “participation”— what were the goals of the Freedom Rings Partnership, relative to the ARRA? Through a series of meetings in the Fall of 2011, the Freedom Rings Partnership collectively decided that the KEYSPOT programs should be evaluated on the basis of three shared outcomes. These outcomes included: 1) Improving community engagement of participants; 2) Increasing adoption and broadband subscription rates; and, 3) Providing job and educational training. So, while the

partnership's primary goals were unsurprisingly much aligned with the federal ARRA vision, internally Philadelphia made a point to elevate community engagement – “participation” –and prioritize it before job and economic “prosperity” functions. This was also due to the unique origin of the partnership itself that was rooted in principles of “digital justice” and community needs, a subject I will turn to in Chapter 5. However, I highlight these tensions as it is in slight contrast with the federal visions put forward in *Falling Through the Net, The Digital Economy*, as well as in ARRA reports. Yet, while job training was collectively agreed upon internally by all partners as the third goal of the program, during weekly meetings lead partners asked for – and shared – “success stories” which primarily centered on job training. For example, in early 2012, some stories that were shared included that of a single mother who secured employment after earning her Microsoft Office specialist certification as well as another mother who felt she “can be more effective” at her job after receiving training through KEYSPOTs. I would argue that this reveals that the lead partners internally recognized that “community engagement,” or participation more broadly, was the more unifying message for all stakeholders. Nonetheless, lead partners also believed that foregrounding workforce development gains was crucial for federal support and broader public buy-in. Yet, as I will explain, other private interests shaped the orientation of the messages as well, which I will now consider.

### **Private Sector Interests: Embracing “Efficiencies” and Neoliberalism**

Private industry also played a role in shaping the goals of digital labor. For example, internal and consulting-firm produced reports further influenced how workforce goals were presented and developed. These reports often reflected the interests and

conclusions of the private sector – aligned with the stance that information is a commodity – and consulting documents were typically generated at the request of lead partners (Schement & Curtis, 1997). In concert with Microsoft Corporation, a technology consulting firm based in Seattle – The Arnold Group – produced a deck and “output document” that was shared internally at meetings and circulated to the partners. Their report entitled, “Shape the Future: The Benefits of Digital Inclusion in Philadelphia,” provided an economic modeling tool aggregating publicly available data on digital inclusion, income, government program costs, and graduation rates to predict the potential economic and social benefits of KEYSPOTs. Referencing the urban crisis to be discussed further in the next chapter, the report noted that a “cycle of poverty” had historically impacted the economic life of the city and argued that investment in digital infrastructure would result in earnings improvement for workers who would be “benefiting from the lifetime creation of 879 jobs.” (The Arnold Group, 2011, p. 3 - 9). I draw attention to this statement as this claim mirrors Mosco’s (2004) critique of the myth of the digital sublime, as it implies that with the right *access* and *skills*, individuals will forge new economic opportunities and lift themselves out of poverty.

Echoing the ARRA’s own language – The Arnold Group (2011) report also argued that digital access would allow for “efficiencies,” reducing costs to city taxpayers through offering some government services online, potentially saving as much as “\$4.50 per transaction” (The Arnold Group, 2011, p. 5 - 18). In turn, investing in digital infrastructure in Philadelphia would result in “reduced dependency” of the poor on social programs. The report therefore reasoned that the welfare state could be further retrenched due to this technological investment and I would emphasize that the language of

neoliberalism and the narrative of self-responsibility is repeated throughout. For example, the researchers claim that broadband access and skills can reduce government healthcare spending as poor and working class populations would acquire the tools to better “manage” their personal health, particularly health issues resulting from obesity (p. 18). Here I would underscore that the lens of neoliberalism obscures structural realities that may limit access to healthy food for those living in poverty, including high food cost and urban food deserts. The Arnold Group (2011) report even goes so far as to argue that the wage increases resulting from technological access could potentially lower incarceration rates, again ignoring structural factors.

Said differently, in The Arnold Group consulting report, investment in technology is discussed as an efficient “return on investment,” offering poor and working-class communities access to a wider range of material resources for a reduced government cost (Stone, 1988). In line with the government stance laid out in *Falling Through the Net* and *The Digital Economy*, the report also advocated for public-private partnerships as a future strategy to help improve Philadelphia’s economic “global competitiveness.” (The Arnold Group, 2011, p. 11). This position firmly advocates for the information-as-a-commodity perspective (Schement & Curtis, 1997). Thus, in an embrace of the values of liquid modernity and the digital sublime— associating access with economic mobility, neoliberalism, privatization, and globalization —the tech perspective is closely aligned with a “policymaker” vantage point and elevates the goals of “prosperity” whereas political “participation” goals are ignored (Schement, 2009). Still, most broadly the report likewise denotes a failure to deeply understand or attend to the complex web of structural and social factors limiting opportunity for poor and working class urban Philadelphians

like Joanne or Mr. Wilson. However, the partnership's marketing arm played an interesting role in defining the goals of digital labor as well.

### **Marketing Visions: Reflecting Policymakers, Attracting Policytakers**

In contrast to the technological sector aligned output document, the marketing and advertising documents produced for the partnership played the role of framing and communicating the economic goals of the program to the general public as well as potential program participants. More specifically, the advertising firm "The Mighty Engine" was responsible for creating: 1) The "KEYSPOT" branding; 2) The promotional strategy to generate awareness of KEYSPOTs, and 3) The partnership's host website, [www.PhillyKeypots.com](http://www.PhillyKeypots.com). The marketing element was an interesting dimension of the project, as the advertising was responsible for reflecting both the vision of the "policymakers" publicly and yet, at the same time, was tasked to promote the program to the "policytakers," i.e. potential program participants. In sum, this meant that the marketing strategy had two faces, one that it presented to the policymakers and one that it presented to the policytakers.

To further explain my point, when working directly with the partnership to craft general campaigns that would reach all segments of the population, the Mighty Engine attempted to emphasize the "prosperity" economic and workforce elements in their messaging. For instance, during weekly meetings, the firm regularly solicited assistance from partners to identify KEYSPOT program participants for possible inclusion in future marketing "radio spotlights." In one such meeting, a marketing strategist outlined the "qualifications" for desirable participants in these future campaigns: 1) Under/unemployed (found a job, or found a better job); 2) Youth education, seniors; and,

3) “Reentering society (found a place to live, found a job). As we can see, the most desired participants for communication campaigns were those who found a job through participation in KEYSPOT programs, rather than those who engaged more deeply with their community, diverging slightly from the general partnership priorities. So, this is more closely aligned with promoting the federal and private sector visions, but nevertheless was also viewed as necessary to secure public buy-in of the program. Thus, this recalls Mosco’s (2004) observation that technology programs are more palatable to the public when they adhere to the goals of creating a neoliberal self-sufficient worker.

Nonetheless, the firm diverged from these visions in its efforts to target potential program participants residing in Philadelphia’s poor and working-class communities, including direct marketing campaigns like flyers or out-of-home (OOH) advertisements, such as wrapping bus shelters. For instance, at a weekly meeting in June of 2012, the Mighty Engine unveiled a promotional flyer that emphasized the connection between KEYSPOTs and workforce development (speaking to policymakers and policytakers) but also promoted social support programs (speaking to policytakers). In other words, federal visions and private industry visions tended to highlight reduced costs and demands for social service as a benefit of digital inclusion, whereas participant marketing touted social support program participation as a benefit of digital participation.

To say this differently, in contrast to The Arnold Group’s report, The Mighty Engine advertising campaign for KEYSPOTs highlighted enrollment in social programs as a potential *benefit* of obtaining digital access, a detail that demonstrates the differences in the internal visions of the program versus the external framing of the program to the



public. Here is a concrete example of this messaging, taken from a marketing flyer created for the partnership:

Quite simply, we're trying to improve the quality of life, earning potential, and network of those currently living on the wrong side of the digital divide in Philadelphia. Our research shows that offering access to computers and the Internet to those currently without it can **make for dramatic changes**, from **unprecedented access to job opportunities and enhanced job skills** to **fuller participation with public benefits** for which they already qualify.

Here KEYSPOTs and the technological access and training they provide is promoted as a program that can “make for dramatic changes” in the lives of poor and working-class Philadelphians, aligned with the “riches” and prosperity theme repeated in *Falling Through the Net* and the *Digital Economy* reports. Yet additionally, it underscores a reality tacitly acknowledged: the poor and working-class Philadelphians targeted through KEYSPOTs need access to social support programs, i.e. “fuller participation with public benefits.” This dimension was addressed in marketing precisely because partners knew that, ultimately, it would be vital for achieving success. In this way, we begin to see the gap between policymaker and policytaker goals and needs come into view.

### **Policytakers: Resisting Workforce Policy Visions**

To summarize my previous arguments, the goals of economic development were built through federal visions, outlined by BTOP, refined by the FRP partners, guided by the private sector, and somewhat complicated by marketing efforts. Yet, I want to point out that additionally, individual community groups, digital trainers or lab assistants, participants, and other local stakeholders often pushed back on or resisted the dominant

narrative around economic development for prosperity and the ARRA policy priorities. These groups often focused more heavily the on political participation dimensions. As will be discussed in Chapter 5 in more depth, some of these differences also stem from the history of the partnership itself, which had its origins in both the failed Philadelphia municipal WiFi project in 2005 and a Digital Justice summit that convened long before the grant writing process for BTOP even began. However, to return to my point, I am arguing that we can understand these policy tensions as the result of an interaction between a set of top-down and bottom-up forces. Said differently, the national visions were arranged at the “top” and their messages filtered down the Freedom Rings Partnership’s organizational levels, such as to the city and lead partner visions, but were influenced by powerful stakeholders like the technology sector. Marketing efforts acted as an intermediary layer, communicating visions from the top but also considering how to attract program participants. The local, on-the-ground organizations at the base of the project were closer to specific challenges limiting community opportunity for KEYSLOT visitors like Joanne or Mr. Wilson and were accordingly more likely to promote political participation as the goal of broadband access programs. As such, the local framing of the issues of economic opportunity and digital labor were much more attuned to the kind of structural barriers discussed in Chapter 3, including the rise of precarious working arrangements, the retrenchment of the welfare state, the expanding digital workforce divide and the growing forces of neoliberalism. Further, these local on-the-ground visions were more clear-eyed in their assessment of the potential of digital access and skills programs, modulating the myth of the “digital sublime” (Mosco, 2004) and thus

exploring the potential of technology to mobilize communities for social justice (Wolfson et al., 2017).

As a concrete example of how these visions were filtered through the various layers of the partnership, while it is true that many non-lead partner organizations in FRP drew on messages of economic opportunity, they shaped this messaging to more closely adhere to their own unique programmatic mission. As a case in point, in contrast to the federal or private sector policy perspectives, in one advocacy organization's digital skills training courses, workforce issues were presented in the context of Philadelphia's wider urban crisis. In fact, in order to underscore the social and economic barriers facing low-income KEYSPOT job seekers and the growing digital workforce divide, in one course a KEYSPOT digital trainer, Maria, shared the following statistics around poverty and inequality with her class:

The SPM [Supplemental Poverty Measure] figures released by the Census Bureau on Thursday show that households may have income above the poverty line, factors such as medical expenses are pushing increasing numbers into poverty. The new figures also indicate that the tepid job growth in the **more than four years since the financial crisis come mostly in the form of low-wage jobs** that in many cases are **not able to lift families out of poverty**.

In sharing this with her digital skills class, here Maria draws connections between the broader political and economic conditions precipitated by the Great Recession itself – as well as the urban crisis in Philadelphia to be addressed further in Chapter 5 –and the proliferation of low-wage, precarious work. Said another way, Maria acknowledges the trouble economic landscape in Philadelphia and connects the lack of good jobs to the

Great Recession. Incidentally, Maria – whose positionality is much closer to the participants and therefore on-the-ground realities in Philadelphia – recognizes that the “goals” of digital labor presented in federal policy (BTOP) and partnership visions (FRP) of economic prosperity may not connect to the lived economic realities of urban Philadelphians.

Thus, to return to the training course, recognizing this disconnect between technology policies and economic realities, Maria focuses instead on how digital skills can be used for political mobilization and participation (Wolfson et al., 2017). In sum, the exploitative working conditions facing poor and working-class Philadelphians are, in Maria’s view, related to a broader restructuring of the relations between capital and labor in the contemporary information economy. Thus, it is necessary for poor and working-class communities to mobilize and organize for labor rights to improve worker protections. In this way, Maria explains, there will be better opportunities in the future. What is important here is that Maria advocates for the KEYSPOT programs to promote deeper political participation rather than centering on economic prosperity. To provide a historical reference and help her students more deeply reflect on the dire economic conditions facing Philadelphia in the wake of the Great Recession, Maria shares a quote from Martin Luther King, Jr. with her class:

The **emergency we now face is economic**, and it is a desperate and worsening situation...there is a kind of strangulation in the air, in our society it is murder, psychologically, to **deprive a man of a job or an income**.

In other words, Maria includes the MLK quote in her class to underscore the ways in which the 2007 – 2009 crisis magnified and reproduced longstanding racial and class

disparities. Again, it is important to highlight that poor and working-class communities like those visiting KEYSPOTs were impacted the most harshly by the Great Recession, as for instance, these groups were even more likely to fall victim to predatory housing loans. So, rather than strictly focus on the digital access or digital skills training needed to connect individuals to economic opportunity, Maria and the community based organization in which she worked shifted the focus back onto the longstanding structural conditions – including the urban crisis in Philadelphia –that contributed to the digital divide in the first place. It is also worth mentioning that digital trainers and KEYSPOT open lab assistants were in many cases members of the communities in which they worked, and thus had lived experiences – such as health issues or experiences with homelessness –that made them better able to meet participants’ social support needs and made them more aware of the myriad challenges to finding good paying jobs (Wolfson & Crowell, 2013). Therefore, this gap between policy goals and economic realities was well understood by those working on-the-ground in Philadelphia’s KEYSPOTs. And it is also the space in which new working arrangements began to emerge.

### **Conflicting Visions: Policymakers and Policytakers**

Having just argued that on-the-ground stakeholders may push back on or resist federal policy visions and promote the dimension of political participation, for a final glimpse into how greatly economic visions can diverge, I will turn to a series of partnership-wide “sustainability” workshops held in the summer of 2012. The objective of the sustainability workshop was to begin to sketch out and solidify the partnership’s commitment to continue to support broadband infrastructure in the city after the conclusion of BTOP. Therefore, partnership members at all levels – from lead partners to

computer trainers –met to discuss creating a “Digital Inclusion Compact and Vision Development.” In one of the session activities called the “History of the Future” exercise, attendees gathered at tables at random to brainstorm on how the project would ideally be remembered. In short, the goal of the exercise was to envision the city *after* the conclusion of the Freedom Rings Partnership.

Table discussions among attendees revealed that after two years of intense collaboration, partner organizations still shared vastly different visions of a digital future for Philadelphia. For instance, a high-level partner representative, Jay –more closely aligned with the technology industry position–expressed a hope that technological access would connect participants with jobs, but also reduce the city’s need for social support programs in the future. Imagining how BTOP would be ideally be remembered five years hence, Jay thus role-played:

Now it’s 2017 and the city economy has flourished, in no small part due to the success of BTOP and creating a digitally connected city! **Most formerly unemployed have digital skills to get better jobs.** For those that do need to search, they can access all that information online, and there is **less need for welfare programs** and in-person unemployment centers.

In other words, as his statement reveals, Jay literally saw “digital skills” as the key for connecting participants to jobs, also repeating the economic prosperity theme. Yet, Jay likewise expressed a goal – aligned with the ARRA language around “efficiency” and the technology industry position of reducing “dependency” – that technological access would reduce the need for social support programs in the future (Stone, 1998). Said differently, Jay reiterated the digital myth as Mosco (2004) conceptualizes it, or the myth that

technology can offer cost-effective solutions for pervasive and very complex urban problems, and even possibly allow for further retrenchment. His position, therefore, was closer to the policymaker vision.

In contrast, at the same table, a digital trainer from an advocacy organization (Audrey) expressed her hope that broadband adoption and digital skills would promote deeper political participation and community engagement. Her vision more closely reflected the priorities of the larger partnership and community organizations. Next, Audrey talked about a “digital future” that would see BTOP as an important leader in the movement to use technology to fight for social justice and turn back patterns of economic inequality that persisted throughout the city. In short, Audrey referred to the urban crisis, or the broader social and structural problems and the political issues framing the Great Recession that I will turn to address in Chapter 5. Nevertheless, it is important to note that Audrey –like the digital trainer, Maria – was more involved than Jay in the on-the-ground work of engaging with participants, and I would thus emphasize that her positionality within the partnership impacted her view of the digital divide problem. Therefore, Audrey more closely represented the policytaker vision, arguing that political change would be necessary to close the digital workforce divide and dramatically improve the economic lives of low-income Philadelphians like Joanne and Mr. Wilson. The conflicting vision communicated by Jay and Audrey –even at the end of the Freedom Rings Partnership – captures the enduring tensions surrounding urban policy frameworks for addressing economic opportunities for poor and working-class Americans, the requisite goals of digital labor, and the tensions between the goals of economic prosperity or political participation. Furthermore, the conflicting visions Jay and Audrey expressed

revealed the disconnects and ruptures between two populations, those that make policy and those to whom policy is targeted – policymakers and policytakers. This gap was a space for unintended consequences, in which new working arrangements and informal digital practices indeed emerged in KEYSPOTs.

### **Conclusion**

This chapter traced the history of BTOP and the evolution of thinking around opportunity in the new economy to study how the goals of digital labor were being presented and developed at the U.S. federal, city, and community levels. This history revealed a widening disconnect between digital workforce policy and the on-the-ground economic realities facing Philadelphians like Joanne and Mr. Wilson. It also highlights the deeper tensions between the goals of promoting economic prosperity and political participation through broadband programs (Schement, 2009).

First, the impact of the Great Recession on jobs and economic opportunity was explored. Special attention was given to the impact of the Great Recession on the demographics that most overlapped with KEYSPOT visitors, i.e. poor and working-class communities of color. The relationship between the Great Recession and unemployment/underemployment was examined, and these trends were explained in relation to the emergence of informal work in urban communities. In order to set the stage for Chapter 5, the Great Recession was situated in the context of the larger urban crisis that has impacted many post-industrial Rust Belt cities like Philadelphia for over thirty years.

Second, this chapter traced the history of the American Recovery and Reinvestment Act (ARRA) – detailing its goals to stimulate the economy in the wake of



the Great Recession – and described how BTOP emerged from these goals. The language of ARRA itself was also discussed, including the inherent discord between themes of program creation and increasing social support (e.g., SNAP) and themes promoting institutional “efficiencies” and using technology to minimize some social support interventions. The structure of BTOP was also investigated through outlining the goals of economic and digital labor as targeted by the program, such as the goals of job creation and worker training.

Third, as they were the key documents through which the U.S. government began to outline and refine its thinking around the role of the Internet in stimulating economic opportunity, the *Falling Through the Net* and *Digital Economy* reports were studied. The early *Falling Through the Net* report promoted the concept of “universal service” arguing that Internet technology could offer “riches” echoing the prosperity theme, yet cautioned that some segments of the U.S. population – “have-nots” – could be left behind. The second report described the growing online world as an “information society” and the “have-nots” now inhabited a “digital divide,” language that diminished issues of power. In the last report, signaling the neoliberal shift, the discussion of the digital economy moved to the forefront and the report stated that private industry, rather than the federal government, should take the lead in developing the U.S. broadband infrastructure and in tackling the complex issues surrounding the digital divide.

A close reading of the *Digital Economy* reports explained how (and why) the U.S. federal government’s thinking on the role of digital technology was evolving, i.e. shifting away from earlier reports that assigned equal weight to the role of the Internet in both social and economic ventures. The federal goals of digital labor were repositioned by a

new economic imperative to train American workers for global opportunities, provide them with the “skills” necessary to work in technology jobs and industries, and to give them the ability to search for jobs online. However, the final *Digital Economy* installment did take notice of a possible digital workforce divide. In these reports, the private sector was also designated to lead such efforts – providing the infrastructure and training necessary to achieve federal policy goals – with the U.S. government cast in a supporting role. Therefore, we see a shift towards the view of information as a commodity, rather than a public resource (Schement & Curtis, 1997).

Finally, how “work” was defined and differentiated through the Freedom Rings Partnership was discussed through four different dimensions. Partner planning meetings and discussions prioritized community engagement and political participation as the most important outcome of the program, yet “success stories” largely centered on job training and work opportunities. Internal consulting reports –like that produced by the Microsoft associated, The Arnold Group—took the private sector perspective on the prospect of digital inclusion, emphasizing how workforce development and technological access could increase institutional efficiencies and maximize global competitiveness (Stone, 1988). Third, the use of KEYSPOTs marketing materials to define digital labor and work was also explored. In contrast to the technology industry position and to some extent the ARRA itself, participant targeted materials presented FRP as way to access social support programs. Finally, on-the-ground organizations more in touch with the everyday lived realities of urban Philadelphians –a group I am terming the “policymakers” –framed digital inequality as an issue of social justice requiring deeper political participation and likewise positioned the lack of jobs within the context of the Great Recession and the urban crisis.

Partner representatives not engaged in direct work with participants were more likely to side with the industry view and federal position, envisioning that KEYSPOTs would stimulate the formal economy and reduce the need for social support programs; in other words, allow for further retrenchment of the welfare state (Mosco, 2004).

In this way, I am asserting in this chapter that we can understand the formulation of policy and approaches to digital labor as an evolutionary process whereby ideas are defined and redefined as we move through time and between institutions and stakeholders. We can also understand it as a top-down and bottom-up process where policymakers –and also policytakers –influence programs goals. On-the-ground communities targeted for BTOP funds – those communities on the wrong side of the digital divide – may push back on federal or technology industry visions that misunderstand or misinterpret their needs. These discussions are also driven by an underlying policy question – is information a commodity to be circulated through the free market, or is it a public resource necessary for political engagement (Schement & Curtis, 1997)? The disconnect between vision, goals and reality was, indeed, a space of unintended consequences. However, to analyze KEYSPOTs, it is likewise important to situate the program within the context of Philadelphia itself and its particular social, economic, and political landscape (Wolfson & Crowell, 2013). Therefore, the following chapter will first trace the history of Internet programs in Philadelphia, provide more background on the structure of the Freedom Rings Partnership, and concretize the role of the urban crisis in restricting economic opportunities for poor and working-class Philadelphians visiting KEYSPOTs like Joanne or Mr. Wilson.

## **Chapter 5**

### **Philadelphia- The Urban Crisis and the Freedom Rings Partnership**

#### **Introduction**

While federal policy visions saw technology as a means to stimulate growth post-recession and promote prosperity through the ARRA as discussed in the previous chapter, I am arguing that alongside digital inequalities, complex structural issues such as lack of opportunities in the formal sector coupled with the breakdown of durable social support institutions yielded unintended consequences. So, whereas policymakers touted ICT access as a cheap and efficient solution for tackling complex problems like urban poverty, policytakers resisted or rejected this vision, instead focusing on participation as needed to force political change in low-income communities. This space of interaction and tension between the broader federal technology policy visions and on-the-ground urban needs and realities forms the terrain of this study. Thus, as I will present in this chapter, Philadelphia's digital divide, the digital workforce divide, and the emergence of informal digital work should also be understood as a consequence of a larger urban crisis (Wolfson & Crowell, 2013).

Therefore, in order to analyze the work of the KEYSPOT program specifically—and urban broadband adoption more generally—it is important to situate broadband adoption initiatives within a precise social, economic, and political landscape (Wolfson & Crowell, 2013). Therefore, this chapter will first detail the history of Internet programs in Philadelphia, as some of the relevant themes and threads—such as the economic, political and social goals of broadband access and the tensions between public and private interests—continued to exert influence over the Freedom Rings Partnership. Second, as

referenced in the last chapter in the context of policymakers and policytakers, more background on the formulation of the Freedom Rings Partnership itself will be provided, with attention to the embedded program design and the evolution of visions around job training and workforce development on the local level. Lastly, in order to properly assess how the economic lives of the urban poor have been shaped by the contemporary information economy, the history of the urban crisis as it has unfolded in Philadelphia will be discussed. Special attention will be given to the ways in which post-industrialization, discriminatory social policies and the retrenchment of the welfare state reduced economic prospects for urban Philadelphians and pushed many like Joanne to pursue informal sector opportunities or caused participants like Mr. Wilson to lose their jobs. Having sketched out the key points of this chapter, I will now first turn to the history of internet programs in Philadelphia

### **Blueprints for BTOP: Lessons of Wireless Philadelphia**

As argued in the previous chapter, tensions between public and private solutions shaped federal policy, and the embrace of privatization and deregulation constrained local government's ability to appropriately respond to pervasive digital access problems. While Chapter 4 charted the shift towards private solutions on a federal scale, the longer history of the private sector's involvement in broadband development in Philadelphia is unique and that history provides added context into some of the different stakeholder visions already described in Chapter 4. For example, as referenced briefly before, the private sector played a major role in crippling Philadelphia's municipal WiFi project – Wireless Philadelphia – in 2005. The failure of this project rallied community stakeholders to convene and discuss digital inclusion issues, and then later this coalition served as base of

the BTOP grant writers for the Philadelphia Freedom Rings Partnership. The municipal WiFi episode also underscores again the tensions between visions of information as a commodity and information as a public resource that I discussed in the last chapter (Schement & Curtis, 1997).

### **Wireless Philadelphia: A Vision of Digital Inclusion**

So, to first provide background on the municipal WiFi project, on August 25, 2004 then Philadelphia mayor John Street announced via press release that he had appointed an executive committee to explore the viability of establishing a municipal wireless Internet project in the city (Cardenas, 2004). If successful, the 2005 project would have made Philadelphia the largest U.S. city to undertake such a venture and project a vision of the city as a forward-thinking, tech-savvy destination. A public infrastructure, it was reasoned, would also help address the city's sizable digital divide by offering poor and working-class residents more affordable internet access and also supporting businesses to spur economic growth. The mayor's executive committee tasked Chief Information Officer Dianah Neff with creating the business plan and also selected a non-profit partner, Wireless Philadelphia, to help create the digital infrastructure and evaluate bids from ISPs. This first city press statement revealed that the goals of the municipal network were to help citizens, businesses, schools, community organizations, and city visitors. However –perhaps sensing some of the challenges ahead to realize such an ambitious project –the initial press statement indicated that the committee would also, “identify possible legal and regulatory barriers and help develop strategies to overcome them” (Cardenas, 2004). In preemptively accounting for “possible legal and regulatory barriers,” this press statement was the opening salvo in what would become a fierce

public debate on the role of broadband in economic life and the private sector's role in shaping public information access programs.

### **Stakeholder Tensions: Private Sector Strategies, Political Promises**

While the public's response to Mayor Street's plans for municipal WiFi was overwhelmingly positive, telecommunications corporations such as Comcast (notably headquartered in Philadelphia) and Verizon Wireless grew concerned that such a project could decrease sales to current customers as well as block expansion to a new pool of potential customers residing in the city (Abraham, 2015). Therefore, knowing that Philadelphia would not agree to put the brakes on a popular project, citing "unfair competition," Verizon began to lobby Pennsylvania state legislators to attempt to block the city's proposal (Associated Press, 2004). Yet, rather than openly voice their opposition to the WiFi plan, industry lobbyists included the deal-kill as a smaller stipulation in a larger state senate bill addressing telephone company incentives for expanding broadband infrastructure throughout the state (Associated Press, 2004). Regarding Verizon's back-door approach to reshape wider state policy to their advantage in response to Philadelphia's municipal WiFi project, New America Foundation research fellow Joshua Breitbart complained, "They'd never hold a press conference to announce that they're panicked, but they'll roll out their full range of power to block Philadelphia's entrance into the market" (Abraham, 2015). Comcast subsequently refused to submit a bid for the WiFi project, citing subsidies as problematic to competition – although the corporation itself had received \$30 million in subsidies in exchange for establishing its own headquarters within the city (Siklos, 2005). I want to highlight that this interaction captures the paradox of urban broadband programs: though broadband is widely

recognized as central to the functioning of the economy and yet unaffordable for many low-income urban Americans, to ensure survival, initiatives must be “market friendly” or better still *market-approved* by the telecommunications industry itself. This is one concrete consequence of the impact of the federal policy position established through the *Falling Through the Net* and *Digital Economy* series— and the embrace of information-as-commodity —examined in the previous chapter (Schement & Curtis, 1997). It also lends weight to Lenert et al.’s (2012) claim that the free market is unconcerned with the greater social good and is, therefore, an inappropriate partner for government efforts to achieve the ultimate goal of universal service.

That all being stated, it is important to note here that political pressure also played a role in determining the fate of Wireless Philadelphia. Though the telecommunications industry was ultimately unsuccessful in stopping the WiFi initiative in Philadelphia at that particular time, mounting local political pressure in the city also undermined the program’s stability. Two city Council members —including Michael Nutter who would later serve as Philadelphia’s mayor during the Freedom Rings Partnership—also cited concerns about the cost of the project and questioned whether or not it was an appropriate investment, given the city’s other financial challenges (Twyman, 2005). It is worth pointing out that this adds another dimension to the stakeholder groups discussed in the previous chapter. In short, “policymakers” is a wide group, including researchers and government workers more generally, but also politicians at the city, state and federal levels. In this way, financial, industry, state, and local political pressure constrained the program’s ability to obtain a highly prominent, well-established ISP partner. Thus, Wireless Philadelphia partnered with the newer and less-tested internet service provider,



EarthLink. As I will turn to now, unfortunately, Earthlink was less prepared to accomplish the formidable tasks ahead.

### **Lessons Learned: Earthlink's Threads and Failures**

To expand on Earthlink's involvement, in its initial press statement after the partnership was announced, EarthLink indicated that digital inclusion was to be the "cornerstone" of the municipal WiFi project (Earthlink, 2007). To this end, Wireless Philadelphia CEO Greg Goldman remarked that the partnership was critical because "low-income families can begin using the powers of the Internet to improve their educational, employment, and life opportunities" (Earthlink, 2007). Notably, this first mission statement focusing on education and employment mirrors almost exactly the themes of "economic riches" from *Falling Through the Net*, the *Digital Economy*, BTOP—and of course the Freedom Rings Partnership itself. To be eligible for the Earthlink program, low-income customers were required to have income 150% or below the federal poverty level, or enrolled in programs like Transitional Assistance to Needy Families (TANF) or Supplemental Security Income (SSI). The following summer, a small-scale test of the network was conducted and the Wireless Philadelphia program announced that it would be offering eligible low-income residents access for \$9.95/month, subsidizing EarthLink's \$20/month rate. This plan is similar to the one that Comcast would adopt later for its "Internet Essentials" program during the Philadelphia BTOP grant, as I will address later in this chapter.

While Earthlink's initial network tests for the city were successful, WiFi was still a fledgling technology and a less established service like Earthlink was not well equipped to meet the myriad challenges ahead. For instance, the infrastructure was plagued with a

number of small issues –access points in street lights were improperly installed and in some areas data speeds crawled below what was advertised (Abraham, 2015). The larger rollout date was postponed twice and following the election of Mayor Michael Nutter in late 2007, many expressed concerns that Earthlink was not committed to fulfilling the terms of its contract with the city (Abraham, 2015). By May 2008, EarthLink reported that it had enrolled only 6,000 customers. The contract was negotiated in the court systems and a month later, Earthlink formally withdrew (Technical.ly Philly, 2009). Shortly thereafter, a coalition led by local IT consultants and a company, Network Acquisition, bought EarthLink’s equipment for \$16.8 million.

The threads and failures of the municipal broadband project – including the ultimate victory of the private sector over the city’s program to address affordable WiFi and digital access for Philadelphia’s low-income populations – shaped the strategies and missions of the coalition that later applied for BTOP funding in 2009 (Breitbart, 2005). This interaction also brings into focus how the federal policy debate over information as a commodity or information as a resource can play out and influence technology programs on the local level (Schement & Curtis, 1997). Moreover, the future stakeholders that would create the Freedom Rings Partnership coalition were forged in the context of the collapse of a very popular municipal WiFi initiative to address digital inequality in the city. In other words, this new coalition formed as a direct response to the failures of Wireless Philadelphia and held a different vision for the city, a vision which saw political participation as a key aim of digital inclusion. The discourse around the digital divide and the role of internet technology in economic life and workforce development in Philadelphia also more specifically began to take form.

### **Digital Justice and the Freedom Rings Partnership**

Ultimately, the hard lessons of the failed municipal WiFi project were instructive and emboldened a new group of stakeholders to coalesce around a shared vision of a digital city. Therefore, following the failure of Wireless Philadelphia to realize the promise of digital inclusion throughout the city, in 2008 around 30 organizations united to form the Digital Justice Coalition in order to, “ensure that there is a plan in place to provide the public of Philadelphia with affordable and reliable Internet access” (Wolfson & Crowell, 2013). Notably, even the language of “digital justice” takes on added significance, as it is indicative of the more diverse movement driven by a goal of social and political equity, forming a counterweight to the powerful corporate interests that had previously hampered the municipal WiFi project. However, in 2008, the city and its residents began to consider new possibilities to revive the goals of the defunct WiFi program through the then newly announced ARRA stimulus package, i.e. BTOP. Although the Digital Justice Coalition might seem trivial in the context of a contemporary study, it is in fact crucial in terms of helping to further contextualize the varied stakeholder visions as discussed in Chapter 4 – the policymakers and policytakers. It likewise reinforces my broader point about the troubled relationship that exists between community groups seeking the expansion of broadband to address problems of inequality, social justice, and political participation and the goals of the private sector that view information, instead, as a commodity to be bought and sold (Schement & Curtis, 1997).

To add more background on the Digital Justice Coalition and its goals, the conversations and evolving plans around applying for BTOP funding through the stimulus package started to take shape at a 2008 summer summit where the city’s

technology office and 50 community groups convened to design the goals and sketch ideas that would serve as the basis of the future grant proposal. Additionally, the collective: 1) created a BTOP planning group, 2) approached a national foundation to conduct a study about current broadband adoption rates and patterns in the city that could act as a baseline, and, 3) developed a questionnaire around community and organization broadband needs (Wolfson & Crowell, 2013). After three first-round BTOP grant proposals proved unsuccessful, The Office of Information Technology for the City of Philadelphia (OIT) and the Urban Affairs Coalition (UAC) served as anchor institutions to submit proposals for the BTOP Broadband Infrastructure and Public Computer Centers (PCC) and Sustainable Broadband Adoption (SBA) funds respectively. As mentioned earlier, these were successful –with PCC being awarded \$6.4 million and SBA receiving \$11.8 million – and the anchor entities in concert with institutions such as The Free Library of Philadelphia, Drexel University, and multiple community-based organizations formed the Freedom Rings Partnership and the associated KEYSPOt broadband program.

To expand on and review some of the details of the partnership provided in Chapter 1, the foundational goals of the KEYSPOt program were to: 1) Create or refurbish 77 public computer centers throughout Philadelphia; 2) Develop an awareness campaign around the digital divide and broadband adoption across the city; and, 3) Train 15,000 Philadelphians in educational programs to build digital literacy and increase broadband adoption. The project would more than triple the workstations available to low-income residents by updating 26 already-existing public computer centers and creating 51 new centers, in total upgrading 65 workstations and installing 764 new

workstations. Over 5,000 laptops were distributed to Philadelphia Housing Authority (PHA) residents. Digital education courses were outlined to train participants in basic computer use, multimedia content development, in order to “improve job search and resume” and “improve access to government and community services” (The National Telecommunications & Information Administration, 2011).

While the Digital Justice Coalition and its members sketched their own vision for digital inclusion in the initial summer summit, I would highlight here that through the process of applying for funding, new stakeholders entered into the mix with their own aims and internal objectives. Further, when BTOP funding was finally retained, the objectives and aims of the ARRA more broadly also contoured the resulting program and its mission. For instance, as discussed in Chapter 4, the federal goals included lowering U.S. governmental costs to provide services – “efficiencies” –and in some cases shifting services online so that participants could “self-serve” (Stone, 1988). As argued previously, this promoted efficiencies, but it was also palatable –because as Mosco (2004) asserts –it adhered to the values of neoliberalism that champion self-responsibility as the path to greater economic prosperity. As a more concrete example of my point, in a 2012 National Telecommunications Infrastructure Administration (NTIA) BTOP progress study, Internet access was presented as a potential vehicle to reduce healthcare costs for the U.S. and ways to urge potential patients to seek online help were considered (National Telecommunication Infrastructure Administration, 2011 a, p. 35). Again, I would underline here that this goal is more in line with a neoliberal project that intends to shift away from a traditional social services model to a new paradigm where participants are responsible for locating services. This also echoes the position taken by my

participant, Jay, in the “History of the Future” exercise that I presented in the last chapter. To review, Jay was more aligned with the policymaker interests and imagined that, in the future, KEYSPOTs would reduce the need for social programs in the city. Regarding the BTOP grant proposal, the goals of digital labor were developed by a number of interests—which is why as I discussed in Chapter 4—the objectives in partner materials and on-the-ground organizations were often complementary, yet occasionally contradictory.

To return to the KEYSPOT program design, in order to access the low-income populations that would most benefit from BTOP, the program design embedded the public computer centers (PCC) and broadband training programs (SBA) into the city’s existing social-service infrastructure (Wolfson & Crowell, 2013). For instance, the sites were located in 19 recreation centers, 10 homeless shelters, 15 affordable housing sites, libraries, and community-based organizations working with poor or marginalized communities. Most of the centers were located in neighborhoods with the least access to broadband, i.e. North, West, and South Philadelphia. According to BTOP and FRP materials these communities were in “the greatest need of economic development” (The National Telecommunications & Information Administration, 2011b). Yet, here the NTIA vision emphasized economic “development” and overlooked the issue of the urban crisis, a dimension that this chapter explores later.

### **Flaws in the Public-Private Partnership Model: Comcast Internet Essentials**

Having just reviewed the formation of the Freedom Rings Partnership, I will now turn again to addressing some of the tensions between public and private interests occurring at the local project level. As part of the goal to increase broadband adoption in the home, the Freedom Rings Partnership also worked with two programs, Comcast

Internet Essentials and Wilco/Mobile Citizen, to enroll eligible Philadelphians into affordable internet access plans. As key background (because it connects to my argument about the limits of the private sector in promoting the goals of universal service, Lenert et al., 2012), in exchange for FCC approval of its acquisition of a majority stake in NBC Universal (General Electric), in 2011 Comcast agreed to establish the Internet Essentials program offering a three-year low-cost broadband access (\$9.95/month) to poor and working families with children<sup>13</sup> (Federal Communications Commission, 2012). This arrangement was similar in some ways to the Earthlink rate program discussed earlier in the context of Wireless Philadelphia. However, as the Internet Essentials program was limited to families with children –and Philadelphia Housing Authority residents were constrained due to home wiring limitations – FRP also utilized a partnership with Wilco/Mobile Citizen<sup>14</sup> offering an installation fee of \$14.95 and \$14.95 per month<sup>15</sup>. This represented a more nuanced response to the problems of cost than the 2005 solutions presented by Earthlink in the municipal WiFi initiative.

Yet, to return to my critique of private sector stakeholder interests, at the end of the first year of the Freedom Rings Partnership initiative in 2011, site partners had reported multiple issues with Comcast Internet Essentials. First, in weekly meetings I attended, partners related that many needy participants were ineligible due to the fact that the program was limited to families with school-aged children. Second, some reported

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<sup>13</sup> Notably, in the wake of new talks of a potential Comcast merger with TimeWarner, Comcast agreed to extend Internet Essentials “indefinitely.”

<sup>14</sup> Wilco is the cable provider for Philadelphia Housing Authority and Mobile Citizen is the non-profit arm of CLEAR.

<sup>15</sup> Also, I would add that participants were eligible only after completing 8 hours of FRP digital training and if not previously enrolled with high-speed access within previous 90 days.

that sign-up requirements made it difficult for eligible participants without a permanent residence (e.g., such as homeless shelter families) to enroll. Third, partners complained that they had to assume enrollment management responsibilities, though Comcast was supposed to be more accountable for such tasks. This is simply another example of how on-the-ground organizations must react and respond to private sector involvement. Yet, most alarming, at the end of 2011, Internet Essentials had only enrolled 463 Philadelphians in its program (Federal Communications Commission, 2012). To illustrate the inadequacy of Comcast's participation in the mission of increasing broadband adoption, an internal Freedom Rings Partnership mail survey of broadband adoption in the home conducted by Drexel University at the conclusion of the Freedom Rings Partnership polling 322 Philadelphia Housing Authority (PHA) residents found that 36% utilized Wilco/Mobile Citizen, 23% utilized Verizon, 23% utilized other options, and only 17% utilized Comcast. In other words, over 80% of those surveyed selected *other internet service providers* over Comcast Internet Essentials. This finding should be shocking, yet Freedom Rings Partnership stakeholders more closely aligned with the technology sector interests largely dismissed it. Instead, these stakeholders highlighted later Internet Essential subscription rate "improvements," as if improvement alone was adequate.

Therefore, in light of Comcast's criticisms five years earlier that Mayor Street's municipal WiFi program in Philadelphia would promote unfair competition, I would point out that when collaboration with Comcast was pursued to address pervasive digital inequalities in the city, notably low-income Philadelphians did not benefit as much as was promised. Moreover, Internet Essentials was established *in exchange* for government



approval of its acquisition of a majority stake in NBC Universal. Nonetheless, the program's limitations rendered many needy Philadelphians ineligible. This episode highlights some of the enduring "essential tensions" and complexities which color the history of broadband access programs in Philadelphia and conflicting visions of information as a commodity or as a public resource (Schement & Curtis, p. 123). Further, it illustrates the ways in which neoliberalism demarcates the lines between public and private in the context of the urban crisis and in the contemporary information economy. In Chapter 6, I will explore this idea further through the perspective a KEYSPOt digital trainer, Sammy, who in an interview insisted that the private sector interests – like Comcast –benefit far more from these partnerships than poor and working-class communities. However, now I will turn to a broader factor shaping not only digital access, but also framing the economic lives of KEYSPOt participants like Joanne and Mr. Wilson.

### **BTOP: An Organic Response to the Urban Crisis**

In order to better establish the relationship between digital and economic inequality in Philadelphia, I will now pivot to the issue of broadband access and the urban crisis in Philadelphia. At the time of the Freedom Rings Partnership, roughly 41% of Philadelphians lived without consistent or quality access to broadband Internet (Pew, 2012). In their FCC-sponsored study of broadband adoption issues, scholars Powell, Byrne and Dailey (2010) rightly frame the issue of digital exclusion as one of inequality – low broadband penetration rates intersect with high rates of poverty and under/unemployment. I argue alongside Wolfson (2013) that Philadelphia's KEYSPOt program is, in fact, an attempt to respond to the urban crisis –the informal digital

economy occupied by participants such as Joanne simply filled the economic “gaps” left by urban policies of retrenchment (Wolfson & Crowell, 2013). This retrenchment or the breakdown of durable support institutions per Bauman (2000), is linked to the values of neoliberalism already discussed in previous chapters. To restate, neoliberalism is a theory of politics and economics that argues human wellbeing can be achieved through individualism and free market principles (Harvey 2005; 2006). This philosophy accordingly holds individuals accountable for their welfare, rather than the society or the state (Harvey, 2005). In this way, the values of individualism and neoliberalism also underpin the “urban crisis” which has been marked by burgeoning rates of poverty and deep poverty; disappearance of waged and full-time work; food insecurity and food deserts; cuts to educational programs and assistance; and rising incarceration rates—among other troubling trends.

I am asserting in this dissertation that to understand the disjuncture that exists between technology policy visions (policymakers) and the realities of contemporary urban life (policytakers), it is likewise necessary to frame this research within the history of urban crisis as it has specifically evolved in Philadelphia, touching on the ways in which racial discrimination, local and federal development and housing policy, retrenchment, and the ideology of the primacy of market in the information economy has limited economic prospects for participants like Joanne and Mr. Wilson (Wolfson & Crowell, 2013). It is also necessary to understand not only the informal digital practices that participants like Joanne are utilizing, but also the factors motivating their movement into the informal sector. In his historical analysis of the urban crisis as it unfolded in Detroit, American historian Thomas Sugrue (2005) argues that although U.S. urban

unemployment and poverty is not a new feature of American life, “the forms and distribution of postindustrial urban poverty are novel” (p. 4). Said differently, something new, in fact, is occurring in Rust Belt cities like Philadelphia in the era of liquid modernity and warrants closer study. The new forms of urban poverty, he contends, result from the fact that the urban poor are increasingly confined to isolation in segregated neighborhoods and are often detached from the formal economy or entirely removed from it (Sugrue, 2005, p. 4). Sugrue (2005) as well as Goode and Maskovsky (2001) maintain that the interaction of racial discrimination, economic trends, pro-market ideologies, and political forces in the 1940’s – 1960’s have culminated in a “fiscal, social, and economic crisis” seen today in Rust Belt cities like Detroit and Philadelphia as well as Baltimore, Chicago, Newark, and Pittsburgh (Goode & Maskovsky, 2001, p. 4; Sugrue, 2005, p. 5).

I would argue, however, that in Philadelphia these trends began to take shape far earlier, in part due to the fact that the city’s dominant industries (like garment-making and metalworking) were impacted by deindustrialization before Detroit’s automotive industry. Additionally, migration patterns – highly striated by race and class – developed in the 1930’s and the city’s programmatic response to depopulation and housing was, in fact, uniquely draconian. Examining the ways in which post-industrialization, discriminatory social policies and the retrenchment of the welfare state contributed to reducing the economic prospects for poor and working-class Philadelphians like Joanne and Mr. Wilson in the formal sector is useful as it provides more explanation into why and how these liquid labor practices developed. This also pushes back on the standard neoliberal view that somehow the urban working-class are poor due to personal failures

and a lack of self-responsibility. Thus, having discussed the broader stakes of the urban crisis, I will now turn to a historical analysis of how these economic issues unfolded in Philadelphia to better frame the economic lives of working class Philadelphians today.

### **The Economy of Early Philadelphia**

In this chapter, I suggest that tracing how the entrenched patterns of inequality in Philadelphia hardened over time challenges the frame of neoliberalism, as it reveals that critical policy and political decisions played a major role in limiting the social and economic mobility of low-income Philadelphians. So, how can we better understand the current economic crisis in the context of this longer history? The economic fortunes of the city have changed quite considerably over time. In the 1770's, Philadelphia was the U.S.'s richest coastal city (boasting the first bank and the first stock exchange), the second largest city in the British Empire after London, and the national capital (Hodos, 2002, p. 358). Though New York gained advantages in finance –and Philadelphia ultimately lost its position as capital to Washington, D.C. –early Philadelphia became a manufacturing stronghold in industries like metalworking, machining, garment-making, chemicals, and drugs (Hodos, 2002, p. 358). In the period of 1880-1930, Philadelphia experienced substantial growth in its economic base, population, as well as increased housing construction (Greenberg, 1981, p. 306). Thus, the city's position as a manufacturing stronghold and its place in the industrial economy was shaped very early in the city's history. Interestingly, Nash (1986) argues that the economic industries and social tensions in the early coastal cities like Philadelphia in many ways shaped the country's future, as the “conception of an indivisible public good or commonwealth” was weakened in favor of championing strong free market principles (p. 97).

I want to also highlight that the widespread patterns of racial segregation seen in contemporary Philadelphia have resulted, in part, from decades and decades of discriminatory politics and policies. As an example, whereas in the early 1900's jobs were largely located in the same areas in the heart of Philadelphia, beginning in the 1930's transportation infrastructure changes allowed for greater movement and thus for the city's population to be distributed over a wider area (Greenberg, 1981, p. 307). Regions of the city that were highly industrialized in 1880 and failed to attract new jobs in the 1930's deteriorated more rapidly than those areas that promised new manufacturing jobs. Black Americans of the time were more likely to become trapped in these areas because as the composition of available jobs changed, they were far less likely to have access to the transportation needed to enter new residential housing outside of the city in suburban areas (DuBois, 1899; Greenberg, 1981). Thus, communities of color began to become enclosed in Philadelphia's fastest deteriorating neighborhoods (Greenberg, 1981). This situation only worsened over time, and can still be seen in present day residential patterns and high poverty tracts in the city (Yapa, 1998).

It is also worth noting that the composition of jobs available in the early 1900's to communities of color were different than those available to poor and working class white residents. For instance, in this early period, black Philadelphians were more likely to work in domestic or personal services – around 60% of men and 90% of women – and did not benefit from manufacturing work as much as their white counterparts (DuBois, 1899). Furthermore, though immigrant groups like the Irish or Italians were subject to discrimination, they were still more likely to work in jobs that offered them some protections in the form of unions or other collectives (DuBois, 1899). For example,

during the Depression era, craft guilds for tanners and carpenters expanded to provide opportunities – and political organizing power – to many disenfranchised Philadelphians (Nash, 1986). Yet, people of color were largely excluded from admission to these guilds (Nash, 1986).

To return to the history of discriminatory urban housing policies, as depopulation trends continued throughout the 1940's, in 1949 the Philadelphia Redevelopment Authority attempted to respond by authorizing the City Planning Commission to survey the older and deteriorating sections of the city, most of which were populated by poor and working-class immigrants and minorities. On the basis of that survey, the demolition of 158,000 housing units in distressed areas (or 26% of all available city housing) and the “rehabilitation” of another 72,000 units was recommended (Klenieweski, 1986, p. 567). To address the displacement of the poor and working-class populations from the areas marked for demolition, the commission established new residential housing in Eastwick, a large vacant area on the periphery of the city, adjacent to the Philadelphia airport (Klenieweski, 1986). To many of the urban poor, this forced relocation to the isolated Eastwick area was akin to isolating them on a “reservation” (Klenieweski, 1986, p. 571). Further, while this plan may have benefitted city development interests, it increased racial segregation and removed poor and working-class residents from access to jobs, transportation, and vital employment social networks. These are factors that would contribute greatly to the current economic situation, as this caused many urban Philadelphians to become more and more detached from the formal economy and formal sector job opportunities (Taylor et al., 2010, p. 19).

During the 1950's period, some efforts were made to stave off urban decline and deindustrialization. However, again, I would argue that the private sector was one of the primary beneficiaries of these endeavors. For instance, in 1958 Philadelphia mayor Richardson H. Dilworth worked with the Philadelphia Chamber of Commerce to form a nonprofit known as the Philadelphia Industrial Development Corporation (PIDC) to attempt to support the manufacturing industry and stave off trends of deindustrialization beginning to impact other Rust Belt manufacturing strongholds throughout the U.S. (McKee, 2004). By utilizing its tax-free status, the program was designed to shift the cost of urban redevelopment to the federal government, thus avoiding local costs and unpopular relocation programs. While the program was successful in creating jobs, reshaping public policies to stimulate manufacturing growth, and increasing tax revenues for the city, this approach primarily benefited private companies. For example, multinational corporations such as Scott Paper, Crown Cork and Seal, and Campbell Soup (across the Delaware River in Camden, New Jersey) came to call Philadelphia home. However, PIDC did not attempt to address trends of racial segregation and working-class Philadelphians were still largely confined to poor-paying or unskilled jobs in the primary manufacturing sector (e.g., janitorial, assembly work) as well as in the secondary manufacturing sector (e.g., service work) (Sugrue, 2005). While labor unions offered more protection to poor workers of color than it did in the previous period, Sugrue (2005)—aligned with Kabeer, Milward and Sudarshan (2013) who address limited protections for women workers—notes that some unions “quietly acquiesced” to discriminatory hiring or promotion practices (Sugrue, 2005, p. 11). Thus, even as the government was making efforts to shore up the struggling formal economy, at this point,

we also begin to see worker protections breaking down. These trends have only continued to worsen and likewise run parallel to the wider breakdown of durable institutions Bauman describes (2000).

### **Philadelphia's Urban Crisis**

Whereas policy interventions like PIDC led to some gains in manufacturing in the 1950's and 1960's, during the 1970s Rust Belt cities experienced a steep economic downturn as automated production enabled corporations to move to less costly (and nonunionized) rural areas, suburban areas, or overseas (Goode & Maskvosky, 2001; Massey & Denton, 1990; Massey & Eggers, 1990; Sugrue, 2005; Wilson, 1996). Scholars such as Inman (1995) and Sugrue (2005) are right to point out that governmental policies contributed to the predicament: federal cuts to urban programs decreased support for the poor, and government housing plans often reinforced racial inequalities. Additionally, mortgage-tax exemptions for would-be home buyers, expansion of transportation highway projects, and military investment in suburban areas only further accelerated patterns of urban flight as more and more middle class (largely white) residents and businesses acquired the means (and mode) to leave the cities (Sugrue, 2005; Wilson, 1996). As the landscape architecture of the city changed to accommodate increased commuter traffic to the outlying areas, roadways and bridges cut through low-income areas of Philadelphia in such a way as to prevent pedestrian traffic or bicycling (Yapa, 1998). In other words, a constellation of policy decisions hastened deindustrialization and the contemporary urban crisis. Although some minority populations did increase their numbers in suburban Philadelphia, on the other hand, urban communities of color lost their white residents to suburban areas much more quickly (Massey & Eggers, 1990;



Quillian, 1999). As Jargowsky (1996) argues, the fact that trends of depopulation, poverty, and class and racial segregation became more and more widespread in Rust Belt cities throughout the U.S. –despite differences in local economies and housing availability –indicated an impending urban crisis, but also that an unfortunate “fundamental and important process [was] underway” (p. 997). Said differently, as I also argue in this project, new relationships were forming between work and capital in urban America.

To connect this history back to my project, how did these trends impact the economic lives of the urban poor and their access to formal and informal work? I should explain here that class and racial segregation dramatically reshapes economic prospects for the urban poor by disrupting both the: 1) Development of formal employment networks, such as close accessibility to areas where jobs are; and by, 2) Weakening informal employment networks, such as the ability to get a job through recommendation from a friend or hearing about a job in the community (Sugrue, 2005; Wilson, 1996). In other words, to reconnect to Straubhaar et al.’s (2002) claim presented in Chapter 3, social connections and cultural capital are often required to obtain such jobs, especially in the burgeoning technology field (p. 26). In this way, joblessness became a defining feature of the “new urban poverty” – Philadelphia residents who could not afford a car to travel to new opportunities in the suburbs often became unemployed or dropped out of the labor force altogether (Wilson, 1996, p. 19). Through this process, the emergence of temporary and low-wage “casual labor” (e.g., part-time, temporary construction work) proliferated and urban underemployment and unemployment rates increased as well (Sugrue, 2005, p.121; Taylor et al., 2010, p. 19). As I will demonstrate in Chapter 6,

these were the types of formal sector opportunities available to KEYSPOOT job seekers like Joanne or Mr. Wilson.

The high poverty rates that resulted from pervasive urban unemployment and underemployment triggered a more complete economic withdrawal and retrenchment from already struggling poor neighborhoods in Philadelphia. While withdrawal and collapse is a complex process, it is caused by a number of discrete factors I will outline here. First, demand for goods and services changes when residents in a given area have less income. For example, purchase of groceries may plummet and stores may close. Demand for services like utilities also declines – notably, this can also preclude future private investment in the community’s infrastructure, like laying higher speed fiber optic cable for Internet access, which again, compounds digital inequality (Massey & Denton, 1990). Second, public community infrastructure is weakened. As residents have less or no income to tax, public funded education or other institutions like libraries providing information access to the community may deteriorate, limiting future opportunities for community members, especially children (Massey & Denton, 1990). Third, collapse can spread: a reduction in revenues can undermine not only the infrastructure of poor neighborhoods, but over time begin to undermine the city’s budget and wider infrastructure. In sum, each change touches another, transforming the overall ecology of urban neighborhoods. The end result is that the formal economy begins to breakdown and complex survival strategies – including liquid labor –can spring up in the cracks and fissures. It is important emphasize that while I am focusing on economic issues to contextualize the economic lives of BTOP participant and “liquid labor” practices,

poverty has “multiplicity of causes” and non-economic factors can also shape the ecology of low-income communities (Yapa, 1996).

So, how did the city government respond to this growing crisis? In an attempt to respond to the effects of the urban crisis in Philadelphia, in the mid-1970's redevelopment programs –recalling the forced relocation to Eastwick discussed earlier – were revived as City Planning Commission chair Bernard Meltzer advocated the use of eminent domain and new relocation programs to move the poor and working-class population to the suburbs and other areas of the city. Programs and projects like Meltzer's reflected one of the predominant urban planning strategies Rust Belt cities utilized to respond to the urban crisis: Klenieweski (1986) aptly terms it “triage” (p. 563). Taking the name from the medical practice of separating patients who would live with care and those that would not, Klenieweski (1986) demonstrates that “triage” came to define many urban planning programs in post-industrial cities like Philadelphia throughout the 1970's that selected some neighborhoods for renewal and others for “recycle.” In this way, the city of Philadelphia failed to develop more comprehensive structural solutions to the urban crisis, leaving the poor neighborhoods vulnerable to further collapse, and imperiling future investment in poor communities. In all these ways, a critical history of the politics and policies of urban space help frame a study of the economic lives of KEYSPOT participants as well as the modern formal and informal urban digital economy in Philadelphia.

### **Globalization and the Shift to the Information Economy**

To turn to the information economy, during the period between the 1980's and 1990's, industrial cities like Philadelphia – already struggling in the wake of the urban

crisis –were also among the hardest hit by globalization and the shift to a technology, information and service-based economy (Bell, 1976; Castells, 1989; Cohen, 1981; Harvey, 2006; Hodos, 2002; Sassen, 1991). As Philadelphia-based companies attempted to expand their global influence and keep pace with technological changes, the manufacturing industry that had long served as the economic bedrock for cities like Philadelphia moved overseas and the economic prospects of low-skilled workers were therefore further diminished (Wilson, 1996). The digital workforce divide hit Philadelphia hard: manufacturing in Philadelphia dropped from 45% in 1970 to 24% in 1990; in the same period, manufacturing employment plummeted from 51% to 31% (Hodos, 2002; Wilson, 1996). Between 1950 and 1980, Philadelphia also lost half of its Fortune 500 headquarters, reduced from 13 to 6 (Cohen, 1981). Arguing that the city must “promote local interaction with global economic forces and factors” and reinforcing the politics of neoliberalism and the primacy of the market, the Greater Philadelphia Chamber of Commerce responded by forming a committee of 27 CEOs of local companies to promote economic development (Hodos, 2002, p. 369). Note that the language of “promoting” global interaction mimics the technology industry perspective reflected in The Arnold Group (2011) report I reviewed in Chapter 4. In other words, the city embraced the private sector and its role in contributing to the digital workforce divide and the impact of deregulation or privatization on the poor was not challenged.

As I addressed in Chapter 3 in my discussion of the digital workforce divide, while technological changes may have opened up new high-skilled employment opportunities in the service and financial sector, in contrast, many low-skilled jobs were rendered obsolete or shifted overseas (Goode & Maskovsky, 2001; Wilson, 1996).

Further, echoing Bauman's (2000) breakdown of durable institutions, temporary, part-time, and contract work became more common (Goode & Maskvosky, 2001). To better illustrate this digital workforce divide, in the period between 1987 – 1989, low skilled male workers were unemployed an average of two months longer than they were twenty years before –and twice as likely to drop out of the workforce altogether (Wilson, 1996). Census data from 1990 reporting on the nation's 100 largest cities revealed that the ratio of jobless residents to employed residents was over three times higher in poverty neighborhoods, magnifying the patterns of inequality established during the urban crisis of the 1970's (Wilson, 1996). In short, the combination of manufacturing decline, continued racial discrimination in hiring, and technological changes pushed the urban poor to "the economic margins" as many moved to informal work or left the labor market altogether (Sugrue, 2005, p. 262). With lack of opportunities in the formal sector, the poor entered "survival circuits" – the city's drug trade endured and incarceration rates in poor urban communities soared to unprecedented rates (Alexander, 2012; Sassen, 2009; slack; Wacquant, 2009). This also marks the passage into the informal digital labor market, as struggling residents like Joanne began to explore new avenues for economic opportunity.

### **Retrenchment and the Information Economy**

As touched on in Chapter 3, policies of welfare state retrenchment and the breakdown of durable institutions only compounded the economic issues facing urban Americans. To restate, although post-industrial urban areas had not recovered from the crisis of the 1970's, federal support and programs benefitting cities and their residents were drastically cut or reduced in the 1990's. My project supports the position adopted by

New Poverty Studies scholars like Goode & Maskovsky (2001) who contend that this shift was due in part to neoliberalism and the political imperative to end “state dependency” and embrace the logic of the market and privatization practices (Goode & Maskovsky, 2001, p. 8). To give a more precise picture of how this has impacted cities, in 1980, federal contribution to city budgets was 18%, yet by 1990 it had dropped to 6.4% (Wilson, 2011, p. 49). As discussed in Chapter 3 in the context of the informal economy literature, programs that had benefited many poor working urban people, especially mothers (like Aid to Families with Dependent Children, AFDC) were cut (Wilson, 1996) and welfare programs were transitioned to “workfare” programs (Goode & Maskovsky, 2001, p. 5). These policy changes dramatically reshaped the economic fortunes – and working arrangements – for poor families in urban communities.

To expand on the above point, as already stated in Chapter 3, Grabham and Smith (2010) argue –drawing on Marxist feminist thought – that the focus on “workfare” in policy elevated the importance of “working” and diminished the importance of social reproduction and the work of mothering (Grabham & Smith, 2010, p. 84 - 90). Following from this and further straining urban families, the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996 also put a lifetime limit on the length of time a household could receive welfare (Collins, 2008; Edin & Lein, 1997; Mink, 1998; Weigt, 2006). The federal minimum wage was likewise allowed to fall, also further constraining the economic lives of the urban poor. It is also meaningful to add that new welfare reporting rules also meant every dollar received from a child’s father for child support resulted in a decrease in the overall entitlement contribution, thus many mothers began to simply bypass the formal systems and receive support from fathers

directly (Edin & Lein, 1997, p. 144; Stack, 1974). This also presaged new economic arrangements for urban families who needed to find ways to retain their social benefits.

While the discourses of individualism and neoliberalism played a major role in ushering in a large-scale rollback of the social safety net, a harmful dominant frame of the black urban mother emerging in this period also dampened public support for welfare (Piven, 2001). To elaborate on this, in his 1976 Republican presidential primary contest, then governor Ronald Reagan spoke of a black woman in Chicago bilking the welfare system out of hundreds of thousands of dollars - the “welfare queen” stereotype was thus borne. This reductionist frame captured none of the complexities of urban life and yet was used as a cudgel against political support for welfare policy, painting all black mothers as promiscuous and lazy (Bobo & Smith 1994; Page & Shapiro 1992). Weeks (2009) argues that this frame represented a larger “attack on poor women,” a punishment levied against low-income mothers due to the perception that single motherhood, and in many cases poverty itself, is a result of personal and moral failings rather than structural conditions (Edin & Lein, 1997; Weeks, 2009, p. 102). A distinction began to be made in public discourse between the deserving or undeserving poor as political rhetoric of neoliberalism painted urban mothers as “welfare queens” and black men as dangerous (Goode & Maskovsky, 2001; Gil, 2007). As Goode and Maskovsky (2001) state in line with the neoliberal project, “The deserving poor are now those who embrace the spirit of entrepreneurship, voluntarism, consumerism, and self-help, while the undeserving poor are those who remain ‘dependent’ on the state” (p. 8). I use this quote to highlight that “entrepreneurship” was championed as a positive frame, but as I addressed in the key terms section of Chapter 1, poor and working-class individuals are unable to take certain

risks due to their precarious financial positions. And as I will address in Chapter 7, participants like Joanne were also less likely to have access to the resources needed to establish a formal business venture. So, whereas the welfare state restructuring changes were articulated under the neoliberal language of “responsibility,” this language papers over the underlying policy frame that painted low income black parents as both immoral and overly reliant on the largesse of the state (Duggan 2003; Grabham & Smith, 2010).

I would be remiss if I did not note here that in the 1990’s there were some slight gains for low-income workers in Philadelphia in areas such as healthcare (resulting from expansion of the University of Pennsylvania Health System and Thomas Jefferson University) and education (as universities like Drexel and Temple moved to set-up global campuses) (Hodos, 2002). As I will discuss in Chapter 6 and Chapter 7, a KEYSPOt participant (Ron) directly benefitted from this expansion and obtained a job in the healthcare sector during this period. Yet, while there were some improvements for the city’s economy in the 1990’s, the job losses from the previous decades, continued depopulation, and rising levels of poverty translated to deep revenue losses for the city. Ultimately, in September of 1990, the city of Philadelphia went to the municipal-bond market to borrow \$375 million dollars, almost twice the previous yearly request for \$188 million, to cover deficits from the previous 6 city budgets (Inman, 1995). The request was rejected by borrowers and the city fell into a 3-year fiscal crisis. In other words, the city funds were inadequate to meet its required expenses. This was also the end result of the urban crisis neighborhood ecology effect I referenced earlier.

Tracing the history of the city’s low-income neighborhoods highlights the role that both politics and policies have played in constraining opportunities for many poor



and working-class communities of color. I present this history to push back on a standard view – peddled by the discourses of neoliberalism and individualism – that urban poverty is an individual problem, related to personal deficiencies like a lack of work ethic. Thus, instead I have emphasized the ways in which post-industrialization, discriminatory policies, and the breakdown of durable institutions like the welfare state have worked together to reduce economic opportunities for urban Philadelphians. In the face of grim economic prospects, many have turned to new strategies for survival – including the liquid labor practices I am analyzing in this project.

### **Contemporary Philadelphia: Surviving the Digital Workforce Divide**

In sum, I argue that a digital workforce divide paradigm provides a useful frame to understand the present situation in Philadelphia (Rodino-Colocino, 2006). The ongoing urban crisis significantly contributed to that divide, heightened by trends of deindustrialization, depopulation, reduction in federal support programs, globalization, and retrenchment. While my focus hitherto has been historical, I want to point out that economic struggles continued in Philadelphia, which during the timeframe of the KEYSLOT project had the highest rate of poverty of any of the top ten U.S. cities as 28.4% of its population lived below the poverty line (Pew, 2013). At the time of the KEYSLOT project, Philadelphia also had the highest rate of “deep poverty”—people living below half of the poverty line—of any of the country’s most populous cities. To elaborate, the average annual income for someone living in deep poverty is \$5,700 or \$11,700 for a family of four and Philadelphia’s deep-poverty rate was 12.9%, which practically means around 200,000 residents lived in deep poverty during the data collection period (Pew, 2013).

How do the poverty measures fit more precisely within employment patterns in the formal sector? Following the 2009 economic crisis that precipitated the ARRA, unemployment in Philadelphia began rising steadily. In 2012 during the BTOP grant project, approximately 11.5% of Philadelphians were unemployed and a much larger number of Philadelphians were underemployed (Bureau of Labor Statistics, 2012). The median annual income in Philadelphia was then approximately \$34,000, or \$16,000 below the national average (Pew, 2012). While there were some gains in the health and education sector in the city as I discussed earlier, for low-income Philadelphia many opportunities remained in the service sector or in unskilled labor (Bureau of Labor Statistics, 2013). As addressed in Chapter 3 –and as will be discussed in more depth in the following chapter –service sector jobs and unskilled jobs are increasingly by-contract, part-time, or temporary without a salary or health benefits. In other words, formal sector opportunities were extremely limited, and those that were available to low-income Philadelphians did not provide a living wage nor necessary benefits like healthcare.

Looking more closely at the statistics around poverty in Philadelphia, it is clear that the problem adversely impacted families in the region: 31% of families with children under the age of 18 live in poverty and 47% of families with children are headed by women living in poverty (Pew, 2012). Philadelphia's public education system is also underfunded. The Philadelphia School District has been in a fiscal crisis since 2001 and in an effort to close a budget gap of more than \$200 million, the city's School Reform Commission voted to close 23 schools in 2013 and planned to close 64 more by 2017 (Herold, 2012). In this way, we can see that the urban crisis and the digital workforce divide has a devastating effect on poor families, constraining their ability to meet basic

reproductive needs, such as feeding and educating their children. To refer to the Marxist feminist arguments presented in Chapter 2 and Chapter 3, again scholars have suggested that this is one of the goals of neoliberal capitalism: to elevate work values and similarly demote the role social reproduction plays in society (Abel & Nelson, 1990; England & Folbre, 2002; Fisher & Tronto, 1990; Folbre, 1994, 2001). In other words, these burdens on poor families have generated a new set of working arrangements, as individuals must learn to balance economic and childcare needs.

So, where do high rates of poverty, the rollback of social programs, racial discrimination, inequitable local and federal development policies, and the digital workforce divide leave KEYSPOT parents like Joanne? Practically, the difficult economic climate has meant that many poor and working-class residents like Joanne must work more than one job to survive and it has accordingly pushed many urban Philadelphians into the informal economy. So, while the standard view taken in the immaterial labor literature (Alessandrini, 2012; Arvidsson, 2009; Jenkins, 2008; Virno, 2004) and in federal broadband policy would celebrate such practices as “entrepreneurial,” again, I suggest that this view does not recognize the structural barriers and discriminatory policies that have made such arrangements necessary for poor and working-class Philadelphians. Further, this over-celebratory view does not address the fact that such “entrepreneurship” does not provide the type of stability and support families may need, such as a predictable salary, health benefits, retirement benefits, or sick leave. Therefore, it is important to situate this project within a particular social, economic and political landscape to properly evaluate the economic lives of BTOP participants and the relationship between informal work and the contemporary

information economy. In the following chapter, I will explore this further through chronicling the specific experiences KEYSPOT visitors pursuing jobs in the formal sector.

### **Conclusion**

As discussed in Chapter 4, the ARRA and the resultant BTOP programs were engineered with the objective of stimulating the economy and creating jobs in the wake of the Great Recession. Tracing the longer history of digital programs and the urban crisis in Philadelphia is pertinent, as it highlights the ways in which social, economic, and political forces shaped city visions and plans for broadband access and further constrained the economic opportunities available for poor families of color in Philadelphia. I include this history because it reveals that the current shift to the informal economy witnessed in in the context of BTOP is not simply the result of inevitable economic forces and it has not occurred in a vacuum. Rather, it is the result of federal and local policies that prioritize the market, “development” or private interests – be it through the failures of Wireless Philadelphia or the relocation policies pursued through Eastwick –often at the expense of the urban poor, exacerbating trends of digital exclusion, economic isolation, and racial segregation. Further, this history combats the political ideology of neoliberalism that would seek to make a distinction between the “deserving” and “undeserving” poor or pathologize poverty as a condition related to morality or a lack of personal responsibility.

In short, while tangled, a historical examination of structural problems surrounding digital inequality and economic opportunity in Philadelphia contextualizes the emergence of liquid labor practices today. It likewise highlights the role that the

urban crisis has played in constraining opportunities for Americans and the economic lives of urban families more particularly. In the next chapter, I will extend my exploration of these issues to KEYSPOTs, considering the barriers to formal opportunities in Philadelphia and detailing what types of formal sector job opportunities were sought by participants and what opportunities were indeed available. I will demonstrate that the opportunities available were largely low-skilled, low-paid, and part-time. I suggest that these barriers to the formal economy are the result of social, political and economic factors – including the urban crisis –and reflect a broader restructuring of the relationships between capital and labor. That being said, I will now turn to introduce my participant, Ron, on the first day I met him at a KEYSPOT Digital Jobs fair in 2012.

## Chapter 6

### Working Class Jobs in the Formal [Digital] Economy

#### Introduction

On a cold Saturday morning in January of 2012, hundreds of unemployed and underemployed Philadelphians flocked to historic Girard College<sup>16</sup> in West North Philadelphia to attend job events which included a Freedom Rings Partnership “Digital Jobs Fair,” an in-person jobs fair, and various free development and digital skills workshops. On the day of the Girard College event – also associated with the citywide Martin Luther King Day of Service – some of the several hundred job seekers first trickled into a medium-sized classroom where attendees without home internet access were offered the opportunity to use laptops to draft emails to prospective employers or create and print their resumes. Such job-related events were particularly well attended – because as discussed in the preceding chapter on the urban crisis– Philadelphia unemployment rates climbed steadily following the 2009 economic crisis that precipitated the ARRA. In 2012, approximately 11.5% of Philadelphians were unemployed and a much larger number of Philadelphians were underemployed (Bureau of Labor Statistics, 2012).

At the fair, representatives from KEYSPOTs around the city spoke with job seekers about how to search for opportunities and the benefits of home internet access. A few attendees lingered to use the computers; quizzically one woman holding a black

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<sup>16</sup> Girard College is notably a Philadelphia historic site; Civil Rights protests erupted on the campus during the 1960’s after local NAACP chapter president Cecil B. Moore demanded that the school desegregate and allow African Americans to apply for school admission (Temple University Libraries, 2011).

folder asked, “Wait, are there companies here to talk to?” Job-seekers then wandered down an interior corridor into classrooms where Target Corporation volunteers in branded red t-shirts led workforce development workshops on topics like “Resume Writing” and “Building Your Personal Brand.”

After stopping at the Digital Jobs Fair and the Target event, job-seekers entered a larger crowded open area where representatives from companies including Comcast, AT&T, Vanguard and Piedmont Airlines were seated in rows at folded tables. A young African American man approached the Piedmont Airlines table with his printed resume in hand, yet was instructed only to, “follow the company on Facebook and Twitter.” A young woman moved toward the Comcast table and explained to the representative, “I work at a daycare center right now.” Another man in a tweed baseball cap pushed through the crowd and questioned a recruiter, “You need a driver’s license? Mine is suspended for a ticket.”

Leaning against a back wall with a folder of freshly printed resumes, Ron, 45, who recently lost his job in the healthcare sector in the wake of the Great Recession, explained that that while the companies gathered at the in-person event were “topnotch” many of the representatives he spoke with, “were just like ‘hey, let’s keep going, look at the website’.” With a sigh, he admitted that the jobs such companies would provide could be superior to “factory work” but many of the positions were only part-time. When questioned about his access to a computer and technological skill, Ron replied that he had two laptops at home, fluency in social media sites like Facebook and LinkedIn, and digital skills including expertise in Photoshop and Illustrator. Regarding his perception of the current employment landscape in urban Philadelphia Ron observed: “I think the best

area to go into is some type of form of customer service, where it is high demand, low reward.”

### **Overview**

Ron’s challenges in finding well-paid opportunities in the formal sector and my interaction with other attendees at the KEYSPOt Digital Jobs Fair paints a portrait of some of the myriad challenges facing low-income job seekers in Philadelphia. So, what impediments exist to finding formal work in the modern informational city? In what fields and sectors were KEYSPOt participants gaining jobs? As my opening vignette reveals and as I have addressed in previous chapters as well, some of the challenges facing this population of job-seekers included: 1) The rise of part-time work in sectors that are “high demand, low reward,”; 2) Structural barriers that can limit access to opportunities, like lack of a driver’s license or access to transportation; 3) A job history that does not prepare you for high-skilled work, such as, “I work at a daycare center right now,”; 4) The reality that even with digital access and skills, work opportunities may still be limited for low-income urban Philadelphians; and, 5) Intrusive social media job application tactics that may exploit desperate job seekers. Yet, how can these challenges be better explained and how did they impact the search for work in the formal sector? And if Ron had already acquired access and advanced digital skills –why was his job-search still unsuccessful? In order to present the complex economic terrain that I have just described, in this chapter I will examine what type of digital work skills participants obtained in FRP programs and then address some of the barriers such job-seekers faced in the formal economy.



Following from this, what are the key insights I am developing in this chapter? To first explain the work skills obtained and address these barriers –building on the insights in Chapter 4 and Chapter 5 –I will provide more detail on what type of “digital workforce skills” are sought and obtained in the context of the KEYSPOt programs. This includes hard skills (such as typing) and soft skills (such as resume writing). Second, I will address the barriers to formal sector opportunities and concretize the digital workforce divide, including detailing what types of job opportunities were sought by participants and what opportunities were indeed available in Philadelphia. Third, I will argue that although technological skills were necessary to obtain work due to online applications, the opportunities available were largely low-skilled, low-paid, part-time and may have required only minimal computer skills. The positions were also overwhelmingly located in the reproductive labor sectors I discussed briefly in Chapter 2 and Chapter 3, in other words sectors such as carework, domestic labor and some service work. Notably, these sectors did not provide work that was flexible for parents like Ron. Fourth, I will address how the lack of well-paid jobs may have contributed to the continued need for social support programs. Last, I will present some of the unique challenges digital technology may present for working class job seekers, such as the ways in which digital applications may result in “social sorting” and explain how desperate work seekers feel increased pressure to submit to invasive applicant screening practices. Finally, to connect to my larger point, in this chapter I assert that these barriers to the formal economy reflect a broader restructuring of the relationships between capital and labor in urban U.S. economies. The formal sector limitations I will begin to outline in this chapter lays the groundwork for Chapter 7, where I suggest that struggling KEYSPOt participants may

seek opportunities in the informal economy, or in other words, pursue liquid labor. In short, this chapter provides a more nuanced insight into the economic lives of BTOP participants.

Before I move into my data analysis regarding the barriers to formal sector work, however, I would like to revisit a few earlier arguments that are crucial to this chapter. In Chapter 4, I addressed the development of broadband policy and, more specifically, the evolution of the goals of digital labor. I subsequently charted the shift from a broadband *access* focus to a digital *skills* focus. I argued that the policymaker vision of economic development was at odds with some of the on-the-ground economic and social realities impacting low-income job seekers –or the “policymakers” in the wake of the urban crisis as I addressed in Chapter 5. Though I highlighted these contradictory stakeholder interests and assessed their relationship to the pervasive digital myths Mosco (2004) described – which peddle technology as a cheap solution to complex urban problems –I did not offer a detailed account of how KEYSPOT programs developed and organized their courses to teach workforce skills to participants in the first place. Thus, I want to underscore, before I move on, that these KEYSPOT skills courses were not ineffective at their objective of training and connecting some participants to jobs. For example, in this chapter I will highlight the stories of participants like Dinah, who obtained a position through KEYSPOTs. Said another way, I want to emphasize: *participants found jobs*. So, the argument that I am developing in this chapter instead is that despite the administration of successful training programs, many KEYSPOT visitors were unable to obtain the type of full-time, good-paying jobs with benefits they needed to make ends meet. Most notably, the positions were inflexible to the reproductive labor needs of families. What is

important here is that as a result of the retrenchment of the welfare state, the breakdown of durable social support institutions, and the degradation of reproductive labor in the era of liquid modernity, participants who found jobs continued to need social support program assistance to survive. In other words, the digital myth that imparting digital access and skills can reduce the need for social programs among low-income Philadelphians rings hollow.

As a related point on digital access and skills, I am also asserting that a strict “access” and “skills” policy focus overlooks the ways that class and social position can shape interactions and attitudes toward ICTs. As revealed through the experience of Mr. Wilson in Chapter 1 and in Chapter 3 in the context of the Digital Impact Group report (2009) on “technophobia,” by assuming low-income populations do not adopt new technologies because of fear or because they cannot grasp its usefulness, the ways in which technological tools can oppress or exploit this most vulnerable class of job-seekers is overlooked. This includes Mr. Wilson but also a participant, Tiara, who I will introduce in this chapter. This fits with Mosco’s (2004) argument as well – the myth of technology as synonymous with constant social progress can cloud our ability to properly critique digital tools. So, emphasizing all these dimensions is important background not only to better contextualize the lack of access to good jobs KEYSPOt visitors endured, but also to understand how the process of informalization I will explore in Chapter 7 – or liquid labor – relates to the contemporary information economy. However, in order to understand the economic lives of KEYSPOt job-seekers more specifically, it is first necessary to provide more background on how the goals of digital labor I reviewed in

Chapter 4 were actually implemented and executed in the KEYSPOTs workforce training courses.

### **The Freedom Rings Partnership: Developing Digital Workforce Skills**

Having sketched out the broader stakes and goals of this chapter, to begin, what “digital workforce skills” were taught in KEYSPOT courses? As discussed in Chapter 4, the ARRA represented the federal government’s policy response to the Great Recession. Its objectives were to preserve and create jobs, provide some relief to the unemployed, and promote the development of U.S. infrastructure. More specifically, as I outlined in my discussion of the *Falling Through the Net* and *Digital Economy* series, policymakers saw developing technology “access” and “skills” as a means to jumpstart the formal economy and increase institutional efficiencies. Accordingly, BTOP grant applications also reflected and reinforced this policy focus. As presented in Chapter 3 and 4, Hauge and Prieger (2015) concluded that “workforce development” was the most cited target statement in BTOP grant applications. In fact, the statement was referenced 963 times, and other economically focused target statements included “small business” with 119 references (Hauge & Prieger, p. 6559). In this way, grantees reinforced the prevailing goals of digital labor and this was further reflected in program development.

In this way, “workforce development” and stimulating the economy was outlined as one of the primary objectives of the Freedom Rings Partnership. However, as discussed in Chapter 4, this vision was differentiated somewhat between lead partners, community organizations, and individual trainers— or, between the policymakers and the polycytakers. Some stakeholders emphasized the economic prosperity dimension whereas others focused on political participation (Schement, 2009). Said differently, the various

groups had unique visions on how training should occur and how to position their instruction within the context of community needs. However, I want to highlight that nonetheless a substantial percentage of overall training hours were dedicated to workforce development skills across all sites. Approximately 13% percent of the total training hours for the public computing centers (PCC grant) were devoted to Microsoft Office alone whereas 10% of digital training sessions (SBA grant) were focused strictly on digital workforce skills courses, including certified job training programs like the “International Computer Driver’s License” (Gangadharan, Carolan & Chan, 2013, p. 43). To give a more detailed picture of how heavily community organizations invested in workforce skills training, as of May, 2013, Philadelphia FIGHT – an HIV/AIDS health advocacy organization – had alone provided 1,864 hours of the “job readiness” training courses to 280 participants and 1,753 hours of Microsoft Office skills training to 222 participants (ASR Analytics, 2012a, p. 12). In other words, while stakeholder visions diverged, workforce training and job search support was a significant dimension across the partnership. I would also point out that the Freedom Rings Partnership itself was a significant source of employment for the city. The PCC grant created or maintained 77 part-time lab assistant positions and 11 full-time managing positions. Additionally, the SBA program created or maintained 45 full-time positions, including management and training positions (Gangadharan et al., 2012, p. 44).

Job search was a strong motivation for visiting KEYSPOTs. As mentioned in Chapter 1, some additional research was conducted by other FRP partners as well, including a mixed methods study (surveys and focus groups) sponsored by the Open Technology Institute (OTI) of the New America Foundation. Their findings support many

of the conclusions of this project, including my assertion that KEYSPOT visitors accessed sites and enrolled in programs seeking economic opportunity. To be more specific, one of the measures utilized was a workstation user survey<sup>17</sup> administered at public computing centers (PCC) and computer training (SBA) sites across the partnership. According to the OTI survey findings, the second most cited motivation for visiting a KEYSPOT was, “to look (or apply) for a job” and about 30% credited the KEYSPOT with helping connect them with work opportunities (Gangadharan et al., 2013, p. 43). Additionally, 52% of the 550 Philadelphia Housing Authority (PHA) residents that responded to a Drexel University mail survey reported using program resources to search for a job whereas an additional 17% reported finding work as a result of access or digital training (Dandekar & Kim, 2013). In short, though FRP stakeholders – policymakers and polycytakers – diverged somewhat in how programs were implemented and presented, job seeking and job skills training was nonetheless a significant component of the entire partnership.

### **Technological Skills for Workforce Development**

Given that job training and job search formed a significant dimension of the partnership, how was workforce training conceptualized through programs and implemented across KEYSPOTs? To restate the partnership’s main focus as discussed in Chapter 5, KEYSPOTs offered points of *access* to broadband Internet through the PCC side of the grant as well as digital *skills* programs through the SBA grant. As discussed in

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<sup>17</sup> Two survey versions were used and both yielded a response rate of approximately 50%: the short form survey was available in 54 sites and produced 3148 responses whereas the long form survey was available in 43 sites and generated 538 responses. Both included detailed demographic information however the long form survey presented additional questions such as participant motivation for use and home subscription status.

Chapter 1 and in the previous chapter, the program consisted of 764 computer workstations across the city and 5,000 netbook computers were distributed to qualified Philadelphia public housing residents. Coupled with the technological assets, the KEYSPOt program was marketed and mediated by a large online network, [www.PhilllyKEYSPOTs.org](http://www.PhilllyKEYSPOTs.org). The online portal was a place for participants to locate a public computer center, enroll in skills courses, or obtain more information about the KEYSPOt program.

As job search was a key motivation for visiting KEYSPOts, participants engaged in many activities related to their job search, including browsing jobs, writing resumes, and acquiring information on how to obtain unemployment benefits. Training courses were perceived as a means to acquire fundamental skills, such as creating an email address or mastering software like Microsoft Word. Although the digital training resources available through KEYSPOt were integral to the job search process, making social connections and networks were an equally important resource for participants as they sought employment opportunities. Further, KEYSPOt participants were often members of marginalized groups—such as homeless persons or ex-offenders—and required extra sensitivity from trainers or, in some cases, help locating additional social support services to complete their job search. In all these ways, the participants who took part in KEYSPOt programs exemplified Philadelphia’s diverse economy.

### **Teaching Hard and Soft Technology Skills**

At this point, readers may have rightly noted that while the term “access” is more defined, “skills” is more variable and open to interpretation – and as discussed in Chapter 3 – a subject of considerable academic debate (Hargittai, 2008; Mossberger et al., 2003;

Sevron, 2002; Warschaeur, 2003). In the context of KEYSPOTs, I would suggest that Philadelphians seeking work enrolled in training programs to improve both their *hard technology skills* (such as typing and software proficiency) as well as *soft technology skills* (such as communicating via email to prospective employers). Related to soft technology skills, as presented in the opening, FRP partners worked to establish job fairs where participants could interact with potential employers and develop their job-pitch skills. Although many KEYSPOT training programs taught core skills through formal computer courses, lab assistants also worked one on one with participants at the open access centers to enhance hard and soft skills. As discussed earlier in the chapter's opening vignette in the context of Ron, participants entering KEYSPOT programs exhibited a range of competencies in these skill areas. Some participants possessed advanced digital skills whereas others had limited (or no) prior experience with computers or computer software.

**Hard technology skills.** So, what hard technology skills were being taught in KEYSPOT programs? The hard technology skills taught at FRP sites varied widely. Skills taught included, but were not limited to: 1) "mousing" (using a computer mouse); 2) typing skills; 3) building software proficiency in programs such as Microsoft Word, Excel or PowerPoint; 4) establishing and using email accounts; 5) navigating websites; and, 6) using browsers and online search tools. I would underscore that many hard technology skills ladder up: without adequate mousing and typing skills it is impossible to obtain software proficiency or effectively utilize websites. The format of many KEYSPOT training programs attempted to address this issue by offering courses for



novice, intermediate and advanced technology users. Targeted classes like these also gave trainers the ability to better focus their instruction on the needs of the class.

Having briefly defined hard and soft digital skills in the context of KEYSPOTs, I will now pivot to how skills were related to the job search process. Searching and applying for jobs online requires a number of discrete hard technology skills. For example, to search for a job on a website, you would first need to be able to use a mouse, type, and then understand how to operate a web browser. Unfortunately, websites for job-postings could be complex and overwhelming for hard-skills learners. Banner ads or “mousetrap” sites were seen to be particularly troublesome for new users in KEYSPOT training programs who could easily get lost during class. Thus, the instructors in these hard-skills courses usually relied on assistants –or me in some cases – to provide personalized support. This fieldnote captures the interaction between a KEYSPOT computer assistant (Camille) who is supporting a lab visitor (Joe) who struggles to locate job opportunities online. As you can see, because he lacked fundamental hard technology skills, Joe was unable to effectively search for jobs online:

Joe tells Camille that he is working on a resume and job related research. He seems to be **fairly adept at using the mouse** but is rather **slow with typing**, using only his index fingers. Joe is surfing a website on jobs; on the top of the site it reads, “3 ways to apply for jobs online.” As he is searching through the content on the site, he seems to also **struggle with the website’s organization**.

Thus, the above interaction between Camille and Joe illustrates a reality for many digital learners that I want to emphasize: job application resources online are not always designed for their needs. Additionally, email services, software programs, websites and

online job postings can be similarly unaccommodating. In short, I want to emphasize that teaching hard skills was undoubtedly an important and significant dimension of KEYSPOt workforce development courses.

**Soft technology skills.** I would also stress here that hard skills alone, however, were not sufficient to fully prepare job seekers to apply for potential positions. Learning *soft technology skills* was also necessary. Again, I highlight this point as it fits into my larger argument that a strict digital skills policy focus may overlook the many soft skills that are needed to find work (Straubhaar et al., 2012). Although most participants had already developed some hard skills, some new students in KEYSPOt programs struggled with acquiring the necessary soft skills, such as effective business writing or job interview techniques. The soft technological skills taught through KEYSPOts to job-seekers can be more widely defined, but included: 1) effective business writing (including resume strategies); 2) communicating to prospective employers through e-mail; 3) online job search and application strategies; 4) interviewing techniques; and 5) online security practices, such as setting social media privacy settings to limit prospective employers' access to personal information. In many cases, these soft skills could not be taught through a single lesson, as they required a mixture of local, social, and cultural understandings. In other words, knowledge about how to obtain a particular job opportunity successfully requires general communication skills such as fluency, literacy and digital skills, but also localized social and cultural knowledge, such as employer expectations or an educational degree. These expectations or requirements were not always made transparent through the job application itself, which meant that poor and

working-class applicants lacking the appropriate social and cultural networks began the job search process at a distinct disadvantage.

Thus, echoing Straubhaar et al.'s (2012) findings from the Austin, Texas broadband project, I suggest that cultural capital and social capital were also extremely useful –if not vital –in the quest to secure better work opportunities, particularly high-skilled work in the tech sector. Therefore, a framework that is more attuned to the “digital workforce divide” rather than a broader “digital divide” helps us to closely consider impediments to formal work opportunities that go beyond the simple acquisition of online access and technological skills (Rodino-Colocino, 2006). So, to reiterate my point from earlier in the chapter, I am outlining the hard and soft skills training because my argument in this dissertation is not that KEYSPOt courses were ineffective at their objective of teaching skills. On the contrary, I intend to illustrate that hard and soft skills alone were not enough to connect many of my participants to the types of jobs they needed to exit poverty.

### **Low-Skilled, Low-Wage and Part-Time Work in the Formal Economy**

So, having detailed the range of hard and soft skills taught in KEYSPOt job training courses, let us now turn to the jobs themselves. The opening vignette from the KEYSPOt Digital Jobs Fair already began to sketch out some of the impediments poor and working-class job-seekers faced in their efforts to find formal sector opportunities. For instance, some participants confronted structural barriers such as lack of transportation; others may have had a job history of low-skilled work. Yet, even job seekers like Ron with advanced digital skills (in Photoshop and Illustrator) seemingly found it difficult to locate full-time jobs that offered a good salary and benefits. Drawing

on the digital workforce divide paradigm, I aligned with Straubhaar et al. (2012) in suggesting that one possible explanation for Ron's experience is a soft skills issues – social and cultural networks may be necessary for job mobility and to attain better, high-skilled positions. Yet, as detailed in previous chapters, changes in Philadelphia's economy in the era of liquid modernity—including the urban crisis characterized by the breakdown of durable social support institutions and decreased labor protections– also played a role in precipitating the rise of part-time and flexible work. To reiterate my stance, I have termed this problem, more broadly, an emergent digital workforce divide (Rodino-Colocino, 2006). This is a divide impacted by digital access and skills, but that is also a function of a broader restructuring of the information economy. Said a different way, jobs were available to participants like Ron, just not the *right* jobs.

To expand on this point, throughout the duration of the BTOP grant, KEYSPOt visitors remarked that they were unable to find consistent, well-paying, reliable opportunities; thus, many participants reported turning to one, two, or even three part-time jobs to financially survive. In fact, many of those visiting KEYSPOtS to find work disclosed that even though they were searching for opportunities, they were already earning income from at least one job. Part-time workers like Ms. Ramirez, who I will introduce later in this chapter, were also less likely to earn benefits like healthcare which contributed to higher living costs. And, while it was true that some participants lacked broadband access and digital skills, this was not universally the case. In fact, participants like Ron and Joanne had acquired advanced digital skills, yet the opportunities available to them in the formal economy would not provide a living wage and otherwise lacked status. Likewise, other personal limitations—including a job history defined by low-

skilled work and lack of affordable childcare access –pushed participants like Ron and Joanne to pursue opportunities in the informal economy. To build on these arguments, I will now turn to the composition of jobs available, explain the impact of precarious work, and last discuss how the lack of full-time jobs has pushed some participants into chronic part-time working arrangements.

### **Composition of Jobs in the Formal Sector: Analyzing Job-Postings**

If I am arguing participants were not locating the “right” jobs, how do we get a clearer picture of the types of opportunities that were available to poor and working-class job-seekers visiting KEYSPOts? As I discussed in Chapter 1, in addition to creating ethnographic fieldnotes and conducting in-person interviews, I also collected hundreds of documents throughout the duration of the project. These documents included handouts or reports available in weekly staff meetings, flyers available in fieldsites, informational packets, advertisements, participants materials (resumes, poems, or writing samples) and community notices. Another type of document I collected in my fieldwork were job-postings and job advertisements. To explain how these were collected, KEYSPOt staff and community organizations regularly circulated job postings and lab bulletin boards were likewise a resource for job seekers. Though participants were often using KEYSPOts to search for jobs online, analyzing the composition of job flyers available in sites was a good starting place to begin to map the types of formal sector opportunities available. Approximately 30 of these job postings were collected and subsequently analyzed; I will now turn to those findings.


The types of formal work opportunities circulated at KEYSPOts were largely in the reproductive labor sectors that I identified in Chapter 2, with carework (such as

nursing and elder care) and domestic work (like cleaning and food preparation) most heavily represented. Some of the outlier job positions included a casino security guard, a school crossing-guard, and a truck-driver. The sample postings, notably, corroborate my claim that many of the formal sector opportunities available were precarious, meaning part-time or contract positions that would not provide a living wage or any benefits, such as health insurance and family leave. While at first glance the employers appeared to be of high-status, on closer inspection, the jobs were primarily for low-status and low-skilled work. The jobs did not require advanced educational degrees or certifications; however, most surprising, an analysis of the documents suggested that advanced digital skills may not even be relevant or required for the positions available. Simply put, the positions did not require applicants to have digital skills. This would appear to turn the access and skills policy focus on its head: while access and skills were necessary to apply to the positions online, they may not have been necessary for an applicant to be considered for – or ultimately obtain – the available positions.

**Documents collected.** To pivot to analysis of the job postings, the two documents collected below—for a position as hotel housekeeper and a cook at a major hospital – reflect a representative sample of the types of announcements circulated through KEYSPOts. They are similar in that they are for positions that would be associated with reproductive labor functions, i.e. cleaning (hotel housekeeper) and cooking (hospital cook). A close read of the positions reinforces my larger assertion in this dissertation that the formal sector opportunities available to KEYSPOt visitors were not high skilled and did not offer a living wage. The first position –obtained from a KEYSPOt in a faith

based community center in West Philadelphia – is for a luxury hotel seeking housekeeping and maid services:

**Figure 1: Palomar Hotel Seeking Part-Time Housekeepers**



**Houseperson- Part Time : Philadelphia, PA**

Maintain the cleanliness and appearance of the hotel. Provide customers with quality service in a timely and friendly manner.

**Job Requirements**

To perform this job successfully, an individual must be able to perform each essential duty satisfactorily.

High school diploma or general education degree (GED); or one to three months related experience and/or training; or equivalent combination of education and experience.

Ability to read and interpret documents such as safety rules, operating and maintenance instructions, and procedure manuals. Ability to write routine reports and correspondence.

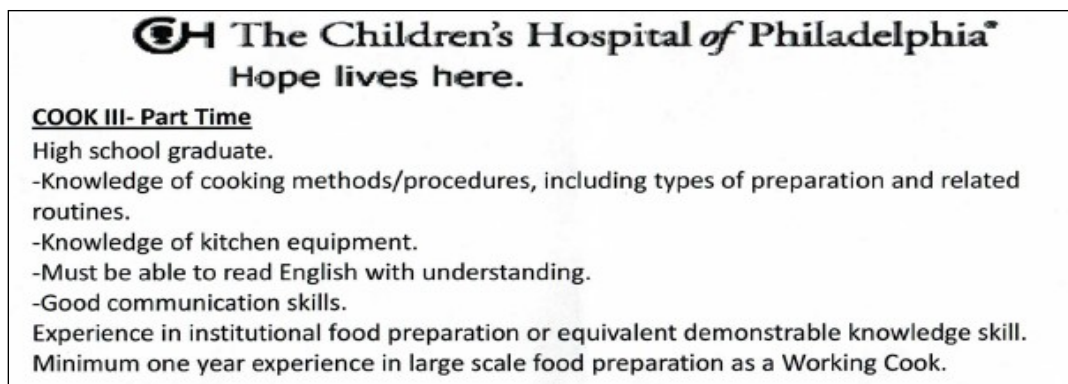
The employee must regularly lift and/or move up to 10-15 pounds, frequently lift and/or move up to 20-30 pounds, and occasionally lift and/or move more than 35 pounds.

First, I would underscore that this job position is not for work in the home yet is nevertheless closely associated with the reproductive labor functions identified by the Marxist feminist Wages for Housework movement in Chapter 2, as it required the worker to “maintain cleanliness and appearance.” In addition to cleaning hotel spaces, a job applicant would need to be able to provide these services in a “friendly manner” –in other words, a worker would be expected to perform more affective labor functions, such as smiling and being friendly to guests. In contrast to the high-skilled work that is performed in an office, there is also an expectation the employee will engage in physical activities by “regularly” and “frequently” lifting heavy objects. Most notably, however, advanced digital skills do not appear to be required. In fact, the hotel housekeeping

position only asked that a candidate possess the ability to “read and interpret documents” as well as “write routine reports”; regarding educational expectations, only a GED is needed for the position. In other words, this refers to more basic literacy skills than hard or soft technology skills. The housekeeping position is also “part-time,” and therefore most likely would not provide a job-seeker a living wage or benefits like health insurance. Potential applicants for the housekeeping job were invited to visit the hotel’s website for more information. Thus, to sum up the key takeaways from the announcement, the position was for a part-time, low-skilled, low-status reproductive labor job, offering no benefits and requiring limited (if any) digital skills.

Having closely examined one position posted at KEYSPOTs, I will now turn to consider a second job advertisement for a local children’s hospital. It is remarkably similar to the previous posting in both the type of position as well as the job requirements:

**Figure 2: Children’s Hospital of Philadelphia Seeking Part-Time Cook**



**The Children's Hospital of Philadelphia®**  
Hope lives here.

**COOK III- Part Time**  
High school graduate.

- Knowledge of cooking methods/procedures, including types of preparation and related routines.
- Knowledge of kitchen equipment.
- Must be able to read English with understanding.
- Good communication skills.

Experience in institutional food preparation or equivalent demonstrable knowledge skill.  
Minimum one year experience in large scale food preparation as a Working Cook.

As you can see, this second posting was also seeking a worker to perform traditional reproductive labor functions in a wider sense, in this case acting as a hospital cook. Accordingly, the requirements for the job are related to previous food preparation experience, more specifically a job-seeker must understand “cooking



methods/procedures” and have familiarity with “kitchen equipment.” Correspondingly, this second position does not appear to require digital skills, as it seeks a worker with “good communication skills” who will “be able to read English with understanding.” As with the first job posting for a hotel housekeeper, this opening was part-time and thus would alone likely not provide a job applicant with a living wage or benefits. To apply to this position, a job-seeker only needed a high-school degree. And similar to the first website, online applications were encouraged. In short, both positions I have herein analyzed are for reproductive labor-type roles, precarious, and did not require the applicant to possess significant digital skills or an advanced educational degree.

Whereas one could argue that both jobs may have required some digital knowledge, could these skills not be learned quickly on the job? It seems unlikely, for instance, that a cook would require extensive knowledge of Microsoft Word or that a hotel maid would need to understand Microsoft Excel. Said differently, I am arguing that an analysis of these job postings from KEYSPOTs revealed that although digital access and skills may be a barrier to the job application process, it is unclear that such skills presented a significant barrier to obtaining the job. My conclusion, then, is twofold. First, KEYSPOTs played a significant role in training participants in the hard and soft digital skills needed to apply to jobs online. However, at the same time, these same digital skills may not have been required for the types of positions available to job seekers. And second, along these lines, although KEYSPOTs connected participants to jobs, these positions were overwhelmingly for part-time, low-skilled and low-status precarious work.

**Further support: Drexel University KEYSPOT jobs survey.** As further support for my above claims about the composition of formal opportunities available to

KEYSPOT job-seekers, I would also refer to a related Drexel University study of KEYSPOTs (Dandekar & Kim, 2013). To provide more background, the mail survey of 550 Philadelphia Housing Authority (PHA) residents conducted in 2013 by Drexel University provides more granular data on the type of formal opportunities sought and obtained by job seekers. It is important to explain here that public housing residents made up the largest target group of the Philadelphia Freedom Rings Partnership, as over 5,000 residents participated in an 8-hour digital training required as part of the Drexel sponsored free Netbook program. To return to the Drexel survey findings, 17% of the Philadelphia Housing Authority program respondents indicated that they found employment as a result of KEYSPOTs (Dandekar & Kim, 2013). While the respondents' new employers varied widely – ranging from Temple University Hospital to Walmart – the “positions obtained” measure tells the real story of what type of opportunities were available. Closely aligned with my findings, most of the positions obtained by participants were in reproductive labor sectors. For example, approximately 30% of the jobs obtained were in the carework field, including positions like home health care aide, daycare assistant, nurse and medical assistant (Dandekar & Kim, 2013). An additional 15% of the reported jobs were in domestic/cleaning work, such as janitorial staff and housekeeping (Dandekar & Kim, 2013). Next, service industry work comprised roughly another 15%, with job titles ranging from call center representative, receiving associate (stocking), sales cashier and store clerk (Dandekar & Kim, 2013). Other positions obtained by participating PHA residents included security officer, school crossing guard and survey taker. Remarkably, less than 10% of the jobs obtained by KEYSPOT program participants were for higher-skilled work, such as research assistant and phlebotomist

(Dandekar & Kim, 2013). Said another way, the findings from my analysis of job posting collected between 2011 – 2013 bears out in other partner research as well. To sum up the main conclusions from my own analysis as well as the Drexel study, the formal sector jobs available to KEYSPOT job-seekers were part-time, low-skilled, low-wage, and low-status, with opportunities in carework, domestic work and service sectors most heavily represented. Having now discussed the composition of jobs available to KEYSPOT visitors, I will turn directly to KEYSPOT participant experiences to better explain how these workforce realities shaped the economic lives of Philadelphians like Ron.

### **Low-Skilled and Low-Status: Precarious Work and Welfare**

As I have asserted above in my analysis of job-postings and Drexel's Philadelphia Housing Authority mail survey, the work obtained by participants was low-skilled or low-status in nature, and notably afforded unpredictable or undesirable working hours not conducive to parenting. But, how exactly did these jobs impact the individual economic lives program participants? In a semi-structured interview, one KEYSPOT digital trainer in a health advocacy organization, Sammy, captured some of the limitations of the formal sector opportunities obtained by job-seekers. As discussed in Chapter 1, trainers like Sammy were my key access point to participants, as trainers had already earned the trust of a wide range of community members visiting KEYSPOTs. To return to my interview with Sammy, he explained that he had recently assisted a job seeker, Dinah, gain a position as a security guard. Yet, although Dinah obtained a position, Sammy admitted to me that it was not the type of job she needed to make ends meet. In our discussion, Sammy touched on some of the challenges facing poor and working-class job seekers like Dinah and the nature of precarious work that I want to explore in more depth:

...so, **she got this job. Success story.** Great. And she was working as –and presumably still is working –as a security guard for some kind of hospital or clinic or something that **was open all night**, and she needed to get a pay stub. And actually I should say she was working through a **contracting** company....all the universities for example, probably several thousands of jobs, and they are all subcontracted and undoubtedly [they are] **paid less and have no unions and no benefits and no retirement.** So [Dinah needed the paystub] to **apply for food stamps** because despite all that, she is still not making enough money.

As Sammy highlights for us here, although Dinah obtained work in the formal economy as a security guard –and thus on the surface hers was a KEYSPOOT “success story” –in fact, her new opportunity was not ideal. For instance, as a subcontractor, Dinah worked alone in a clinic at night. She had little to no contact with her company, and thus had no support in how to navigate practical matters related to her employment, including how to access her paystub. Furthermore, as her position was contracted, Dinah was poorly compensated, had no union protections, and received no benefits. While Dinah needed hard and soft technological skills to initially obtain the position (and access her pay stub online), Sammy complained that she did not need advanced digital skills as a condition of her employment. Yet, most remarkably, shortly after Dinah obtained the position, she returned to the lab to ask Sammy for assistance in gathering the documents necessary to apply for food stamps through the Supplemental Nutrition Assistance Program (SNAP).

I should add here that while KEYSPOOT participants came from a range of backgrounds with differing work histories, almost all engaged in varied and complex survival strategies to meet their daily needs. Therefore, just as Edin and Lein (1997)

described in their urban ethnographic study I reviewed in Chapter 3, program participants often relied on varied income streams and social support programs – both governmental and non-governmental –to survive. And further, participants invested a significant amount of time managing these sources and scanning for new economic opportunities. For example, enrollment in job-training programs like those offered through KEYSPOTs not only aided participants during a job search, but such programs were in some cases a precondition for recently laid-off workers seeking to continue receiving government unemployment benefits. Thus, it is critical to underline participants utilized digital training for multiple purposes beyond simply obtaining workfare skills.

To return to Dinah, as Sammy acknowledged, though hers would on the surface be considered a “success story” because she obtained a job through KEYSPOT programs, it was not a position that offered her a living wage and therefore she continued to need food stamps to make ends meet. Dinah’s experience runs contrary to the position of the technology sector interests presented in Chapter 4: digital training programs do not necessarily improve economic conditions to the point that the welfare state is no longer needed (Mosco, 2004; The Arnold Group, 2011). In fact, poor and working-class participants like Dinah found formal sector jobs and still required social support programs. Her experience reinforces the relevance of a digital workforce divide framework, as an access and skills policy focus may overlook the special challenges faced by working people searching for and applying for jobs. For instance, Sammy specifically highlighted how contracting and the lack of union protections impacted Dinah’s working conditions. In short, I argue that forces like shift to ICTs, fewer unions

protections, and globalization in the era of liquid modernity has dramatically diminished the job prospects for working people in the modern informational city (Tufekci, 2012).

Interestingly, Sammy also remarked to me that his experiences connecting patrons with jobs made him refine his own personal attitudes towards ICTs. According to Sammy, in some cases technology is, “being used as a tool to help layoff more people and push more work on to people down on the pay scale.” When I asked what exactly he meant by this comment, Sammy grumbled that not only was Dinah unable to find a good-paying job, she was also given no human resources support whatsoever and needed his help to simply access her pay stub. In other words, Sammy suggested that ICTs have diminished the job prospects for working people, acting as a “tool to help layoff” and suppress wages. Yet, adding insult to injury, ICTs can also shift responsibilities – that would have previously been held by the human resources staff of a company, like assisting workers with accessing a pay stub – to already overburdened and vulnerable low-wage workers. Sammy’s statement here captures some of the enduring tensions surrounding the role of technology in the everyday economic lives of poor and working-class Philadelphians and likewise illustrates the complex experiences, attitudes and beliefs which shaped their interactions with information technology. Sammy’s observation also underscores the utility of a digital workforce divide frame that can better draw attention to how issues of power and class structure an individual’s relationship to technology (Eubanks, 2011).

### **The Urban Crisis and Chronic Part-Timers**

Having drawn attention to some of the unique challenges facing KEYSPOOT job seekers, to fully comprehend the tensions resulting from this digital workforce divide I

have highlighted, it is important to understand how low wage-work and retrenchment can together push individuals into multiple part-time jobs. In other words, because participants like Dinah could not locate a single full-time job that provided a living wage and benefits, they may turn to several part-time formal or informal jobs to survive. This can, in some cases, incorporate informal strategies like Joanne's as I will address in Chapter 7, but in many cases, translates to holding two or three jobs in the formal sector. This has resulted in a situation where there are "chronic part-timers," or workers who never find a full-time position and thus must permanently juggle several opportunities to keep afloat financially. Often lack of access to benefits like health insurance was a major contributing factor in labor churn (Devey et al., 2006). One such visitor working multiple part-time jobs in the formal sector was Ms. Ramirez, who lived in public housing and regularly walked to a nearby KEYSLOT in a faith based community center in North Philadelphia. She visited the KEYSLOT a couple of times per month to work on her resume and apply to jobs online. Ms. Ramirez's experience illustrates the various challenges facing chronic part-time workers. It also demonstrates how individuals must survive and adapt when they are unable to find one good-paying job or when they lose access to needed social support programs like Medicaid in the era of retrenchment.

Ms. Ramirez was in her early sixties and moved to West Philadelphia from Venezuela in the mid 1960's. She began teaching in the city's public-school system in 1976 and worked at three different schools in her community, serving as a Spanish language teacher, an Algebra instructor ("for a few years in the 1980's"), and as a teacher's aide. Ms. Ramirez walked with the use of a cane as she is disabled due to an injury she sustained while teaching in the classroom in the late 1990's. Although she was

on short-term disability for a period, Ms. Ramirez ultimately lost her health coverage and could not continue to obtain treatments like physical therapy. Due to her injury and lack of access to treatment, Ms. Ramirez was unable to be on her feet all day in a classroom. Thus, she was forced to leave her full-time teaching position and then entered into part-time work. Another factor in her decision to leave her full-time job, as she explained, was her need to care for an elderly parent, which I will turn to later.

When I met her at the KEYSPOt, Ms. Ramirez held three part-time jobs: one as a teacher's assistant, a second as an administrator with the Philadelphia court system and a third as a substitute teacher. She regularly attended KEYSPOts in the hopes of finding a full-time job and frequently used the lab's computers to edit her resume and scanned for job opportunities online. She confessed to me that juggling three jobs was physically and emotionally exhausting, especially given that she was also the primary caregiver for an aging parent. This excerpt from my fieldnotes describes how balancing part-time work and caring for her mother caused Ms. Ramirez considerable hardship:

[Ms. Ramirez] says now she is **working part-time and has 3 jobs** [in addition to working as a substitute teacher]—one is working with the Philadelphia court systems and her second is working part-time as a teacher's aide. She says many days she has to wake up at **4:00 or 5:00 am** in order to go **check on her mother** who is in ill health before going to work. Ms. Ramirez explains that her mother **cannot afford home healthcare**.

In other words, as this fieldnote excerpt reveals, ironically Ms. Ramirez was initially forced into part-time working arrangements because she could not obtain quality healthcare for herself, and then she remained in part-time work because she could not



afford home healthcare for her mother. This underscores how the lack of access to social support programs like Medicaid or affordable healthcare directly shaped the economic lives and, correspondingly, the work practices of poor and working-class Philadelphians. And although Ms. Ramirez was not engaging in the reproductive labor of childcare, she was directly responsible for providing care for an immediate family member. In conclusion, the culmination of chronic part-time work and a lack of affordable health benefits pushed Ms. Ramirez –and by extension her family – into precarious economic arrangements. Ms. Ramirez’s story also helps explain how the retrenchment of social support programs like Medicaid can have direct consequences for the job prospects of many low-income Philadelphians, as these types of constraints can push individuals to pursue a set of survival strategies that lead to greater personal hardship rather than a path out of poverty. Ms. Ramirez’s experience also pushes back on the technology sector position articulated in The Arnold Group (2011) report and through the partnership representative Jay’s statement in the “History of the Future” exercise presented in Chapter 4: access and skills training does not enable further retrenchment of the welfare state. I will now consider other ways in which the access and skills focus can overlook key dimensions of the job search problem.

### **Marginalized Through Access, Algorithms and Social Media**

Finally, having reviewed the hard and soft workforce skills KEYSPOt visitors obtained through training programs and some of the limitations surrounding formal sector opportunities, including precarious and chronic part-time work, I will now turn to discuss the ways online tools have reshaped the job search and job application process itself. This is a critical dimension because, as I will demonstrate, although ICTs have changed the

way we all search for and apply to jobs, these tools have uniquely altered the job application process for poor and working-class Americans. As discussed through Mr. Wilson's perspective and in Chapter 2, Mosco (2004) argues that the "myth of the digital sublime" can interfere with our ability to properly critique technology and consider how an individual's economic and social position can shape their attitudes and beliefs regarding ICTs. For example, as I will turn to consider later in this chapter, a participant (Tiara) expressed great concern to me that social media access could promote discriminatory hiring practices. For me, this was an unexpected response and reinforced how my own racial and class position shapes my personal interaction with online tools. More specifically, as an able-bodied white woman, I do not have these same social media concerns and instead, frequently include my photograph in job related materials. In this way, I assert that a digital workforce divide frame can better draw attention to how issues of power and economic privilege impact a person's relationship with ICTs, as was also the case with Mr. Wilson. Therefore, in the following section, I will analyze how the rise of online job applications, challenges with mobile access, and social media concerns can limit and shape economic outcomes for poor and working people. This is also important context for my next chapter on the emergence liquid labor practices as well, as it begins to explain some of the additional factors that may encourage participants to pursue opportunities in the informal sector.

### **Problematic Algorithms: Applying to Jobs Online**

Although the shift to online applications has proven advantageous for employers as it greatly expedites the applicant review process, I would briefly point out that it has also eliminated or significantly reduced opportunities for job candidates to provide

personal context. I draw attention to this issue because it is yet another example of how ICTS can create special challenges for poor and working-class job applicants, as they may have had limited opportunities for higher education, gaps in work history, or non-traditional backgrounds in low-skilled work. Additionally, an online applicant may also be immediately excluded by simply checking a box: poor credit reports, arrest records or a conviction status are easily linked to potential job applicants (Martin, 2010). For example, KEYSPOt trainers assisting ex-offenders in locating work boasted that they offered those in reentry a “cheat sheet” or specific instructions on how to get their records expunged to prevent immediate digital exclusion. One ex-offender visiting KEYSPOtS complained to me that he could, “barely even get a job at McDonald’s” with a felony conviction on his record. While I acknowledge that this type of applicant information was previously available to prospective employers prior to the internet, I would underscore that digital applications have greatly streamlined this sorting process, offering limited space for explanation or contextualization. This further illustrates how ICTs can be mobilized in a way that submits poor and working-class participants seeking jobs to further social sorting and marginalization, and likewise elevates the importance of considering how economic and class position can shape interactions with technological tools.

### **Access Inconsistencies: Applying to Jobs on Mobile Phones**

Here some readers would rightly raise the question of how poor and working-class job applicants beyond KEYSPOtS are accessing applications as, increasingly, job opportunities in the formal economy require online applications. Though some online applications are compatible with smartphone technology, typically access to broadband

and a computer is useful, if not required, for job-seekers. For example, a participant I will introduce in Chapter 7, Deric, reported that before KEYSPOTs, he was primarily utilizing smartphone technology to search for and apply for jobs. Deric's experience was not unique: a 2015 Pew Research study indicates that around 28% of job seekers are using mobile devices to connect to work opportunities (Smith, 2015). Individuals with less education – holding a high school diploma or less – are also more likely to rely on a smartphone for advanced job-related tasks, yet mobile devices are unlikely to properly display job applications, websites can be hard to read, and attaching supporting documents such as resumes is made more difficult (Smith, 2015). So, although the trend of increased mobile broadband adoption has led to optimism among many digital divide researchers, I would side with those scholars who have rightly pointed to the inconsistencies in terms of the quality of use and argued that mobile access may have an uneven impact on economic growth or even civic engagement (Chew, Levy & Ilavarasan, 2011; Napoli & Obar, 2014). Nonetheless, while mobile access can present a challenge to formal sector job applicants, this is one area where KEYSPOTs could directly respond. However, another way that ICTs are impacting the job search process for poor applicants is that they may be more likely than middle or upper-class workers to be asked to submit personal information to employers. For instance, some of my participants were asked (or felt pressure to) allow potential employers access to their social media accounts, a subject I will now turn to.

### **“Friend and follow us!”: Social Media and Employer Screening Practices**

So, to pivot away from online application and mobile access issues, I would underline that social media plays a prominent role in the job search process today.

Modern job-seekers may use social media to search for a job, network, or conduct background research on a prospective employer (Smith, 2015). Poor and working-class Philadelphians visiting KEYSPOts expressed concern to me regarding the emerging role social media may play in evaluating their job applications. More specifically, participants in precarious economic situations stated that they often felt increased pressure to submit to social media “screening.” For instance, as participants explained, potential employers may encourage job applicants to friend the company on Facebook or follow the company on Twitter. Yet, given the precarious financial situation many job-seekers were in, some felt they simply had no choice but to willingly submit to these practices. This recalls the insights of Dyer-Witheford (1999) and Stack (1974) presented in Chapter 3 –many low-status workers may be more reluctant to speak out against exploitative working conditions because they are already in such dire economic circumstances.

As a practical example of how this “screening” evolved from my fieldwork, I regularly witnessed social media applicant “screening practices” during my participant observation at job fair events. As presented in this chapter’s opening vignette, the Freedom Rings Partnership was a co-sponsor of the MLK Day of Service job fairs at Girard College in both 2012 and 2013. At the events, prospective applicants printed their resumes at the Digital Jobs Fair and practiced their soft skills (like interview techniques) with KEYSPOt staff, then exited into a larger open area where employers were gathered. As job seekers approached the prospective employers who were seated behind folding tables or in freestanding booths, applicants were often only asked to Facebook “friend” or Twitter “follow” the companies. For example, this fieldnote entry captured during the 2013 job fair event depicts one of these interactions:

A man representing “Piedmont Airlines” says to a potential [female] applicant, “The **easiest way to stay in touch** with us is to **friend us on our Facebook page or to follow us on Twitter.**” Another male about 18 – 24 years old approaches the table in gray slacks, a blue and white striped oxford shirt and a black tie about 5 inches too short. He has a very small frame. He tells the man at the information desk that he **has a resume**, and is instructed only to, “**follow the company on Facebook and Twitter.**”

In other words, as this fieldnote reveals, whereas job fair attendees were instructed to print their resumes at the Digital Jobs Fair and practice soft skills like interview techniques, when they approached prospective employers, their resumes were not always solicited and their interactions with the recruiters could be brief. Although I grant that for some job-seekers establishing social media connections could be beneficial in other ways, like in learning more about the company, I would point out that in this instance it was not made clear to applicants why or how this was useful (or used) for gaining employment. It was also unclear if the voluntary social media participation would even substantially improve a candidate’s opportunities for employment. In this way, this incident captures some of the exploitative practices that poor and working-class job seekers may submit to in their quest for formal sector job opportunities.

I would add here that the common practice of asking potential applicants to Facebook “friend” or Twitter “follow” companies has, of course, a dual purpose. First, it gives employers the ability to further screen potential applicants but, second, it boosts internal marketing efforts through increasing an organization’s social media presence and number of followers online. Most disturbingly, this practice not only exposed the job

applicants to additional scrutiny and surveillance, but also potentially rendered the applicants' social networks visible to employers as well. Nonetheless, in a state of economic precariousness, job-seekers like Ron indicated that they often felt powerless to refuse any potential employer requests. In short, these social network surveillance strategies served as another impediment – albeit a more indirect one – to formal sector work opportunities. Participants additionally voiced fears that these invasive practices could expose them to hiring discrimination, a subject I will turn to now.

### **Social Media Concerns: Discrimination and Digital Photos**

As another complicating factor shaping their interactions with technology in the formal job sector, participants likewise expressed concern that the wide availability of digital photographs – accessible through sites like Facebook – could expose them to potential discrimination based on race, gender or appearance. Job seekers communicated in interviews and during participant observation that in addition to the prospective employer friending and following practices already discussed, applicants may be asked to submit a photograph with their application and/or on resumes. In some cases, participants reported that they were encouraged to provide photographs on other job networking sites like LinkedIn. In this portion of fieldnotes taken from site observation, one participant, Tiara, expressed her apprehensions regarding digital images and online job applications:

Tiara points to a sample resume from the book that depicts a personal picture on the resume and continues to say that she feels there is **pressure to add a picture**, and that some [job] websites require it. She expresses concern that this **could be discriminatory**, and that you will be **judged on how you look and not on your credentials**. She says to me, “Like, if you were applying to a security job, would

you put your face [there] and show you are a 90-pound woman? Or, you know if you did, they won't hire you, right? What if they just look at your picture and decide you don't look like they think you should, so you can't do the job?" She later explains that **she took down her Facebook page** when she went on the job market due to **concern that she would be searched**.

In this fieldnote excerpt, Tiara reiterated some of the special challenges facing poor and working-class job seekers when it comes to social media. In referencing my gender and perceived physical attributes – “you are a 90-pound woman” – Tiara intended to point out the ways in which photographs can potentially exposed job applicants to discrimination. To put it another way, Tiara worried that a woman could be removed from consideration from a security sector job simply because she does not fit the image (male, physically strong) most associated with the position. Additionally, she raised the prospect of racial discrimination as well given that digital photos are readily available on social media. Finally, whereas my participant, Ron, felt obligated to submit to social media screening, Tiara cited surveillance concerns as her motivation for deactivating her social media profile while searching for a job.

In sum, Tiara's insights around social media surveillance connect to a larger argument that I am making in this project, and that is that marginalized communities have complex relationships with ICTs that are shaped by their economic, social and political position. To refer to my earlier point, as an able bodied white woman, I would not have considered the availability of my photograph online to be a possible disadvantage if I was seeking a new job. In fact, for me, it could even be an advantage. In this way, Tiara's concerns about social media and potential job discrimination recalls the “digital myth”



that Mosco (2004) theorizes – technology is not a simple, inexpensive solution to a complex social and economic problems and furthermore technologies are not “unbiased” or neutral (Feenberg, 1991). Thus, as Eubanks (2011) suggests, when evaluating broadband programs centered around workforce development, we must consider issues of power and privilege: Tiara’s interactions with technology – just like Mr. Wilson’s – are uniquely shaped by her gender, racial and class location. I draw attention to Tiara’s story because it suggests that the impediments to formal sector opportunities go far beyond access and skills: the technologies themselves can constrain economic opportunities or shape online practices. So, drawing on Wyatt (2008) and recalling Mr. Wilson’s experience as well, I would underscore that it is necessary to develop a more nuanced view of broadband adoption, considering alternative reasons why marginalized may resist or reject ICTs. This more nuanced understanding could also potentially help better bridge the gap between the policymakers and policytakers.

### **Conclusion**

To touch on some of the main findings presented in this chapter, KEYSPOTS have focused on the role of technology in facilitating the job search process and accordingly programs implemented hard and soft digital skills training courses for workforce development. The KEYSPOT programs were successful at connecting participants to formal sector work, however the opportunities available to job seekers were more likely to be in the reproductive labor fields, such as carework or domestic work. However, there were significant impediments here: the available job opportunities were often precarious, meaning part-time or contract. Additionally, the jobs available typically provided no benefits and offered undesirable working hours. In other words,

poor and working class urban Philadelphians like Dinah or Ms. Ramirez were not necessarily obtaining or accessing the type of high-skill or high-status jobs that could support a family and provide a living wage. Participants have obtained jobs through KEYSPOTs, nonetheless some continued to require social support programs like food stamps (SNAP) to make ends meet. Whereas hard and soft digital skills may be necessary to apply to the jobs online, notably it appeared that advanced digital skills may not be requirements for the positions available to low-income job-seekers, as the postings I shared for jobs as a hotel housekeeper or hospital cook demonstrates. In the absence of good paying full-time work, participants with significant family responsibilities like Ms. Ramirez had to permanently juggle several part-time formal jobs in the formal sector. Lastly, technology also posed unique challenges to KEYSPOT job seekers, as my participants encountered difficulty applying to jobs online due to social sorting and felt pressured to submit to invasive applicant screening practices through social media.

It is important to restate that I am not arguing in this dissertation that the Freedom Rings Partnership was wholly unsuccessful. Participants found jobs. And, as I will discuss in Chapter 8, in my view the partnership provided valuable tools and resources for poor and working-class communities struggling in the wake of the Great Recession. I am arguing, instead, that the “access” and “skills” policy focus overlooks important dimensions of the issue, such as how structural barriers can limit economic opportunities and the ways in which social and class location can shape interactions and experiences with ICTs. In other words, I argue that while participants did gain digital skills, these skills did not necessarily translate to better, well-paying jobs in the formal sector. Dispelling the digital myth as Mosco (2004) conceptualizes it, I also assert broadband

training programs do not necessarily result in “reduced dependency” as private sector policymakers have predicted (The Arnold Group, 2011). In sum, there is a disconnect between the goals of digital labor as conceived by policymakers and the on-the-ground complex economic realities shaping the economic lives of policytakers.

Therefore, as discussed in this chapter, many poor and working-class Philadelphians faced enormous barriers to finding good paying jobs in the formal sector. Given that low income participants are constrained in their ability to apply to formal sector jobs, cannot locate good-paying formal sector jobs, and felt concerned that digital tools like social media facilitated workforce discrimination, is it a surprise that some might resist or reject ICTs like Mr. Wilson, or exit the formal economy like Joanne? As I will discuss in the following chapter, I argue that those with advanced digital skills like Joanne who could not find high skilled jobs utilized their skills to create opportunities *outside* the formal economy, thus embracing “liquid labor” practices. In this way, participants attempted to achieve greater economic flexibility to better support their families and mitigate financial risk in the turbulent, precarious urban economy.

## **Chapter 7**

### **Families and Liquid Labor in the Modern Informational City**

#### **Introduction**

On a typical Tuesday afternoon at the KEYSPOOT during the Fall 2012 presidential election season, you could find Joanne seated at the corner computer next to her son, browsing online for images of American flags, red elephants or the Obamas. She brought her own inexpensive button-making machine to the lab, located interesting images online, and took advantage of free online software to size them for printing. She often paired digital images with local sayings, such as “bad boy” or “bad girl,” a trendy quip used among teenagers. Once her button design was finalized, Joanne utilized the KEYSPOOT’s printing resources and asked lab staff if she needed color prints. With a laugh, Joanne admitted to me that her most popular button depicted a young President Obama smoking a cigarette.

While Joanne had a contract with local schools to create buttons for special events, she explained that most of her sales were made with strangers on the street, highly unpredictable and variable. Though she did not earn significant income from these sales, she liked that it required few financial risks and that she did not have heavy upfront costs. The brief cash transactions were in Joanne’s own words, “smaller, more flexible.” Most broadly, Joanne’s experience in the informal economy of Philadelphia offers a window onto the ways in which policy, poverty, and technology intersect on the ground. More specifically, her experience reveals how the digital workforce divide (Rodino-Colocino, 2006), structural impediments to formal work, and declining social support in the wake of

the urban crisis in Philadelphia may, together, generate a new set of precarious digital work practices among poor and working-class families.

As I introduced in the opening of this dissertation, Joanne is a single mother and visited the KEYSLOT to manage three informal endeavors that earned her a small income. Joanne created political buttons that she sold on the street, but she also wrote children's e-books which she sold primarily on Amazon.com. The subject matter of her books was significant to Joanne, as she wrote from the perspective of an urban mother who has a child with a developmental disability. Joanne contended that her viewpoint was underrepresented in the predominantly "white-authored" children's literature. However, Amazon would not compensate Joanne until her sales met a certain threshold, typically a few hundred dollars. While one of her e-books earned Joanne revenue, she admitted that her other digital books had not yet met the limit. To attempt to gain higher sales, she frequently publicized her books on Facebook, Twitter, and targeted online messaging boards. Joanne also used digital media sites like Etsy to promote and sell handmade goods, like jewelry and artwork. While Joanne occasionally used the lab's computers to search for necessary materials, most of her jewelry supplies –like thread and brightly colored wooden or clay beads –were either made at home or purchased from stores in the community. Unlike her buttons, Joanne assembled these items primarily at home rather than at the local KEYSLOT. Although she sometimes wore her jewelry or carried her goods in small plastic bags folded in her backpack, she preferred to sell them through digital exchange or "community fairs" rather than on the street corners. But, despite her best efforts, Joanne did not make enough income from any of these three

informal endeavors to survive comfortably, and thus frequently searched for other opportunities in both the formal and informal sectors.

According to Joanne, the primary benefit to the informal economy was that it permitted her greater flexibility while reducing economic risk. To elaborate, first, flexibility was important to Joanne because she is a single mother and wanted to spend as much time as possible with her son, Jaleel. Before entering the informal economy, Joanne explained that she worked at a local bar and restaurant, waiting tables during the day and working behind the bar at night. As she pointed out, jobs in the service sector are typically strenuous and require afternoon and night hours, which can prevent mothers from picking up their children from school. The work was dull; Joanne was unable to use her creative skills. And although she did not earn a significant or steady income from her informal endeavors, they did not require a substantial financial investment. For instance, she explained that her button-making machine was relatively inexpensive and she could create Amazon e-books online for free. Therefore, building on my arguments regarding the impediments to formal work developed in Chapter 6, poor and working-class parents entered the precarious online economy for many reasons, including: 1) reproductive labor and childcare responsibilities; 2) the need to lower economic risks and a lack of access to startup capital; 3) the inability to earn a living wage in the formal sector; and finally, because, 4) the formal sector jobs available were low-status, low-skilled and dull. Her story also complicates the standard policy focus on digital access and skills training: Joanne had obtained *both* hard and soft digital skills prior to visiting KEYSPOTs. Yet, paradoxically, she could not use those skills in the former sector but could, however,

utilize them in informal online work practices. In this way, this chapter focuses on the emergence of precarious online labor –or liquid labor –in the modern informational city.

### **Overview**

Joanne's experience is important to document, because as Chapter 4 and Chapter 5 discussed, federal U.S. technology programs like BTOP have focused on the role of broadband access and digital skills training in stimulating economic growth. Said differently, the overarching goal of the BTOP program through ARRA was to connect low-income underemployed and unemployed Americans to jobs. Some policymaker interests – embracing the myth of the digital sublime –even suggested that imparting digital access and skills would provide participants a path out of poverty and, therefore, the welfare state could be further retrenched (Mosco, 2004; The Arnold Group, 2011). Nevertheless, as I argued in Chapter 6, many poor and working-class participants faced significant barriers in finding formal sector opportunities that would provide a living wage and benefits. In fact, participants like Dinah continued to rely on food stamps even after obtaining a new job through KEYSPOT programs. Conversely, participants like Ms. Ramirez were stuck in chronic part-time work and visited KEYSPOTs in the hopes of finding a single full-time job that could provide benefits like healthcare.

In the face of these dire economic conditions –and confronting diminished formal sector job prospects –participants utilized KEYSPOT digital resources in an attempt to create opportunities outside the formal economy. These activities ranged from promoting services such as modeling or caricature drawing, to selling handmade goods and digital goods online. In some cases, street economies merged with digital economies in unique and unanticipated ways. Whereas these flexible labor options and online activities could

be viewed as expanding economic possibilities for low income Philadelphians, as I argued in Chapter 3 – in alignment with scholars like Andrejevic (2008), Duffy (2015), Dyer-Witheford (1999), Fuchs (2014), Kuehn and Horrigan (2013), Mies (1988), Jarrett (2015), Ouelette and Wilson (2011) –digital labor is uniquely exploited by capital in the non-wage digital economy. These liquid labor practices are undoubtedly dynamic, creative, and make a cultural contribution; Joanne herself noted that her e-books provide a valuable perspective on parenting a child with disabilities (Arvidsson, 2009; Jenkins, 2006). Yet, it is important to situate these practices within the larger digital workforce divide (Rodino-Colocino, 2006) and consider the relationship between these new precarious online work practices and the larger information economy. Though informal work may have provided extra income, these practices did not provide participants with long-term financial stability and could not deliver route out of poverty (Mosco, 2004). So, whereas scholars like Edin and Lein (1997), Collins (2008), Daly (2003), Grabham and Smith (2010) and Sassen (2003) have theorized and detailed urban street economy “survival strategies,” in this chapter I contribute a perspective on how these street strategies intersect with the digital economy, a facet underexamined and undertheorized.

To develop my arguments on the emergence of this precarious work, in this chapter first I advocate for framework of “liquid labor” that can position the informal digital labor practices of working class individuals within the context of the digital workforce divide. The motivations and factors shaping this work intersect with some dimensions I have already explored in this dissertation, such as how the urban crisis and retrenchment impact the economic lives of poor and working-class Americans. Next, to bring my theory of liquid labor to life, I will present the stories of four of my research



participants – Joanne, Sky, Deric and Ron. Third, I will synthesize some of the key themes gleaned from my examination of their liquid labor practices, arguing that my participants engaged in these strategies because they provided flexibility and minimized financial risk. These online practices were also more conducive to reproductive labor roles. I will also consider how working-class participants are utilizing the informal economy; I will detail some of the emergent “hybridized” forms, such as creating digital goods to be sold online, creating material goods to be sold online, and marketing digital goods and services. Finally, I will summarize my key thoughts to lead into the conclusion chapter, as I consider areas of resistance, possible interventions, and future research goals.

### **Offering a New Framework: Liquid Labor**

To restate the framework presented in Chapter 1 and Chapter 2, drawing on Bauman’s (2000) concept of “liquid modernity,” I propose the rise of informal online labor – or liquid labor – as a framework for understanding the complex issues surrounding precarious work and the information economy in advanced capitalism. More specifically, I am applying Bauman’s (2000) ideas to a study of the economic lives of the urban poor, with a focus on informal digital labor practices. Said differently, the framework of liquid modernity helps explain, more broadly, that the emergence of these precarious informal digital practices results from larger patterns of labor restructuring in the U.S. and the accompanying breakdown of durable social support institutions like the welfare state (Bauman, 2000). I would extend Bauman’s conceptualization here and add that the interaction of these dynamics has also had a significant impact on families and childcare access, which was likewise a factor driving liquid laborers to seek more flexible work.

With limited access to capital, low-income participants gravitated towards these low financial risk strategies; nevertheless, participants assumed other risks, in the form of a significant investment of their own personal time (Beck, 2000).

In this chapter, therefore, I assert that these flexible, low-financial risk work practices should be understood as a kind of super precarious, highly exploited online labor. While I agree with scholars like Beck (2000) and Deuze (2006) that “risk” is a defining feature of liquid life, I suggest in this project that “liquid laborers” are those workers who assume the most risk, strive for maximum flexibility, and circulate in the most precarious survival circuits (Sassen, 2003). However, what is also important here is that I advocate for a materialist consideration of risk in the context of digital work. To explain, workers like Joanne occupy a very different position in the economy and are thus bound by a different decision matrix when it comes to risk. Said differently, the ability to take risks in the new economy –the ability to be “entrepreneurial” – should be understood as dependent on economic or social resources. Simply put, whereas I would agree with Neff’s (2012) assertion that “risk” is a celebrated value in the new economy and can lead to exploitative working arrangements, I would emphasize that an oversimplified understanding of risk overlooks how the new economy can uniquely exploit different groups along race, class or gender lines. For instance, middle class beauty bloggers (like those in Duffy’s 2015 study) may be more likely to have resources to fall back on if their risky online venture fails; for instance, such online workers may find greater security in knowing a family member or friend can provide them housing or help with emergency healthcare costs in a tight situation. This is not a luxury that participants like Joanne have and therefore they must evaluate risk differently. As a related point, because ICTs have

increasingly played a role in reshaping the economic fortunes of the working poor – as seen through Mr. Wilson’s story – I would likewise extend Bauman’s (2000) theory to consider that an individual’s relationship with liquid modernity (and technology) is uniquely shaped by their social and class position. Therefore, I have selected “liquid labor” as a more appropriate classification than “immaterial labor” or “affective labor” to draw attention to the ways in which class location and digital access interact to generate precarity and limit economic opportunities and consider the material and immaterial aspects of this work.

However, moving beyond Bauman’s (2000) conceptualization, as discussed in Chapter 1, I find “liquid” to be a useful term for a few other key reasons. First, in economics, liquid assets are those that can be easily converted to cash – participants like Joanne relied heavily on small cash transactions to maintain flexibility and limit financial risk. Second, in contrast to “immaterial” labor, participants like Joanne produced both material and immaterial goods, dissolving the boundaries between what is “immaterial” and “material.” Third, as both Bauman (2000) and Castells (1989) argue, the expansion of ICTs has allowed capital to easily flow across borders and boundaries, fleeing protected workers to seek cheaper global labor. Lastly, liquid labor resonates with Devey et al.’s (2006) concept of churn, or the process whereby precarious workers enter and exit the formal and informal markets, but never gain stable economic footing. Having outlined my goals and theoretical underpinnings, I will now turn to my participants to better ground and expand on my theory of liquid labor as a type of hyper precarious and hyper exploitable labor.

### **Liquid Laborers: Joanne, Sky, Deric and Ron**

Before I introduce each participant, I will provide some more background to better contextualize their digital labor practices. Why have my participants chosen to enter the informal economy? What factors have shaped their decision to pursue liquid labor practices? This answer has been posed and answered, partially, in previous chapters. For instance, I have already presented how the breakdown of durable institutions, such as the welfare state, impacted the economic fortunes of many poor and working-class Americans (Bauman, 2000). For example, in Chapter 3, I reviewed research from scholars like Collins (2008), Daly (2003), Edin and Lein (1997), Grabham and Smith (2010), and Sassen (2003) who have rightly argued that urban “survival strategies” (including informal work) have been necessitated by declining social support, reduced union protections, and the rapid embrace of neoliberal policies like workfare. Marxist feminist scholars have likewise suggested that shifts in reproductive labor have put an additional strain on the working class; said differently, issues of childcare can push low-income Americans into new working arrangements (Abel & Nelson, 1990; England & Folbre, 2002; Fisher & Tronto, 1990; Folbre, 1994, 2001). Furthermore, following from Rodino-Colocino (2006), there is a growing digital workforce divide where a “high tech minority” benefits from changes in the information economy, whereas the low-skilled American workforce faces declining wages and increased precariousness (Bauman, 2000; Beck, 2000; Deuze, 2006; Rumberger & Levin, 1985). Given the limited formal sector opportunities and the rise of chronic part-time work I presented in Chapter 6, some marginalized workers may seek alternative sources of income in the informal sector.

But what about the impact of these wider economic changes on Philadelphians more specifically? In Chapter 5, I traced the history of Philadelphia's housing and urban policies to show how they contributed to patterns of racial and economic segregation in the city, trapping the urban poor in the declining high-poverty neighborhoods. This racial and economic segregation limited their geographic proximity to formal jobs and reduced vital social networks. I likewise explored how these policies –coupled with high rates of incarceration and an underfunded public educational system –put additional economic pressure on low-income families, causing many to become loosened or detached from the formal economy altogether (Wilson, 2011). In Chapter 6, I addressed some of the challenges to finding work in the formal sector in Philadelphia, noting that the jobs available to workers were low-wage, low-skill, and of low-status. Notably, the sectors in which KEYSPOOT participants attained jobs were in reproductive labor fields like carework/domestic work or the service industries. The positions were also typically part-time and thus did not typically provide needed benefits like healthcare or family leave.

While these previous insights help frame the issues surrounding liquid labor, they do not represent the full range of factors and motivations that played a part in a participant's decision to seek informal work. Some of these other considerations and motivations included increasing flexibility, minimizing financial risk, and managing reproductive labor responsibilities. Therefore, to bring my theory of liquid labor to life, I will now turn to introduce four participants –Joanne, Sky, Deric and Ron. I have focused on these four participants as they represent a diverse set of liquid laborers, two females and two males, ranging in age from 21 to 45. Each engaged in very different activities. For instance, as presented in the opening, Joanne is a 34-year-old African American

woman and her informal economic activities included selling pins, digital books and jewelry. Sky is a 21-year-old African American woman and a part-time model who promoted her modeling services online. Deric is a 31-year old African American man who sold digital music and marketed his music on the web. Ron is 45-year-old African American man who worked as a caricature artist and a for-contract graphic designer. In presenting these participant accounts, I will give special attention to the individual factors and personal motivations that caused them to each seek opportunities in the informal sector. Following the detailed portraits, I will then synthesize and elaborate on key themes.

Before I move on to discuss the ethnographic data in detail, I would reference my earlier key finding that the informal “street” or “material” economies are now merging with digital or “immaterial” economies in unique and unanticipated ways. Thus, I offer a broad typology here to better orient the reader to my subsequent analysis. The informal digital strategies I examine can be grouped into three categories: 1) Utilizing media tools available at KEYSPOTs to create digital goods to be sold online, like Joanne’s Amazon e-books, 2) Utilizing media tools available at KEYSPOTs to create material goods to be sold online or in the streets, like Joanne’s political buttons; and, 3) Utilizing media tools available at KEYSPOTs to promote informal services, like modeling. Another significant trend I observed in the field was that social media and other online resources were used to promote and market goods and services. In some cases, participants like Joanne were using digital content – like the online images of the Obamas – as the raw material for street goods. Again, this is a point of differentiation from the “immaterial labor” literature, in that I am tracing the connection points between street and digital economies.

That being stated, I would also emphasize a broader point that I am making in this chapter, and that is that these multiple, dynamic survival strategies resulted from childcare issues and a need to maintain flexibility and minimize financial risk. Having contextualized these liquid labor practices, I will now turn back to Joanne, offering a more detailed description of her online work practices and motivations.

### **Meet Joanne**

Introduced in the opening of the dissertation as well as this chapter, Joanne is a 34-year-old African American woman who was a “regular” at the KEYSLOT located in the faith-based community center in North Philadelphia. She self-described as an “artist” and engaged in various liquid labor practices as I have discussed, including selling buttons/pins on the street, creating digital books, and selling handmade jewelry. As Joanne did not earn consistent or significant income from any of her informal endeavors, she frequently scanned for other temporary work opportunities in both the formal and informal sectors. Each liquid labor strategy she pursued required little start-up capital and thus presented few substantial financial risks; Joanne’s financial transactions were usually small cash exchanges, around \$20 or less. Nonetheless, it is important to highlight that she assumed different kinds of risk, in the form of heavily investing her personal time into her ventures, without knowing if they would become profitable. As discussed in the opening, while she owned a laptop, she did not have internet access at home. Joanne had both hard and soft digital skills.

**Mothers and the service sector: the necessity of reproductive labor.** Relating to what will be first thematic argument about the relationship between informal labor and reproductive labor, for Joanne, the primary benefit to the informal economy was that it

permitted her greater flexibility in working hours. This was especially important to Joanne as she is a single mother and wanted to spend as much time as possible with her son. Further, Jaleel has a developmental disorder and thus it was not easy for Joanne to obtain childcare for him; she explained that other family members were not as well equipped or trained to meet his needs. Joanne was thus concerned with providing enrichment for Jaleel, activities that after school care programs were not able to provide. Notably, retrenchment may have influenced this reality – as discussed in Chapter 5 on the urban crisis, some educational programs and services were reduced due to budget cuts in Philadelphia in the previous period, precipitated by the city's fiscal crisis in the 1990's. To return to Joanne, before entering the informal economy, she worked in the service sector at a local bar and restaurant. As she pointed out, jobs like this in the service sector require afternoon or night hours which are difficult for parents. In other words, aligned with my arguments in Chapter 6, the formal sector work available to Joanne was somewhat akin to Dinah's opportunity –low-status, low-skilled, low-paid and requiring night hours. In short, as durable institutions breakdown in the era of liquid modernity and reproductive labor is degraded along class, racial and gender lines, parents like Joanne turned to flexible work to navigate increasingly precarious economic conditions.

**Amazon e-books: the unique exploitation of digital labor.** Having detailed the reproductive labor considerations that drew her to online work, I will now turn to a deeper examination and analysis of these flexible liquid labor practices. As discussed, Joanne participated in multiple informal activities. Regarding the first type – digital goods to be sold online – the e-books that Joanne wrote and sold on Amazon would fall into this category. Joanne used free online software to create her books and then



subsequently sold them online. However, the surplus generated from this labor largely benefitted Amazon.com, as Joanne was not compensated until her total sales reached a certain benchmark of several hundred dollars. As previously discussed in Chapter 3, “immaterial labor” was in this way exploited by capital in the non-wage digital economy (Andrejevic, 2008; Fuchs, 2010, 2014; Jarrett, 2015). In other words, though Joanne controlled the means of creative production in her handmade jewelry business, for her e-books she very clearly produced, “surplus value for others who control capital and use the appropriated labor for achieving profit” (Fuchs, 2010, p. 143). In sum, while Joanne received some compensation for her digital books, she received nothing unless her book was successful. Thus, although she limited financial risks, she invested a significant amount of personal time into these activities, without any guarantee that it would ever earn income.

Here a reader might point out that Amazon did shoulder some upfront costs in providing the online e-book creation software and in hosting the book online. But, I would respond that Joanne took over the promotional functions. For example, to ensure she met the Amazon.com required benchmark and received some payment from her e-books, Joanne utilized her personal network of friends and family through social media, posting messages about how to buy her book online. As discussed in the introduction to this chapter, one of her books centered on how urban mothers parent children with developmental disabilities. Thus, as a complement to her social media promotional tactics targeting friends and family, Joanne additionally utilized online messaging boards geared towards disability communities. Yet, as she assumed these various promotional functions, she invested a significant amount of time publicizing her book on behalf of Amazon. So,

though Amazon shouldered some costs, they were marginal and earned back quickly if Joanne made any sales. In this way, I argue that Joanne's experience highlights the nature of the digital workforce divide, as the non-wage and low-wage low-tech majority plays a significant role in making the digital economy profitable for the high-tech minority (Jarrett, 2015; Rumberger & Levin, 1985).

To return to the issue of risk and a materialist consideration of risk-taking, though Joanne did not take on financial risks to create her Amazon e-books, nonetheless, she assumed great risks in the form of investment of her own time. This speaks to the ways in which class position can uniquely shape how risk is navigated and defined – Joanne was unable to risk any money, so she had to risk her time instead. Yet, although Joanne is a poor and working class digital laborer, I would point out that her overall self-marketing strategies were similar to those executed by the middle-class “aspirational laborers” detailed in Duffy's (2015) study of beauty bloggers reviewed in Chapter 3. This is a subject I will explore in the next section when I introduce another participant, Sky. Nevertheless, I want to highlight that though I analyze a different type of classed digital labor, there are potential intersections with current scholarship that centers on middle and upper class digital laborers. Nonetheless, as I stated in the opening, I am arguing that a materialist consideration of risk and possible forms of exploitation is critical.

**Political buttons: traveling light and street corner sales.** To now shift to analyzing her second liquid labor strategy, as mentioned, Joanne also created political buttons. This would be the second typology I introduced earlier – using digital goods to sell material products on the street. To generate her designs, in addition to using lab computers she also leveraged KEYSPOOT resources like free paper and printing. While

she had a simple website for her products, she observed that street marketing was one of her most effective strategies. To sell her buttons on the street, she affixed about 50 – 100 of them to a small, lightweight painting canvas fitted with a shoulder strap. At the top of the board, the price – “\$1.00!” –was hand-painted in bright yellow puff paint. Joanne carried them with her during the day as she traveled throughout the city, on the bus or by foot. She typically earned about \$30 - \$50 in cash per hour in this way, however she had to return home when her supply ran low. Here Joanne’s strategy to “travel light” recalls Bauman’s (2000) characterization of the contemporary information economy as an era in which, “Travelling light, rather than holding tightly to things deemed attractive for their reliability and solidity....is now the asset of power” (p. 13). To expand on Bauman’s (2000) observation, although her income was unpredictable, she was not weighed down by upfront costs and produced (and carried, literally) was a small number of goods at one time, thus maximizing flexibility and minimizing financial risk in that part of her work. Therefore, “liquid labor” here recalls the ways in which workers like Joanne traveled light, avoiding heavy commitments or investments.

**Risky, solid street economies; low-risk liquid economies.** Yet, it also useful to change directions here and explain the tensions informal workers faced when selling goods on the street. This highlights that while material economies can be somewhat regulated, the digital economy remains more fluid and is, therefore, not as tightly policed. This in part explains why so many informal digital laborers are fast embracing it as an option to earn additional income: it is a largely unregulated sector of the economy. To expand on how material economies are regulated, during street selling for her buttons and jewelry, Joanne was careful to not delay in one place and constantly kept moving on

public transportation. This is because to legally peddle her goods on the street, Joanne was required to obtain an official license from the city of Philadelphia. The license cost was about \$200 - \$300 and required an application and paperwork, and for liquid laborers like Joanne who wanted to maximize flexibility and minimize economic risk, this upfront financial investment was considered prohibitive. Nevertheless, Joanne explained to me that there were potential risks in selling her goods without a city license:

And so, they kind of just **keep moving**. You know, you **can't stay in one place**.

You have to **keep your eyes looking** for that because I was actually sitting at City Hall once. I thought I hit the jackpot. I was sitting down at City Hall because the weather was inclement. I was inside and I was also in the way of a lot of traffic.

You know, between the Broad Street line and the arrow people coming by and I think I made like \$60 in two hours. I was just like, "Whoo! Whoo!" You know?

And a **police officer** objected for me to move along and I did, but I came back the following day and she came over with her partner and said, "If I see you down here again **I'm going to arrest you**." I was just like, "**Wow, I'm not selling drugs. I am selling pins!**" I didn't say all of that....but, yeah, that was disappointing because I hadn't found a place with that much traffic yet.

As this interview excerpt indicates, the informal street economy was policed in shared city spaces like the street or subway, constraining the ability of the liquid laborer to access "traffic" or the greatest density of potential customers. So, if she wanted to sell without a license, Joanne cannot be fixed in one spot, but must be perpetually on-the-go. Thus, my position here is that another reason why she must "travel light" is a practical one: Joanne was on the move constantly to evade arrest. Yet, as I have already described,

Joanne adapted her strategies to fit these limitations – fastened with a shoulder strap, her canvas board proved a cheap, lightweight solution that allowed her goods to be mobile. However, again, this episode highlights one of the benefits to selling immaterial goods like Amazon e-books instead of material goods like buttons on the street: you are not physically limited by the inventory you can transport and additionally you take no financial (or legal) risks peddling goods without a license.

Building on this point, I would underline that in the above quote, Joanne distinguished her liquid labor activities from other more nefarious informal economic activities, i.e. the traffic and sale of drugs on the street. Although Joanne is not “selling drugs,” informal economic activity of all types was policed – the penalty for selling her pins on the street was arrest and possible prosecution. This frames the complex tensions that exist between the informal and formal economy and the structural role of government and policing in defining economic exchange in urban spaces. And, it also emphasizes the potential motivation for embracing the informal digital economy more widely– it mitigated some risks, and although exploitative, did not require up-front payments in the form of a license. Thus, Joanne’s calculation and evaluation of risk was very much materialist and tied to her class position: she had to constantly reevaluate her risks, with a focus on limiting upfront costs. Nonetheless, as Joanne later explained in an interview, flexibility and mitigating risk was not necessarily a choice, as poor and working-class liquid laborers have structural barriers to accessing capital.

**Structural barriers to a formal business: lack of access to startup capital.** As a pushback on the entrepreneurial frames embedded in broadband policy that celebrate technology as a path to business opportunity, I would point out that Joanne was interested

in establishing a formal business to sell her products, yet faced structural barriers. Joanne's liquid labor model – relying on low financial risk ventures and small cash transactions – was her only viable option. For as Joanne pointed out, the quality of a business plan or a would-be entrepreneur's business concept does not fundamentally alter the nature of capital. Said another way, those without resources living at the economic margins cannot secure the financing necessary to establish a formal sector venture. In an interview, Joanne championed her low-risk model and explained how difficult it is for poor and working-class business owners in her community to obtain loans or startup capital:

Well, there's a lot of **misinformation** from eons where people are still working on it. For instance, the **notion that you need to have a lot of money** to start your own business, the notion that if you **write a business plan you can get a business loan**, that is completely bogus. It doesn't matter how your business plan is. If you don't have **collateral and money** that is already coming into your business to show that you'll be able to pay it back.

In other words, Joanne indicated here that poor and working-class participants without significant economic resources – such as homes or cars – may not have the “collateral” needed to obtain a small business loan for start-up capital. Additionally, the absence of credit history or poor credit may hinder poor and working-class entrepreneurs in their loan application process. Said differently, Joanne suggested that anyone who thinks she/he can easily obtain a loan armed only with a strong business plan has been confused by “misinformation.” Nonetheless, the “smaller, more flexible” informal economy allowed Joanne an opportunity to earn money. Joanne created her e-books online; her

political pin business only required the purchase of an inexpensive button-making machine, and she used KEYSPOOT resources like paper and online software for free.

These structural impediments that Joanne referenced reveal that a limited and vague policy definition of “entrepreneurial activity” is not only over-celebratory, but overlooks a significant dimension of the problem of economic mobility. As Joanne cannot engage in economic risk-taking – whether through personal capital or invested capital – she must instead take on other risks, such as risks of personal time or even the risks of peddling on the streets of Philadelphia without a license. This also underscores the ways in which the “access” and “skills” policy focus can obscure the complex relationship between poverty, inequality and ICT access. Joanne wanted to start a business, but due to her class position, she did not have access to the resources that were necessary. It likewise highlights how “risk” is uniquely conceptualized among different classes of digital laborers and underscores the utility of a materialist understanding of risk.

However, to shift to another liquid labor strategy, I would add that when I met Joanne, she was beginning to build a small handmade jewelry business, primarily selling the goods directly through Facebook to friends or at local community street fairs. This would fall under the second typology I mentioned earlier, utilizing KEYSPOOT media tools to create material goods to be sold in the streets. But, whereas Joanne occasionally used the lab resources to search for the materials needed to create jewelry, most of her supplies –such as thread and brightly colored wooden and clay beads –were purchased from stores in the community or made at home. Though she was beginning to experiment with selling her goods on Etsy, at the time of my research, she had not yet fully

developed that avenue to promote her goods. Nonetheless, I wanted to briefly include these other liquid labor strategies, though it was under development.

So, to sum up and frame all of her liquid labor practices, Joanne was initially motivated to pursue liquid labor due to her reproductive responsibilities, as her previous job working at a bar and restaurant was not conducive to parenting. She appreciated the flexibility liquid labor could provide her, even though she admitted that the income earned from her ventures amounted to small infusions of cash rather than a steady, predictable income. As she did not have access to the capital she would have needed to establish a formal business, Joanne embraced a low financial risk model. Nevertheless, she risked her own time and faced exploitation of her labor, as evidenced by her relationship with her e-book host, Amazon. She used both street and digital economies to make ends meet, shifting between creating material goods and immaterial goods. And though her online work demonstrated incredible creativity and ingenuity, her practices were a means of family survival facing dire economic circumstances. In short, Joanne was the most precarious of precarious laborers, highly exploited and vulnerable (Beck, 2000; Bauman, 2000; Deuze, 2006). Having now detailed the liquid labor of one single mother, I will now turn to the online work practices of another, Sky.

### **Meet Sky**

While Joanne's usage of the informal digital economy has now been discussed at length, it is valuable to contrast her informal strategies with those of another participant. Sky is a 21-year-old African American woman with curly hair and boxy dark glasses, who was a "regular" at a KEYSPOT located in a health advocacy organization in Central Philadelphia. During her free time at the lab, Sky often watched music videos on



YouTube or fashion clips featuring models walking the catwalk. She was a college student, but also worked as a part-time model: therefore, her liquid labor practices would fall under the third typology I described – using digital media to promote informal goods and services. While Sky is not a mother, she did have custody of her three-year old brother, Darius, and was primarily responsible for his care. So, like Joanne, Sky was shouldering the burdens of caregiving alone without a partner, a circumstance which impacted her economic life and labor strategies. Thus, I want to briefly highlight that liquid labor can not only shaped by class, but can be influenced by gender or race. Sky did not have a computer or broadband access at home, but she had hard and soft technological skills.

**Part-time work, poverty and reproductive labor.** In addition to working in the informal economy as a model and studying as a part-time college student, Sky held another part-time job working at large fast-food restaurant chain. Unfortunately, Sky did not earn enough income from this formal sector job to survive and it did not provide her family with needed benefits like healthcare. Thus, to make ends meet, Sky picked up modeling jobs when she could and occasionally babysat for a co-worker's children. Like Joanne, the informal economy offered Sky flexibility in her schedule to allow her to both care for Darius and attend college classes. However, much like Ms. Ramirez, her part-time work did not provide her with healthcare which put an additional financial strain on her family. This presented special challenges for Sky, as she was the primary caregiver for Darius. In fact, I would add here that Sky visited the health advocacy organization in which the KEYSPOT was located for free medical services because she was living in poverty. This underscores that liquid labor practices result from an interaction of

economic and social forces, including poverty, the rise of precarious work, and the degradation of reproductive labor across race, gender and class lines. More broadly, Sky's story highlights how the urban crisis practically shaped the economic lives of KEYSPOt visitors.

**The risk of wage-loss and wage-theft: lack of protection for liquid laborers.**

How did Sky connect to informal modeling opportunities? Like Joanne, Sky employed multiple strategies to find opportunities. First, she marketed her modeling services to her personal social network through Facebook. Second, she advertised her services and responded to posts online; some of the resources she used to find “gigs” included local messaging boards, an online website geared towards the modeling industry, and Craig's List. Like Ron, a participant who I will turn to later, Sky also relied heavily on word-of-mouth recommendations: she primarily found work through local Philadelphia based designers and boutique clothing store photo-shoots.

While I have touched on issues surrounding the online exploitation of digital labor, my interviews with Sky exposed another harsh reality for liquid laborers that Joanne had not experienced. As she was not protected by a contract, when the terms of her labor changed, Sky did not feel she was in a strong position to make challenges. Thus, her experience suggests that both formal laborers (such as Dinah) and informal laborers seeking work through KEYSPOts could be subject to multiple forms of exploitation. To provide an example to this point, regarding a recent modeling event she worked, Sky complained:

We wore scarves printed like bright colors, geometric. It was cool but I was perturbed because they said **it was going to be \$50** and then **they paid me \$45**

and didn't even pay me back for my [bus] fare and it was ass-far. But it will be **good for my portfolio and one day I'll hopefully get something permanent.**

So, whereas Sky had agreed to perform a service for \$50, when she arrived, she was paid \$45 and not reimbursed for travel expenses as agreed upon. This reaffirms the multiple forms of exploitation poor and working-class job-seekers face: in the formal economy, they may be subjected to invasive social media screening practices (as discussed in Chapter 6), whereas informal workers can encounter digital economy exploitation (as in the case of Joanne's Amazon e-books) or wage theft or wage loss (as was the experience for Sky). In other words, when liquid laborers face exploitation, because they are in such a precarious economic position, they are less likely to complain or bargain for higher wages (Dyer-Witheford, 1999; Harvey, 2005; Stack, 1974). It also reveals that whereas upfront financial risks are limited for poor and working-class liquid laborers like Joanne and Sky, backend risks are not. Therefore, although Sky was not obligated to invest cash into her modeling business, she was at constant risk of wage loss or wage theft, among other forms of possible exploitation.

**Class position and portfolios: the slippery promise of hope labor.** Having addressed the issue of wage loss presented in Sky's interview, I would emphasize that there is another key reason here that Sky did not contest her exploitative working conditions, and it connects to the insights of digital labor scholars previously reviewed in Chapter 3. Though Sky was not properly compensated for her modeling services, she tempers her response remarking that, "it will be good for my portfolio and one day I'll hopefully get something permanent." In other words, though she was not properly compensated in this situation, she still had "hope" (Kuehn & Corrigan, 2013) that she

was one step closer to her ultimate goal: attaining a full-time position. This would, in turn, allow her to give up the multiple jobs she must now work to survive. In other words, she downplayed her own exploitation. Sky's sentiments here support the claims of digital labor scholars I reviewed in Chapter 3 (Bulut, 2014; Duffy, 2015; Kuehn & Horrigan, 2013; Neff, 2012; Postigo, 2007) who have argued that digital laborers may see their work as a long-term investment. Said differently, even though they are often aware of the exploitative dimensions, precarious digital laborers may continue to engage in their work in the hopes that it will eventually lead to a more stable, profitable, or permanent opportunity. Nonetheless, I would point out that these precarious exploitative "hopeful" arrangements can translate to work as well that spans social classes, such as unpaid college internships as a form of hope labor (Rodino-Colocino & Beber, 2015).

However, given her economic, social and class position – not to mention her significant reproductive labor responsibilities as a young single caregiver to her brother—Sky's ability to convert her part-time modeling work into a paid formal position seemed limited. Therefore, although I agree with scholars who have conceptualized these practices as "hope labor" (Kuehn & Horrigan, 2013) or "venture labor" (Neff, 2012), I would insist that we must also consider a digital laborer's social and class position as well as their access to ICTs. For example, Neff (2012) is right to chronicle the exploitative dimensions of high-tech work in the dotcom era, yet these workers undoubtedly still had racial and class privileges that at least made it more likely that they would eventually obtain full-time or well-paid work. In contrast, Joanne and Sky faced significant structural barriers (like lack of access to startup capital or transportation) but also technological barriers, as they were relying heavily on KEYSPOOT resources to

continue their digital work practices. This group of laborers also considered flexibility and how to lower risks in a way that was materialist and uniquely classed.

In sum, Sky's liquid labor practices had many intersections with Joanne's online work. She was similarly motivated to pursue liquid labor, because as a single primary caregiver to her brother, she needed a schedule that would allow her more flexibility but would not require an upfront financial investment. In addition to her caregiving responsibilities, Sky was also juggling a part-time job at a large fast food restaurant chain and college coursework. Though liquid labor opportunities in modeling provided some extra cash to supplement her income, it was not enough to survive. In fact, Sky visited the organization in which the lab was located for free health services. But although Sky acknowledged she had encountered wage loss and wage theft, she had hope her modeling work was a stepping stone to new opportunities and stability. Nonetheless, Sky faced significant structural challenges (like lack of access to a home computer) that constrained her opportunities for economic mobility. In referencing her "portfolio" and future modeling career, Sky's outlook was far more optimistic than my third liquid laborer, Deric, who was pursuing a career in the music industry.

### **Meet Deric**

Having just discussed the digital labor practices of both Joanne and Sky, I will now turn to introduce another liquid laborer who, like Joanne, visited the KEYSPOt in a faith based center in North Philadelphia. Deric is a 31-year old African American male who moved to Philadelphia from the Midwest in 2009 to, "chase [a] dream as an R and B artist." Like Joanne, he also created digital media that he sold online—in his case, online music and digital beats. As he did not have a home computer and primarily accessed the

internet via a mobile device, Deric regularly visited his local KEYSLOT to create music and send digital music files. Deric had both hard and soft technological skills. In addition to providing new avenues to make money from music, Deric argued that his access to a local KEYSLOT expanded the artistic possibilities of what he could do musically. In short, I want to highlight that Deric valued both the economic and cultural benefits of KEYSLOTS, as this is a subject I will consider further in Chapter 8.

**New parents seeking new opportunities.** To return to Deric's liquid labor practices, at the time of the project, Deric and his fiancé, Tamara, recently had a baby. Thus, like Joanne and Sky, Deric had significant reproductive labor responsibilities and liked the flexibility the informal economy could provide his family (Bauman, 2000). As Deric explained, with a newborn, either he or Tamara needed to be home to feed his son, "every four hours," so some work opportunities in the formal sector were entirely out of the question for both parents. Though Deric and his family benefitted from the flexibility the informal digital economy could offer –and the work did not require an upfront investment of cash –his music work required a substantial time investment and the payouts he received were small and incredibly unpredictable. Like both Joanne and Sky, although Deric earned some income from these informal ventures, it was not enough to survive. So, though Deric visited the KEYSLOT each week to work on his music, he also spent a significant amount of time searching for formal sector jobs online, often using the lab's resources to print resumes and cover letters. Therefore, like Joanne and Sky, Deric's financial situation was incredibly precarious; while he was engaged in liquid labor, he also sought opportunities in both the formal and informal sectors.

**Music and money: the exploitation of digital [music] labor.** To describe his liquid labor practices in greater depth, like Joanne, Deric earned revenue through a dynamic and constantly evolving set of informal strategies. He gained income primarily by: 1) participating in internet and blog radio stations; 2) generating views on his multiple YouTube channels; and, 3) remixing music and selling digital beats online. To provide more background on each strategy, first Deric earned a small amount of income – a few hundred dollars per month – from his participation in blog talk radio stations. He explained that the blog talk radio stations were accessed primarily via mobile phone applications, “all over the world,” and were also a way to gain business contacts. Second, Deric maintained several music channels through YouTube which were listed separately under various “stage names.” In this way, he earned a small amount of money from YouTube when users viewed his content. Nonetheless, I want to focus on his third informal labor strategy – remixing and selling digital beats.

To elaborate on this third strategy, one resource Deric utilized to remix and sell digital beats was “ClubCreate,” a now defunct application accessible through Facebook which allowed artists to earn money from creating digital beats or submitting remixes of available songs. For example, Deric was compensated when a beat he generated from a popular music hit was featured on another forum and further when his remixed version of a hit was “shared” through the application. Yet, like Joanne’s e-books, Deric did not earn a significant amount of income from a single share or feature. Only when his song was frequently shared did it generate anything measurable, meaning above a few dollars. I would point out here that music producers were in many ways using a crowdsourcing model to generate low-cost and low-risk creative content. In other words, while Deric

invested considerable time creating music on the site, he earned income only if his beat or remix was successful. Therefore, in many ways, Deric's story mimics Joanne's experience with her Amazon digital books and reinforces the nature of the digital workforce divide. To expand on this, the low-tech majority assumes risk in their online labor – such as investments of personal time – and plays a significant role in making the digital economy profitable for sites like Amazon or YouTube of apps like ClubCreate (Jarrett, 2015; Rumberger & Levin, 1985). And though Deric invested a substantial amount of time into his online work, like Joanne, he struggled to keep his family financially afloat.

**Liquid labor and social support resources.** Repeatedly in our discussions, Deric underscored that the KEYSPOT digital skills courses were extremely beneficial to him; for instance, a trainer helped him improve hard digital skills related to his music, such as how to upload MP3s to his personal website. Yet, to return to my above point, he disclosed that one of the KEYSPOT's most useful functions was to connect him to social support resources his family needed as they were living in poverty (Wolfson & Crowell, 2013). For example, in our interview, he praised the computer assistant, Camille, who went out of her way to connect him with material resources for his infant son. Deric articulated his appreciation for Camille, saying:

She didn't just help me with my music. She helped me find a **job, clothing, and stuff for my son**. She helped me a lot.

In short, Deric explained that Camille was not only providing digital assistance, but that she helped him find needed items such as, “clothing, and stuff for my son.” This underscores the ways in which reproductive labor influenced digital work practices but



likewise demonstrates that while liquid labor offered some cash, it was not enough to survive. Additionally, Deric told me that the lab staff had occasionally connected him to local formal sector job opportunities where he could make some extra cash to better support his family. In sum, for Deric, these liquid labor practices acted more as “survival circuits” and did not appear to translate to substantive economic mobility (Sassen, 2003). Said differently, in the context of the wider urban crisis, participants like Deric acquired digital skills and yet, like Dinah, continued to need social support services to make ends meet. This reinforces my position aligned with Mosco’s (2004) concept of the “digital myth”—and contra the policymaker stance—that access and skills programs do not necessarily offer a route out of poverty. His comment also underscores that for him, KEYSPOTs played a vital social support role, a role that went far beyond simply providing digital access and training.

**Self-marketing, connections and neoliberal identities.** As a final point on how Deric executed his liquid labor strategies, to earn income and attract industry attention, Deric invested a significant amount of time marketing his music on social media. For example, Deric tweeted 15 – 20 targeted messages daily to drive his thousand-plus fans to blog radio appearances and YouTube channels. He frequently posted information on important upcoming events on his Facebook page and maintained high visibility on music sharing sites like Sound Cloud, Sound Click and YouTube. Deric was also a registered artist on the networking and promotion site, ReverbNation. And each week he dutifully uploaded new selfies on the streets of Philadelphia for his social media pages, layered through gritty filters or edgy graphics. This constant self-marketing was vital because Deric feared that without improved social connections, it would be difficult for him to

generate enough revenue from his liquid labor practices to support his growing family.

He shared with me that to make it in the music industry:

[It's about the] **connections that you've got**. So, I mean you can make the beats and have the music and not go nowhere with it because you **don't have the right connection**, and then now it is getting to the point now it is not even just about who you know. It's about **how much money** you've got.

Here in stressing the “right connection,” Deric referred to the same barriers Straubhaar et al. (2012) addressed in their study that I have referenced throughout – a digital access and skills policy focus can obscure the role of social and cultural connections in connecting poor and working-class job-seekers to opportunities, particularly in high-skilled and high-status work. Moreover, Deric expressed here that “the money you’ve got” is equally important to break into the music industry. In contrast to Sky, in this statement Deric also revealed that he was slightly less hopeful that his digital labor would ultimately translate to a better (or more permanent) employment opportunity.

Yet, the point I would emphasize is that because he could not rely on support structures or a steady income, Deric attempted to generate income with all the tools available to him, including constant self-marketing (Banet-Weiser, 2012; Gill, 2007). In all these ways, Deric embodied the modern precarious “neoliberal” laborer because– to paraphrase Bauman (2000)– he understood that the responsibility for caring for his family rested entirely on his shoulders (p 19). However, while Deric emphasized his family’s financial struggles and articulated the structural challenges facing his community (like an underfunded educational system), Deric expressed pride that he took on so many roles to

support his family or “hustle.” Following from this, he clarified his evolving liquid labor strategies to me:

Because now, not only am I an **artist**, but I am a **promoter** now. I'm a **writer**, **producer**, and, also, I am a **webmaster** now. So, moving to Philadelphia has opened up the horizons for me –not just to do one thing in music –but to do a whole bunch of different things in music.

In this statement, Deric celebrated the multiple roles that he assumed in his liquid labor practices, explaining that he is an artist, promoter, writer, producer and webmaster. Said differently, he esteemed his own flexibility and liquidity, or his ability to move into multiple roles and wear many hats to support his family. His comments here –and his constant commitment to self-marketing on social media –suggests that Deric was engaging in a type of neoliberal self-work, constantly regulating and branding both his conduct and appearance online (Banet-Weiser, 2012; McRobbie, 2004; Gil, 2007; Gil & Scharff, 2011). So, although Deric utilized a dynamic and evolving set of strategies to make ends meet and faced exploitation of his digital content, his own appraisal of this online music work was multifaceted. On one hand, he realized that his endeavors might never lead to a stable job and confessed that he did not have the right “connection.” Regardless, on the other hand, he celebrated his “hustle” and felt pride in his ability to navigate an uncertain economic environment and engage in precarious liquid labor.

Deric embodies the complexities and contradictions of liquid labor. As a new parent with an infant son, flexible online work practices gave him more freedom in his schedule and he enjoyed the “hustle” of navigating his many roles. He invested significant time into his music work –and though it was not translating to economic

stability – he felt pride in his ability to self-market and manage his image on social media. One of the most useful functions of KEYSPOTs to Deric was not related to technology at all, but that the digital assistant, Camille, could help him access social support resources his family needed to survive poverty. While Deric made an important cultural contribution just like Joanne, in contrast to the celebratory accounts of creative culture presented by scholars such as Jenkins (2006), I want to reiterate that the “immaterial labor” of poor and working-class workers is uniquely exploited by capital in the non-wage digital economy (Andrejevic, 2008; Fuchs, 2010; Jarrett, 2015). In sum, Deric struggled in liquid labor, yet espoused the benefits of the digital economy and promoted neoliberal self-work. I also want to briefly flag that unlike Joanne and Sky, Deric did have the support of a partner to share the caregiving responsibilities. In other words, the men in my study were more likely to share caregiving responsibilities, whereas the women assumed these roles alone. That being said, I will now turn to Ron, another father who engaged in liquid labor to support his family.

### **Meet Ron**

After Ron (45) lost his job in the healthcare industry in the wake of the Great Recession, he attended the Freedom Rings Partnership “Digital Jobs Fair” in an attempt to find work in the formal sector. However, while I introduced Ron in Chapter 6, I did not discuss how he was making ends meet given his impediments to finding well paid formal work. With formal job opportunities limited to him, like Joanne, Sky and Deric, Ron entered liquid labor as a caricature artist, using digital tools to market his services and to help him gain customers on the street. Like the other participants already introduced, Ron employed multiple tactics, earning revenue through a constantly evolving set of flexible

survival strategies. First, he utilized digital tools to create material goods – caricature drawings – to be sold on the streets. And second, he promoted his art as a type of informal service, performing at birthday parties and other events. Ron had two laptops at home, but they were, in his words, a little “outdated”: one had a touchscreen that he could draw on and the other was primarily used for software programs and storage. He reported to me that he was looking for “funding” to upgrade them both. Ron had advanced hard and soft digital skills, with fluency in software programs like Photoshop and Illustrator. He also supported a large family including a wife, two children (ages 25 and 20), and a niece (19) who lived with him.

**Growing up quickly: balancing work and reproductive responsibilities.** How did Ron get started in his craft? Ron told me that he grew up in a small rural community in Pennsylvania and started out as a “low-key artist” doing portraits for friends and family in his hometown. At the age of 20, he realized he wanted to establish a career in the arts and so headed for the “hustle and bustle” of Philadelphia. Ron enrolled in an arts college to develop his creative skills – and to expand on my above point – during his training attained hard digital skills including mastery of Photoshop, Illustrator and computer animation. It took Ron a few extra years to complete his program because he, “found out he was going to be a daddy” in his first year of school, and likewise held a full-time job. During this time period, Ron also frequently returned to his hometown to check on an aging parent. On the challenges of this family balancing act, Ron remarked that, “It taught me just the resilience of growing up quickly.” In other words, like Sky, Ron juggled reproductive labor responsibilities, a job, as well as college coursework.

However, like Deric (and unlike Joanne and Sky), he did have the support of a partner to help with caregiving.

**Lack of contacts and service sector limitations.** Though he was well-trained and deeply inspired by the art and culture of the city, Ron confided in me that he struggled to find his way into the high-tech art world and pursued other options to continue to support his family. Like Joanne, Ron entered the service sector, first working as a restaurant busboy and later as a waiter. His experience in the workforce reinforces my arguments from Chapter 6: many of the opportunities available to KEYSPOOT participants in the formal sector were in fields like carework, domestic and service work. I would also reiterate that the jobs available in these industries were not conducive to parenting and did not offer benefits like health insurance. For instance, although he enjoyed advancing in the service industry, Ron admitted that the working hours were not ideal for him as a parent, thus he eventually transitioned into the healthcare sector where his schedule and pay were more consistent. I would remind the reader here that as I noted in Chapter 5, the healthcare industry in Philadelphia experienced healthy growth in the 1990's and into the 2000's, and thus was a significant source of employment for the city. In this way, Ron benefitted from this expansion I discussed earlier.

**Art and design for-sale: low financial risk liquid labor.** However, as I have mentioned elsewhere, Ron ultimately lost his job in the healthcare sector due to downsizing in the wake of the Great Recession. With limited options in the formal sector on the horizon and the need to support a large family, Ron decided to enter the informal economy. According to Ron, that period of his life felt like a “rebuilding process.” He stated:

So, now **after being laid off** I had more mental time that I could see the big picture. So, I am kind of creating it out, starting from scratch. So, I'm in that **rebuilding process**. So, I am trying to think what is more **efficient?** **What will I work with?** Purge things, keep things, things like that.

As Ron divulged here, one of the challenges for liquid laborers is that they do, in fact, need access to technological tools, hence his question, “What will I work with?” Thus, it is important to point out that these were resources that KEYSPOTs could help provide. In any case, Ron also described this as a time where he considered “efficiency,” or how to make the most out of what limited resources he had.

After evaluating his options, Ron ultimately decided to use his creative digital skills to generate extra cash, promoting and offering caricature drawing services on the street. Later, he gained some small jobs working birthday parties for friends, entertaining children with his drawings and other skills such as face-painting. When his caricature drawing business slowed, Ron expanded to offer graphic design services, creating personalized business cards and other materials for clients. Like my other liquid laborers, Ron did not have a significant amount of disposable income to “work with” and thus, following from Bauman (2000), pursued several low financial risk approaches to gain customers and clients. To obtain work, first Ron utilized social media. He maintained a separate Facebook “business page” and used both LinkedIn and Google Plus to develop business contacts. Thus, I would note here that leveraging personal social media networks and self-marketing was a central strategy for Joanne, Sky and Deric. Second, Ron relied on an online event platform, Gigmasters. For a low monthly membership fee, the platform offered Ron access to potential bookings, provided quotes to interested clients,

and helped him host an official business website. In other words, like Joanne, he needed to limit his financial risks and up-front costs. Lastly, Ron leveraged word-of-mouth recommendations, which he made clear were vital to obtain gigs. Yet, Ron did not make enough from any single opportunity to survive and, like Deric, was actively seeking work in the formal economy.

**High demand, low reward: the information economy and the digital workforce divide.** As I presented in the previous chapter in the context of the Digital Jobs Fair where I first met him, Ron shared a bleak – and relevant – assessment of the current state of the formal economy in Philadelphia. To summarize that assessment, Ron complained that the formal sector positions available to him were primarily, “high-demand, low-reward.” In other words, the jobs available were in sectors like service work and carework that would offer few benefits and perks. Further, the positions required undesirable hours, delivered low pay and were particularly inflexible to parents. So, although Ron was searching for formal work, he was not overly optimistic about his prospects in the formal labor market.

I am returning to this point, however, to identify and underline that here another participant account exposes the disconnect between digital policy and economic reality. Ron had advanced creative and digital skills, yet throughout his career he struggled to gain the high-tech, creative work he was qualified for due to a lack of social connections and his reproductive labor needs. Thus, he leveraged his skills, instead, into work in the informal digital economy. This supports my larger assertion that the digital workforce divide (Rodino-Colocino, 2006) should be understood as shaped by social and economic position, but also as related to a larger restructuring of the urban labor market in



advanced economies. It likewise substantiates Straubhaar et al.'s (2012) argument that workers seeking high-tech work could face significant social and cultural barriers. In short, an access and skills policy focus can overlook the other impediments faced by KEYSPOOT program participants more widely in their quest to find high-skilled, high-status opportunities in the formal sector. And as I have now demonstrated, Joanne, Sky, Deric and Ron were each highly skilled and yet unable to find consistent, well-paid formal work.

**A path to financial success: self-help and self-care.** But beyond this, what were Ron's other motivations for engaging in liquid labor? Interestingly, in our interviews, Ron repeatedly referred to or quoted motivational speakers or self-help books that he found inspirational. He explained that these books and speakers had shaped his personal philosophy on how to best approach his business. Notably, these books drew heavily on neoliberal themes. One of the motivational speakers he listened to encouraged all aspiring entrepreneurs to, "under promise and over deliver," to their customers. Ron remarked that he decided to take that on as a mantra for his own business, offering discounts for referrals and focusing more on customer "quality" than on his price point. In other words, Ron intuited from his study of these self-help books that to be successful, he should concentrate more on the quality of the product and building customer relationships rather than strictly focusing on his bottom line. Though Ron was enthusiastic on this point, it struck me as fraught – would this focus ultimately earn Ron more revenue in the future? It was clear from our discussions that his family desperately needed income. Was this philosophy focused on developing the business or, instead, centered on developing the attitudes, capacities and outlook of the individual laborer?

To this point, another motivational book that Ron referenced in our interviews was about the importance of “self-marketing” in the digital age. In this way, Ron’s outlook echoes Deric’s, as he emphasized neoliberal self-work and self-branding (Banet-Weiser, 2012; McRobbie, 2004; Gil, 2007; Gil & Scharff, 2011). In our interview, Ron then urged all aspiring liquid laborers to prioritize their own self-care above the care of the community. Said differently, Ron himself embraced the dominant values of neoliberalism and encouraged other aspiring liquid laborers to adopt these same core beliefs. He proposed that to give to others in an uncertain world, you must first take care of yourself. Ron thus described the self-help book’s main themes to me:

So, if you're not doing for others, you're only doing for yourself. So, the basic part of that is saying **take care of yourself first [and] then you are able to give to others**. And those who are all givers in this world –if they continue to give to others, they're constantly taking care of themselves –which is enabling them to give to others. So, in that same sense, **this book is teaching you how to take care of yourself first in order to be the best that you can be for yourself as marketing.**

In making this comment to me, Ron advised all aspiring liquid laborers to, “take care of yourself first.” According to Ron, looking after yourself allows you to, “be the best that you can be,” in business but also in life. Yet, what is most interesting is that Ron made a concrete connection between these attitudes and “self-marketing” to improve your business prospects. In this way, Ron appeared to suggest that liquid laborers like Joanne, Sky and Deric were not simply marketing their products online, but that they are also marketing themselves, ideally as neoliberal, self-reliant laborers. Consequently, his

statements revealed that in this state of perpetual economic uncertainty and instability – when workers cannot rely on durable social support institutions –many may turn inward for answers and solutions. So, while “liquid labor” encapsulates the precarious, fluid online working practices that emerged in my fieldsites, it does not fully capture the deeper discourses and attitudes that structured how participants understood their own work. Additionally, it does not speak to how the discourses of the digital sublime appear to cut across class boundaries, and may even become internalized (Mosco, 2004).

Ron’s outlook therefore frames the challenges and tensions facing critical researchers as they examine broadband programs and precarious digital work. Participants could simultaneously inhabit dual perspectives on their practices, positions that seemed at times in conflict with one another. For example, all participants openly acknowledged and critiqued the structural factors that had inhibited their opportunities for advancement and mobility. Yet, at the same time, participants embraced and championed neoliberal attitudes and blamed themselves when their liquid labor practices were not profitable enough to support their families. Subsequently, many liquid laborers shared Mr. Wilson’s frustration that the rise of ICTs has not benefitted all communities equally and that technology – through automation or computerization –has played a role in dramatically reshaping the economic prospects for the urban poor. Even so, many participants regarded digital skills as a possible route out of poverty, even though none had achieved stability and most continued to rely on social programs. These issues draw attention to the ways in which the myth of the digital sublime (and neoliberalism) are deeply embedded not only within broadband programs like KEYSPOTs, but also within our culture –and in some cases – within the workers themselves.

## Conclusion

One of the chief goals of the BTOP programs was to develop broadband infrastructure for job growth. This goal implied that technological development stimulates job opportunities and can mitigate unemployment. Yet, as I have presented in this chapter, many poor and working-class participants used digital resources to generate opportunities outside the formal economy. These activities ranged from promoting services such as modeling or caricature drawing, to selling handmade goods or digital goods online. In some cases, digital and street economies collided in unique and unanticipated ways. The surprising emergence of these dynamic survival strategies in the context of the Freedom Rings Partnership programs raised questions that I have pursued in this project: how can we better understand these informal online work practices? Why are they happening and how are they connected to the contemporary information economy?

To summarize my key arguments from this chapter, liquid laborers like Joanne, Deric, Sky and Ron all arrived at the informal economy primarily due to their reproductive labor responsibilities and their need for supplemental income in the absence of high-skill, high-status job opportunities in the formal sector. In short, though they each had obtained advanced hard and soft technological skills, they were unable to find good jobs and thus applied those digital skills towards precarious online ventures. The income they obtained from their ventures was often a small infusion of cash, rather than a predictable living wage or living income. While some, like Joanne, would have wanted to establish a formal business, structural factors like a lack of credit history and economic collateral were prohibitive. Thus, given that they did not have access to capital, liquid

laborers could only make small investments into their enterprises and had to consider minimizing financial risk. Nevertheless, participants did risk their own time in dedicating themselves to their online work without knowing if it would eventually translate to income, all the while generating wealth for corporations like Amazon or YouTube. Liquid laborers faced various forms of exploitation online and offline. Digital economies appeared to offer some advantages over street economies for participants like Joanne, as they were not highly policed. While my participant Sky was hopeful that her modeling work would convert to a full-time opportunity, Deric was more pessimistic, citing a lack of social contacts and money as a barrier to finding formal work in the music industry. Following from this, despite their best efforts in the informal (and formal) sectors, participants like Sky and Deric continued to need the aid of social support programs to survive, services their KEYSPOt could help them locate. And although participants openly critiqued the structural factors that had limited economic opportunity for their families, they also celebrated their online self-marketing and self-work, championing the values of neoliberalism.

To summarize my overarching thesis developed in this chapter, in the wake of retrenchment and the urban crisis in Philadelphia, the informal economy offered poor and working-class parents and caregivers a source of supplemental income many once received through welfare and social programs. Thus, the informal online economy in urban Philadelphia should be viewed critically and seen as connected to –and a consequence of – broader patterns of governmental restructuring that are happening alongside labor shifts within the information economy. And I want to flag that while the work practices I have described in this chapter reflected creativity and contributed

cultural value, liquid laborers were highly vulnerable to exploitation and wage loss or wage theft (Andrejevic, 2008; Fuchs, 2010; Jarrett, 2015; Jenkins, 2006). However, beyond that, I am arguing in this project that while middle and upper-class digital laborers generating economic value online through blogs or engagement on Facebook may be exploited (Duffy, 2015; Fortunati, 2011; Jarrett, 2015), the stakes are clearly higher for liquid laborers like Joanne, Sky, Deric and Ron who are struggling to survive and feed and clothe their families. Therefore, it is important to consider how issues of class and digital access interact with –and influence –digital labor practices and the materialist dimensions of risk-taking.

It is also important to highlight that some liquid laborers like Deric accessed KEYSPOTs for social support services as well as computer access. So, though broadband access and skills programs like KEYSPOTs have provided communities impacted by the urban crisis with badly needed resources, the “access” and “skills” policy focus has also overlooked the useful social support dimension of KEYSPOTs. This focal point has also obscured other barriers to economic opportunity, like lack of access to startup capital or even access to affordable childcare or healthcare. Along these lines, as Tufekci (2012) points out, broadband programs cannot generate good jobs where they are none and as Straubhaar et al. (2012) notes, such programs also cannot substitute for social or cultural capital. Said differently, while technological development – including developing digital access and skills –is a key component of a thriving urban economy, it cannot replace durable support institutions or a robust welfare state infrastructure.

In closing, I submit that the revival of survivalist informal economies in large U.S. cities like Philadelphia over the last 40 years suggests that informal work has been

tied to the changing relationship between capital and labor in liquid modernity (Sassen - Koob, 1989; Sugrue, 2005; Wilson, 1996). However, the merging of the digital and street survivalist economies is a relatively new phenomenon, one that can perhaps help critical media scholars consider new areas of possible labor exploitation, as the low-tech majority generates massive wealth for the high-tech minority (Rumberger & Levin, 1985). In addition to the shift to ICTs and the growing digital workforce divide (Rodino-Colocino, 2006), I have investigated the broader trends that have contributed to this informalization process, including globalization, neoliberalism, decreased union protections and the rollback of social programs. And as I am arguing here, simultaneously, the degradation of reproductive labor along class, racial and economic lines has likewise reshaped working arrangements and the work practices of poor and working class urban Americans. Thus, I am proposing the rise of liquid labor – a type of highly precarious, flexible, classed digital labor – as a framework to better understand the complex issues surrounding the restructuring of the relations between capital and labor in America's modern informational cities. In the following chapter, I will offer some concluding thoughts on this project, but also consider areas of possible resistance, interventions, and future research directions.

## Chapter 8

### Conclusion: Liquid Labor, Precarious Lives

#### Introduction

When I asked Ron if he had any advice on how to become a successful liquid laborer and survive in the uncertain urban information economy, Ron responded that to be effective, the “number one skill is you have to be coachable.” He elaborated on his point to suggest that in the contemporary information economy, you must be constantly learning new skills – technological and otherwise –and expanding your opportunities. Nothing is guaranteed anymore and nothing is solid. As steady opportunities in the formal sector dwindle, the precarious flexible economy expands. To survive in these difficult conditions, as Ron proposes, one must be in a state of perpetual evolution, easily taught and trained to do something better. In other words, like Joanne, Sky, Deric or Ron, in the era of liquid modernity you cannot rely on durable institutions, so you alone must make economic opportunities with whatever tools are available.

Given the complicated portrait I have painted in this dissertation of precarious life in the formal and informal urban economies, where do we go from here? What are the possible interventions and solutions to the problems I have carefully outlined in this study? In this closing chapter, first, I will sum up my key arguments from this dissertation and briefly review my framework of liquid labor. Second, I will outline my intended contribution to academic scholarship in the research areas of digital labor and the digital divide. Third, I will explore possible extensions of this dissertation to pursue in the future. Fourth, I will consider possible interventions and areas of resistance. Finally, I will offer a personal reflection and deliver some concluding thoughts on the project.



### Overview of Project

To summarize the key arguments I have advanced in this dissertation, as stated in Chapter 1, the primary purpose of this study was to better understand the economic lives of poor and working class BTOP participants. More particularly, I sought to also investigate why and how “liquid labor” strategies were utilized by participants like Joanne, particularly in the context of a federal broadband project like BTOP that was focused on recovery and economic enhancement in the wake of the Great Recession of 2008 in Philadelphia. I proposed “liquid labor” as a framework for understanding the transitioning relationships between work, class, technology and inequality. I argued that in a global information economy marked by the breakdown of durable institutions – and facing poor prospects in the formal sector – participants like Joanne, Sky, Deric and Ron navigated informal sources to make ends meet. Further, I specified that these issues are also framed by social support needs – for instance, Dinah gained a job through KEYSPOTs but still required food stamps (SNAP). I asserted that whereas many digital divide scholars and federal policymakers have centered on technological “access” or “skills” as a path to economic opportunity for low-income Americans, this overlooks how technology practically fits into the everyday lives of KEYSPOT visitors like Joanne and Mr. Wilson. In short, a failure to appreciate the on-the-ground economic realities facing urban Americans has resulted in a problematic disconnect between policy visions and program practices, or gap between the policymakers and the “policytakers.”

Along these lines, this study had four chief objectives. First, I analyzed how “work” – as it related to poor and working-class Americans – was discussed in BTOP materials and how the “goals” of digital labor were being presented and developed.

Second, I investigated the impediments to finding formal work and tried to understand in what fields and sectors KEYSPOt participants were gaining jobs. Third, I explored the disconnects between how “work” was defined and what work was obtained through KEYSPOts, focusing on the more “invisible” dimensions of urban labor. Following from this, I sought to contextualize the changing relationship between informal labor and the contemporary information economy among the urban working class. Thus, having briefly outlined the project’s key objectives, I will now turn to review the data collection processes, methodology and theoretical framework I employed to investigate these research questions.

### **Data Collection, Methodology and Theoretical Framework**

Having reviewed my research focus, I will turn now to my data collection procedures and practices. As I presented in Chapter 1, this ethnographic study was based on 400 hours of participant observation in BTOP funded “KEYSPOTs,” i.e. public computer centers (PCC) and broadband adoption training programs (SBA). I also conducted 18 semi-structured interviews with participants and staff and collected 150 documents pertaining to the KEYSPOts. As also explained in Chapter 1, Philadelphia and the KEYSPOts program in the post Great Recession period provided a rich research site for the study of “liquid labor” practices, as the city had an unusually high rate of poverty coupled with a low broadband penetration rate. The KEYSPOt program’s embedded design granted me access to a diverse subset of working class families. Positioning my study of “liquid labor” within a larger technology policy framework revealed a more complex picture of the relationship between poverty, digital inequality and economic opportunity.

As I addressed in Chapter 1, uncovering informal digital labor practices required time, but more importantly, necessitated gaining the trust of participants. As a methodology, ethnography allowed me time and space to attempt to capture this complexity. As ethnographic research seeks to study people within their environments, gaining rapport and trust was vital to the data collection process (Emerson, Fretz & Shaw, 2011). Notably, these social interactions directly shaped the type of data I obtained. For instance, I took on very gendered roles in the fieldsites to gain that participant trust, cleaning computers, making coffee and caring for children. In this way, I want to underline again that my stance as a researcher and my own subjectivity was intimately tied to this project and granted me a unique access point to learn more about reproductive labor in the lives of my participants. Regarding my theoretical framework, the analysis of my ethnographic data was structured by critical theory, drawing on Marxist feminism's conception of "reproductive labor," Bauman's (2000) sociological arguments on "liquid modernity," and Mosco's (2004) cultural arguments regarding "digital myths." These three theoretical planks provided direction and structure to my primary findings.

### **Primary Findings**

In brief, there were four key interconnected findings in this project that I will herein summarize. First, I argued in this dissertation that there is a disconnect between the policymakers designing broadband programs and the "policytakers" to whom the programs are targeted. Thus, misled by the "myth of the digital sublime," (Mosco, 2004), policymakers embraced the neoliberal view that ICTs were a cheap and efficient solution to complex urban problems. On this point, I also emphasized the ways in which ICTs are uniquely classed. For instance, Mr. Wilson rejected broadband not due to

“technophobia,” but because he viewed computerization and automation as directly responsible for his job loss at the bowling alley, whereas Tiara communicated a concern that social media exposed her to hiring discrimination (Digital Impact, 2009). To my second finding, I determined that although programs like KEYSPOTs have endeavored to connect low-income Philadelphians to jobs through digital access and skills, the types of formal sector jobs available to participants were low-skilled, low-wage and low-status and particularly inflexible to parents. Regarding the formal sector challenges facing my participants, some participants like Ms. Ramirez were forced into a dead-end cycle of chronic part-time work due to a lack of access to social support programs such as Medicaid. Thus, to my third point, given these formidable impediments in the formal sector, some participants instead pursued flexible, low financial risk opportunities in the informal sector. Finally, I suggested that the rise and frequency of these informal arrangements may signal a changing relationship between capital and urban labor. To elaborate, my research indicated that existing street economics are being reshaped by the introductions of ICTs. Yet, more broadly, I contended that the breakdown of durable support institutions, degradation of reproductive labor and introduction of ICTs are some of the forces interacting to generate these new working arrangements along class lines (Bauman, 2000). In brief, this space of “liquid labor” marks a new terrain of struggle that moves beyond issues of technological development but, more importantly, economic equality and community infrastructure. Having briefly sketched out these main contributions, I will now turn to a more detailed final discussion and review of each major finding.

## **Broadband Policy and the Goals of Digital Labor**

As discussed in Chapter 4, the ARRA and the resultant BTOP programs were engineered with the objective of stimulating the economy and creating jobs in the wake of the Great Recession. Yet, as I have argued elsewhere, there was a disconnect between the federal economic policy visions and implementation in local KEYSPOTs. More specifically, in the Philadelphia program, the goals of economic development were built through federal visions, outlined by BTOP, refined by the Philadelphia FRP partners, guided by the private sector and somewhat complicated by marketing efforts. Most interestingly, the communities targeted for BTOP funds – those communities on the wrong side of the digital divide – pushed back on the federal and/or technology industry visions that prioritized workforce development over political engagement. This disconnect between vision, goals and reality can also be understood as the space of “unintended consequences” where informal digital labor practices emerged.

Yet, in tracing the longer history of digital programs and the urban crisis in Philadelphia in Chapter 5, I also highlighted the ways in which social, economic, and political forces shaped city visions and plans for broadband access prior to KEYSPOTs – and how federal, state and city policy further constrained economic opportunities for poor families of color in Philadelphia. These forces were aided by the discourses of neoliberalism, which focused on poverty as an individual problem; in effect, this focus obscured the role of structural issues (like lack of educational access) in limiting opportunity. In short, here I demonstrated that “liquid labor” or informalized work has not occurred in a vacuum, but was the result of federal and local policies that prioritized the market or “development” at the expense of the urban poor, exacerbating trends of

digital exclusion, economic isolation and racial segregation. In all these ways – contrary to the “myth of the digital sublime” articulated by The Arnold Group Report (2011) or KEYSPOT partner Jay–I emphasized that technology is not an easy or inexpensive solution to the problems facing urban America. In a related vein, programs like KEYSPOTs do not allow for further welfare state retrenchment. For instance, Dinah obtained a job through KEYSPOTs, yet still needed foodstamps (SNAP). Additionally, my participant Deric visited the KEYSPOT to find clothing and other necessary items for his infant son. So, while broadband programs and digital infrastructures are an important dimension of the urban economy, they cannot (and should not) substitute for or replace durable social support institutions (Bauman, 2000; Mosco, 2004).

### **Impediments to the Formal Workforce**

Having touched on the labor policy discourses surrounding BTOP, what workforce training was offered and what jobs were obtained by participants? As I presented in Chapter 6, KEYSPOTs primarily focused on the role of technology in facilitating the job search process and incorporated both hard and soft digital skills into the training courses for workforce development. Overall, the KEYSPOT program was successful at connecting some job-seekers to formal sector work. Yet, the opportunities available to KEYSPOT visitors were more likely to be in reproductive labor fields, such as carework or domestic work. These formal sector opportunities – as the job-postings seeking a maid and hospital cook demonstrated – were often precarious, part-time or contracted. Additionally, the jobs did not provide a living wage, offered no benefits, and required undesirable working hours that were inflexible for parents. Said differently, although participants obtained jobs through KEYSPOTs, many continued to rely on

social support programs. In the absence of full-time work, participants like Ms. Ramirez and Sky with significant family responsibilities lacking access to programs like Medicaid permanently juggled part-time formal and informal sector opportunities. Their experiences underscore how the breakdown of durable social support institutions and the shift to precarious, part-time work has dramatically reshaped the economic lives of urban families in America (Bauman, 2000).

To return to the KEYSPOt programs, whereas hard and soft digital skills were necessary to *apply online* to these available jobs, advanced digital skills were not always requirements for the positions available to participants. For instance, the job postings seeking a hotel housekeeper and hospital cook did not reference digital skills, asking only for applicants with basic literacy skills. This raises additional questions on how the “policymaker” vision of digital training may collide with workforce realities. I noted that technology itself also posed unique “classed” challenges to KEYSPOt job seekers. To elaborate, KEYSPOt participants were more likely to encounter difficulty applying to jobs online simply because credit checks can now easily sort out low-income jobs seekers. Additionally, participants like Ron and Tiara remarked that they felt pressured to submit to invasive social media applicant screening practices; Tiara even underscored that new technologies could increase racial or gender hiring discrimination. In all these ways, the myriad impediments to locating well-paying formal sector work begin to bring into focus the complex challenges facing BTOP job-seekers. These impediments likewise frame the conditions under which informal work became, for some, a necessity.

### **The Rise of Informal, Precarious Online Labor**

Building on these insights regarding formal work and technological relationships, in Chapter 7 I argued that liquid laborers like Joanne, Deric, Sky and Ron all arrived at the informal economy due to their need for supplemental income in the absence of high-skill, high-status job opportunities in the formal sector and their reproductive labor responsibilities. I noted that each participant had obtained advanced hard and soft technological skills, yet was unable to find good work. Thus, each applied those digital skills toward ventures in the informal sector. The income Joanne, Sky, Deric and Ron obtained from their ventures was often a small infusion of cash rather than a predictable, steady income. Yet, the digital economy was desirable because it was flexible for parents, requiring little financial risk and up-front investment; it was also unpoliced, in contrast to street economies. While some, like Joanne, would have wanted to establish a formal business, structural factors like a lack of credit history or economic collateral were prohibitive. Because participants needed to control economic risks as they did not have access to capital, they assumed other risks: liquid laborers invested substantial time into their enterprises without knowing if it would ever translate to income and faced multiple forms of exploitation. Liquid laborer, Sky, was hopeful that her modeling work would convert to a full-time opportunity whereas Deric was more pessimistic, citing lack of social contacts and money as a barrier to formal work in the music industry. However, most importantly, I would point out that these liquid labor practices did not translate to increased financial security or economic mobility.

In short, rather than see these liquid labor opportunities as enhancing economic opportunities for participants, I have underscored that these digital practices were one



tool in a larger set of urban economic survival strategies. For instance, despite their best efforts in the informal (and formal) sectors, participants like Dinah, Sky and Deric still required the aid of social support programs to survive, services each KEYSPOOT could help them locate. And consequently, participants were likely to be subjected to exploitative arrangements in which established companies or more powerful interests reaped revenue from their creative endeavors. For instance, Amazon.com only compensated Joanne when her e-book sales met a certain threshold of several hundred dollars. In the same way, ClubCreate only compensated Deric when his beats were widely shared online. Liquid laborers were offered no benefits or contracts to protect their work, their time, or their creative products. In fact, Sky was underpaid for her modeling gig, but was without recourse. And it was unclear what intellectual property rights Deric retained over the digital beats generated on the ClubCreate site. So, although “liquid labor” incorporated creative components and the materials produced have cultural value, it is important to situate the practices within a critique of advanced informational capitalism.

### **Changing Relationships Between Capital, Class, Urban Labor and Technology**

In the wake of retrenchment and the urban crisis in Philadelphia, I have asserted that the informal economy offered poor and working-class parents and caregivers a source of supplemental income many once received through welfare and social programs. Thus, the informal economy in urban Philadelphia should be viewed critically and seen as connected to –and a consequence of – broader patterns of governmental restructuring happening alongside the shift to the information economy. So, although broadband access and skills programs have provided urban communities impacted by Great Recession with

badly needed resources, the “access” and “skills” policy focus has overlooked the vital social function of KEYSPOTS in addition to the other barriers to economic opportunity. In the same way, this focus has too often incorporated the myth of the “digital sublime” which suggests that digital tools can deliver a route out of poverty, even though – as I have demonstrated in this project –the jobs available to KEYSPOT participants were low-skilled, low-wage and low-status (Mosco, 2004). It is also notable that lack of childcare access was a significant impediment for the participants visiting labs, yet this is a very practical dimension invisible in BTOP policy. So, to highlight my wider point, while technological development is a key component of a thriving urban economy, it cannot substitute for social support structures like state supported childcare, enable further retrenchment of the welfare state, or provide an easy path out of poverty.

Finally, I have suggested that the revival of the survivalist informal economies in large U.S. cities like Philadelphia over the last 40 years strongly suggests that informal work is tied to the changing relationship between capital and labor in the wake of urban deindustrialization (Sassen-Koob, 1989; Sugrue, 2005; Wilson, 1996). As access to good paying jobs in the formal sector evaporate, the informal economy has expanded to absorb some of these displaced workers. Although I am not arguing that survivalist economies are a new feature of urban life, I do assert that the merging of the digital and street survivalist economies is a relatively new phenomenon. Examining the fusion of street and digital economies helps us consider new areas of possible exploitation, as liquid laborers like Joanne and Deric collectively generate massive wealth for the high-tech minority (Rumberger & Levin, 1985). In addition to a growing digital workforce divide (Rodino-Colocino, 2006), I have discussed other trends that have contributed to the process of

informalization, such as patterns of globalization, decreased union protections and the degradation of reproductive labor along class, racial and gender lines. Following from this, I have proposed the rise of “liquid labor” as a framework for understanding the complex issues surrounding the restructuring of the relations between capital, class and labor in America’s modern informational cities.

### **My Framework: Liquid Labor, Precarious Lives**

To synthesize these key findings and hone in on my intended contribution to the field, I have proposed “liquid labor” as a framework for understanding the transitioning relationships between work, technology and inequality. To elaborate, when one considers the shift between how work was defined in the previous industrial economic period (formal, waged, unionized) and the work in the modern information economy (flexible, unwaged, self-directed), I suggest that the emergence of informal digital strategies – especially among the working urban poor in advanced economies who face financial pressure due to policies of retrenchment – becomes more predictable. Beyond Bauman’s (2000) conception discussed in Chapter 2, I find “liquid” to be a useful term because in economics, liquid assets are those that can be easily converted to cash – participants like Joanne, Sky, Deric and Ron relied heavily on small cash transactions to maintain flexibility and limit financial risk. Second, in contrast to “immaterial” labor, participants like Joanne produced both material and immaterial goods, so this dissolves the boundaries between what is “immaterial” and “material.” Third, as both Bauman (2000) and Castells (1989) argue, the expansion of digital information technologies have allowed capital to easily flow across borders, fleeing protected workers to seek cheaper global labor. Lastly, liquid labor resonates with Devey et al.’s (2006) concept of churn, or the

process whereby precarious workers rapidly enter and exit the formal and informal labor markets, but never gain stable economic footing. However, most broadly, “liquid” captures the characteristics of the new flexible, precarious urban worker, who must take on new shapes and new skills to survive and support their families in the digital era. This term also intends to draw attention to the materialist dimensions of risk-taking in the new economy, more specifically the way in which flexible labor can cause special pressures or limitations across class, race or gender lines.

### **My Contribution**

I contend that this study can make a contribution to the literature on digital labor and digital inequality within the field of media studies. Bringing the extant digital inequality and digital workforce divide literature into conversation with the literature on immaterial and affective labor can offer a new vantage point to conceptualize digital work practices. For example, first I suggested that for poor and working-class parents like Joanne, Sky, Deric and Ron, reliance on the digital economy as a survival strategy in a turbulent economy is a different *type* of interaction than, for example, middle and upper-class users generating “immaterial labor” for online games or social media. Said differently, studies investigating how middle or upper-class users create economic value (for companies) or are exploited through games, Facebook, or Twitter analyze different kinds of immaterial labor. I therefore locate a different type of interaction that is shaped by access to ICTs, but also social and class position.

Second, this project is in conversation with the critical digital divide literature, as it complicates the “access” and “skills” policy focus. Said another way, applying Mosco’s (2004) “digital myths,” I have underscored that programs like BTOP can unintentionally

frame broadband as a means to further retrench the welfare state. The “access” and “skills” concentration can also overlook the practical structural issues (like lack of childcare access) that constrain an individual’s ability to participate in ICTs courses as well as economic opportunity more broadly. This emphasis likewise fails to consider the role ICTs have played in diminishing opportunities for poor and working-class laborers like Mr. Wilson. Building on this, I insist that it is important to appreciate the ways in which class position shapes attitudes and interactions with technology. Finally, I have charted the tensions between policymakers and “policytakers” – a tension between “prosperity” and “participation” –through my analysis of KEYSPOTs (Schement, 2009).

As a final intended contribution, I have proposed that the framework of “liquid labor” charts the rise of precarious, hyper-exploited work in the contemporary information economy. Said differently, it captures the changing contours of the urban economy and the characteristics of the new urban digital working class. The framework likewise considers how the breakdown of social support institutions has destabilized the working class who, without jobs or security, must become “flexible” (Bauman, 2000; Sennett, 1998) and float in and out of the formal and informal economies. Having discussed these areas of contribution, I will now turn to future areas of research and ways to extend and enrich this line of inquiry.

### **Future Research**

Given that I have reviewed my key findings and areas of intended contribution, what are the next steps for this research? How can I continue to develop this project and my scholarship more broadly? There are multiple areas of research that can extend and compliment this project, however, I will briefly touch on three potential lines of inquiry.

To begin, first, I could extend this project by refocusing more concretely on the class dimensions of these findings, delving more deeply into this “liquid labor” as a form of exploited and alienated labor. I could also compliment this project by examining how the intersections of informalization, the digital workforce divide (Rodino-Colocino, 2006) and the degradation of reproductive labor impact a different group of precarious digital laborers. Finally, I could reexamine these liquid labor practices through a political and cultural lens, assessing the role of digital programs in developing new cultural forms and deeper community engagement to push back on the economic changes (such as the decline of unions) that have reshaped economic opportunities. Having sketched out these three future research extensions, I will now describe and consider these three possible areas of future research in more detail.

### **Digital Inequality and the Working Class**

When I began this study, my intention was to investigate the informal – “liquid labor” practices. Why were they occurring, especially in a program like KEYSPOts? In the process of analyzing the data and building and revising a framework to attempt to capture these broader changes in the urban economy – in part, resulting from the introduction of ICTs – I discovered how significantly the rollback of social support programs and lack of access to childcare was shaping the economic lives of urban families. I then began to understand how the rise of part-time jobs, declining union support, and lack of job benefits was making it nearly impossible for families to make ends meet through the formal sector alone. Though I have attempted to capture the layered factors shaping the economic lives of my participants – with “liquid labor” strategies serving as one tool in a larger set of survival strategies – it seems clear that this

is just the tip of the iceberg. How can I dig in and build on these practices as “survival strategies”? Furthermore, while this research was conducted during the Obama administration, given the current Trump administration’s priorities to further retrench the welfare state and slash programs like Medicaid, I predict that the reliance of “liquid labor” in urban communities will, sadly, only intensify. Thus, developing this framework may only be more relevant given the country’s new policy direction.

That being stated, moving forward, I could more closely examine these “layers” to expand this framework. As one “layer” I might extend, this research has raised a broader question about the connections between these programs and the formal labor market. In other words, as this study focused more on participants who engaged in informal labor practices, at the beginning it did not as closely address the types of jobs that participants obtain through these programs. My initial research suggested that these jobs are in fields like carework, domestic work and service work. Yet, for those that do obtain jobs, what are their experiences in those roles, specifically in relation to technology? If they continue to require social support, how long is that support needed? A multi-methodological study that utilized ethnography as well as survey data could possibly yield more insight into the long-term impact of digital training programs and the experiences of these workers in the formal sector as well as the informal sector. More importantly, further development could yield more insights into role of social class specifically in structuring these opportunities and interactions. I might also consider this labor as a form of highly exploited, alienated labor and situate this project within a broader Marxist analysis of the trends of precariousness and informalization. In short, this first future direction would serve to deepen and update my research.

## **Reproductive Labor and the High-Tech Industry**

However, to change directions, I could also shift to an approach that could shed light on a different set of precarious laborers. As I briefly discussed in the context of the literature review in Chapter 3, reproductive laborers are also increasingly offered as “perks” to elite technology sector employees, laboring as housekeepers, nannies, or providing meals (Ritchel, 2012). This rise in reproductive labor as a “perk” for professionals in the technology sector intersects with the broader argument I developed in this project, as it underscores the growing digital workforce divide (Rodino-Colocino, 2006) but also how reproductive labor is degraded along race, class and gender lines. For example, on average, these carework positions are dominated by women of color and immigrants (Dyer-Witthford, 1999). These types of reproductive labor positions are also increasingly informalized and do not afford salaries, health benefits, paid leave, retirement plans, or union protections (Dyer-Witthford, 1999). A future ethnographic or qualitative study could explore the economic lives of these precarious workers supporting the technology industry, not only describing their experiences, but investigating the arrangements between these reproductive laborers and the tech firms they serve. A project of this type could not only contribute another view of the digital workforce divide, but it could also provide more insight into the evolving relationship between precarious tech-sector work, reproductive labor and social class. In this way, a study of this type of study would not be so much a direct extension of this project, but an important complement investigating similar research questions, among a different class of precarious informalized laborers.



### **Neoliberal Work and the Creative Dimension of Informal Labor**

As a third area for future inquiry, liquid laborers like Joanne, Sky, Deric and Ron repeatedly expressed to me their interest in creative endeavors. Joanne considered herself a writer and artist. Sky was an aspiring model and had hopes to become a fashion designer. Deric loved music. Ron was a trained artist with graphic design experience. In short, all four participants communicated their desire to engage in more flexible – but also more fulfilling and creative –work. This harkens back to the conclusions reached by digital labor scholars such as Bulut (2014) and Duffy (2015) in their study of video game testers and fashion bloggers respectively. They argued that their participants engaged in digital work because they wanted a job they “loved” or felt “passionate” about. I would suggest that this desire may only be heightened for poor and working-class individuals who often occupy the most undesirable and unfulfilling formal sector jobs in the contemporary information economy. In other words, how do the creative, hopeful or aspirational dimensions of this labor play a role in motivating poor and working-class participants to exit the formal economy? A greater investigation and attention to this dimension could add a critical –and more nuanced –dimension to my argument on the unique online work performed by the poor and working class.

Yet, as I revealed through the experience of Ron, discussion of the creative dimension of labor was also yoked to participant consideration of the values of neoliberalism. In other words, participants could simultaneously critique the structural factors (like a poor educational system) that constrained their economic opportunity, yet celebrate the neoliberal values of self-reliance. Ron expressed frustration that the composition of formal sector opportunities available to him were “high demand, low

reward,” but found great comfort and inspiration in motivational speakers and self-help books. These messages reassured Ron that with hard work and self-care, he could exit poverty through “entrepreneurship.” Thus, rather than examining liquid labor practices through a strictly economic lens, it could be fruitful to delve more deeply into the relationship between liquid labor, “hope labor,” but more broadly the internalization of neoliberal values and self-branding (Banet-Weiser, 2012; Kuehn & Horrigan, 2013). Said differently, although I have included a discussion of the centrality of risk evaluation to liquid practices through an economic focus, what are the deeper personal values that may also shape a participant’s decision to engage informal work? Do the *policymaker* neoliberal values influence—or intersect with—*policytaker* values? Or said another way, how deep does the digital myth penetrate? So, while considering reproductive labor, liquid modernity and digital myths contextualized participant economic motivations and captured the changing shape of urban labor, it does account for or fully explain the appearance of this “neoliberal” laborer. So, delving into these deeper motivations could be either an extension or a compliment, depending on the findings and conclusions. In short, these three areas offer some exciting possibilities and areas of inquiry that, while outside the scope of the research questions in this dissertation, could potentially extend or compliment this project.

### **Policy Priorities and Possibilities for Resistance**

Also in the spirit of extending my research, although this critical dissertation has focused heavily on the exploitative aspects of the formal and informal economy in the context of a wider urban crisis, I think it is important to also attempt to translate these lessons learned into possibilities for intervention or resistance. Said another way, while I

have painted a bleak portrait of the economic lives of many BTOP program participants, I do believe there are great potentials for change. As some possible starting points, I argue that these circumstances I have chronicled and critique could be improved, if: 1) Precarious workers could become more organized through unionization or related efforts; 2) Urban social support programs were better funded; 3) Childcare needs become a greater political priority; and, 4) Technology programs could again place equal emphasis on the aspects of “prosperity” and “participation.” Having summarized the possible areas of intervention and resistance, I will now move through these proposals in more detail.

### **Organizing Precarious Workers**

To begin, I have highlighted in this study how labor market changes—including globalization, an emerging digital workforce divide (Rodino-Colocino, 2006) and the breakdown of unions—have increasingly left the poor and working class vulnerable to exploitative working conditions. However, more recently some domestic grassroots labor movements have gained traction and suggest a brighter potential future in organizing precarious, isolated, or contract workers. For example, the “Justice for Janitors” coalition in the 1990’s applied a variety of creative protest strategies aimed at exposing the exploitative work practices of high-tech companies like Apple (Dyer-Witthford, 1999). The tactics the “Justice for Janitors” coalition utilized included advertising campaigns but also hunger strikes (Dyer-Witthford, 1999, p. 97). Yet, most notably, these campaigns were successful because they forged cross-community alliances (Dyer-Witthford, 1999). For instance, the “Justice for Janitors” campaign reached out to immigrant advocacy groups and even environmental activists who were concerned about Apple’s waste disposal practices (Dyer-Witthford, 1999). Thus, drawing interest groups to their cause,

the janitors' movement gained more visibility and support and eventually won renegotiations of their working conditions. This could be one potential model for precarious workers to adopt.

Though these new configurations are promising, I would however point out that globally dispersed and immigrant workers (particularly women) may face special challenges in their future ability to organize (Kabeer, Milward & Sudarshan, 2013, p. 251). In their study of the organizing strategies of women and immigrants such as waste pickers in Pune, India, Kabeer, Milward and Sudarshan (2013) argue that global organizations can and should become more proactive in providing support resources to informal, precarious global workers. To elaborate, they first point out that low-income women engaging in informal work are often widely dispersed and that likewise their local work conditions can vary greatly (Kabeer, Milward & Sudarshan, 2013, p. 258 – 259). However, if transnational organizations can more deeply understand and appreciate the changing landscape and characteristics of global work – and respond accordingly by creating new configurations and approaches that can better connect the local with the global– Kabeer, Milward and Sudarshan (2013) contend that it is possible that these workers can more easily forge international cooperative unions. In other words, domestic and global precarious U.S. workers may need to forge stronger connections across struggles, apply a range of protest strategies, and utilize established non-governmental organizations or other transnational bodies whenever possible. I would add here that this cross-struggle movement building was also an approach utilized by Maria's organization as presented in Chapter 4 in my discussion of "policymakers." Thus, I would emphasize this approach as a potentially successful model for precarious local and global workers.

### **Strengthening Social Support Systems**

As a second possible area for intervention, to aid precarious urban workers still struggling after the Great Recession, federal and local governments must continue to support – and expand – social support programs. More broadly, this study has repeatedly demonstrated the vital role that the welfare state played in the economic lives of BTOP participants. I have underscored through the lives of Ms. Ramirez and Sky how the lack of access to needed resources or healthcare programs can dramatically alter a family's economic life, pushing some into chronic part-time work or even out of the formal sector entirely. Whereas the political discourses of neoliberalism may suggest that those relying on social programs are lazy “welfare queens,” this study has revealed that even when low-income urban individuals obtain jobs, they may still require social programs (Bobo & Smith 1994; Page & Shapiro 1992). Not to belabor the point, but because the jobs available to these urban workers are increasingly part-time, they do not provide a living wage and offer no benefits. These positions are also incredibly inflexible for parents, and thus harm working families.

I reiterate these issues because they are of great concern at the present political moment, as the Trump administration's recently proposed 2017 budget would enact draconian welfare state cuts. The current budget seeks to cut foodstamps (SNAP) by 29%, children's health insurance by 19%, Medicaid by 17% and Temporary Assistance for Needy Families (TANF) by 13% (Lu & Soffen, 2017). As I discussed in Chapter 3, Edin and Lein (1997) argue that the economic survival strategies pursued by urban families (including liquid labor) are influenced by neighborhood characteristics, family social networks but, above all – social support resources (Edin & Lein, 1997, p. 146).

Said differently, a family's survival strategies must be altered anytime support services are cut or reduced, therefore even small policy changes can generate an incredible amount of family instability. Without welfare state protections, struggling families who cannot draw on other resources (like family networks) may not be able to meet their most basic needs. In short, I have underscored in this dissertation how the retrenchment of the welfare state can have a ripple effect throughout the entire urban economy, hastening community economic collapse but also impacting the overall financial health of U.S. cities.

In addition to the proposed welfare state cuts discussed above, the Trump administration's 2017 budget would also seek to introduce stringent work requirements to receive benefits like foodstamps (SNAP) and even possibly Medicaid (Alcindor, 2017). As discussed earlier, previous research has demonstrated that parents leaving the welfare system for workfare often continue to live near poverty levels, as they only have access to jobs that are strict, low-status and low-paying (Acker, Morgen, Heath, Barry, Gonzalez & Weigt, 2001; Boushey, Brocht, Gundersen, Bernstein 2001; Cancian, Haveman, Meyeter & Wolfe; 2002; London, Scott & Hunter, 2004; Morgen, Acker, Weigt & Gonzalez, 2006). Therefore, rather than translate into higher workforce participation or spurring economic growth, programs like workfare can worsen labor "churn" as poor and working-class individuals cycle in and out of the bottom of the labor market (Collins, 2008, p. 140; Daly, 2003; Devey et al., 2006). Bernstein and Spielberg (2017) rightly point out that Medicaid in fact enables work, as it can provide the treatment necessary for sick or injured patients to return to their jobs. To cite an example from my study, Ms. Ramirez directly explained that she became unable to work certain jobs due to lack of

access to healthcare to treat her disability. Said another way, healthcare was a major determining factor in her entrance chronic part-time work, pushing her and her mother into deeper financial hardship and struggle.

Given that the trends such as automation, computerization and globalization will only continue to change the economic landscape in America's cities, the government can and should find ways to respond to current workforce realities. Because, at the present time, many urban workers simply do not have access to stable, full-time jobs with benefits. If the welfare state continues to be retrenched and workfare is embraced— as seems very possible given the goals of the Trump administration – we can expect more labor instability and hardship for America's poorest families and patterns of wealth inequality to only intensify (Lu & Soffen, 2017). For as this project has begun to demonstrate, lack of access to social support is one of the major determining factors of “liquid labor” and can cause individuals to become loosened or detached from the formal economy altogether (Wilson, 2011). In this way, social support programs should be understood by policymakers as integral to a healthy economy: when families are unable to access these resources, they are more likely to be pushed into “survival circuits” that never lead to financial stability and exacerbate labor churn (Devey et al., 2006; Sassen, 2003). This has a long-term effect on the health and productivity of urban economies overall.

### **Affordable Childcare and State-Supported Reproductive Labor**

Building on this, as an extension to the need for social programs, another major factor that determines the economic lives of urban Philadelphians is access to childcare. So, whereas trends in globalization, computerization and automation have had a

significant financial impact on urban families, at the same time, profound shifts in reproductive labor and childcare support have generated and motivated a new set of working arrangements. Each of the liquid laborers I have introduced in this dissertation – Joanne, Sky, Deric and Ron – entered the informal sector due to the flexibility it could provide them as parents. In contrast, the formal sector jobs available to poor and working-class job seekers through KEYSPOts were the least flexible to parents, and the opportunities did not offer benefits parents desperately needed like healthcare, maternity leave or personal days. In some cases, parents in these types of low-skilled formal sector positions could even risk being fired for taking a day off to care for a sick child (Edin & Lein, 1997). Therefore, childcare access (or lack thereof) can directly contribute to working arrangements but also the process of churn, as parents may be hired and fired frequently from low-wage jobs due to reproductive labor needs (Devey et al., 2006). Thus, lack of welfare and childcare support, when combined together, can have a devastating financial impact on urban families.

These childcare challenges facing the working class will only be compounded if the Trump administration follows through on its objective to implement additional workfare requirements to access social programs (Alcindor, 2017). As family members take on more work, they will necessarily incur additional expenses, including the cost of childcare (Edin & Lein, 1997). For some families, the cost of childcare could even meet or exceed wages earned from low-skilled jobs. It is important to note that workfare requirements and lack of access to childcare support tend to cause special hardships for single female-headed households (Gingrich, 2010). Indeed, in my study, Deric and Ron both had the help of a partner whereas Joanne and Sky were single caregivers in their



family. In other words, new workfare requirements would target the most vulnerable low-income families, particularly poor single mothers, pushing many into deeper into financial hardship.

Whereas workfare shifts and the discourses of neoliberalism have framed childcare as a “personal” problem, as Khimm (2015) points out, it is also an economic and policy problem. Since the 1980’s, although the costs of childcare have doubled, careworker pay has remained flat (Roberts, 2013). Families in deep poverty are now spending approximately 30% of their overall income on childcare (Roberts, 2013). At the same time, the instabilities generated by lack of affordable care cost the economy up to \$3 billion annually and the rising costs also dampen consumer discretionary spending (Knowledge@Wharton, 2014). In this way, reproductive labor is the “invisible driver” of the economy, not only in that it reproduces the next generation of workers, but also as a major potential drag on overall U.S. long-term economic health (Knowledge@Wharton, 2014, para 8). So, whereas state supported childcare programs would likely have a positive net effect on the total U.S. economy, I suggest that such programs would have the most potential to impact and lift up low-income families. I would also point out that KEYSLOT visitors throughout my two years in the field also communicated that lack of access to childcare was a significant barrier to taking classes or visiting the lab. And one of my key “jobs” in the sites was, in fact, to help parents look after their children. Thus, even more practically, broadband programs that do not consider these types of limitations can neglect key target populations.

### **Technological Investment: Participation**

So, having discussed organizing, social support programs and state supported childcare as places for intervention in the lives of low-income urban workers, I will now pivot to the role that I think technology can play in this process. In this dissertation, I have critiqued the policymaker stance and the “access” and “skills” focus in broadband programs. Yet, I want to emphasize that KEYSPOTs were valuable community resources far beyond the dimensions of “prosperity” and economic uplift. The KEYSPOTs were sites where participants could email friends and family around the globe, read the news, search for an apartment, play video games, find new recipes or complete an online college course. More broadly, KEYSPOTS were central community sites where participants gathered to meet neighbors, attend lectures and meetings, or simply escape the cold. In some cases, they doubled as arts and cultural centers, as KEYSPOT training programs taught a range of creative skills as well including video production, music production, and digital photography. Because the KEYSPOTs were embedded in the city’s existing social service infrastructure, these were also vital material resource centers for participants like Deric who needed clothing for his infant son and Sky who needed access to healthcare services (Wolfson & Crowell, 2013). In the afternoons when the labs were closed at the North Philadelphia faith-based KEYSPOT, preschoolers enrolled in the daycare program pulled their mats and blankets into the dark places beneath the computers to sleep. Technology was not assigned its own separate space; in fact, the funding BTOP provided allowed the Freedom Ring Partnership host organizations to offer more to their communities, building new programs or strengthening established ones.

Given these multifaceted aspects of KEYSPOTs, I therefore suggest that a policy focus on the dimension of “prosperity” can overlook these key functions of KEYSPOTs in connecting and enriching communities. So, although the KEYSPOT infrastructure had a clear technological basis, it was also a social infrastructure (Wolfson & Crowell, 2013). Quite significantly, KEYSPOTs played a role in promoting political engagement, or the “participation” dimension to recall my arguments in Chapter 4 (Schement, 2009). To elaborate on this point, the Pennsylvania voter ID regulations were under judicial review during the 2012 U.S. presidential election cycle and KEYSPOTs served as a place to distribute and discuss information regarding electoral participation for many poor and working-class Philadelphians (Bronner, 2012). In fact, KEYSPOTs throughout Philadelphia distributed yellow leaflets entitled, “Do you want to vote on election day?” and posted official announcements on walls, doors, or tacked them up on computer lab bulletin boards. Printed and posted materials offered details on the new state voting requirements, such as proof of citizenship, residency in PA, and not presently incarcerated. Participants conferred with digital trainers and computer lab assistants on the Voter ID policies throughout city’s KEYSPOTs. Additionally, visitors graded the presidential debates, argued over policy platforms and discussed the economic issues they personally faced and issues in their communities. What is important here is that beyond the formal politically focused training courses I discussed in Chapter 4, KEYSPOTs were also informal spaces that promoted deeper political participation and information sharing.

Why are these community engagement spaces necessary – or relevant – to the question of improving economic conditions? Alongside the digital trainer, Maria, I introduced in Chapter 4, I argue that the proliferation of low-wage, precarious work is not

simply an economic issue, but rather a political and social one. The exploitative working conditions facing poor and working-class Philadelphians in the aftermath of the Great Recession of 2008 are related to a broader restructuring of the relations between capital and labor in the contemporary information economy. While this is a problem formed, in part, by technological tools, it is also intimately connected to the breakdown of unions, the retrenchment of the welfare state and reproductive labor needs. Thus, it will be necessary to for poor and working-class communities to continue to have access to spaces like KEYSPOTs to seek information, but also to mobilize voters, organize for labor rights and to improve worker protections. In other words, technology does have a vital role yet to play in the uplift and economic empowerment in low-income communities, yet it can and should go beyond digital “access” and “skills.” I suggest that returning a balance between the twin goals of economic “prosperity” and political “participation” is needed, as the economic challenges facing those on the other side of the digital divide are deeply enmeshed in neoliberal capitalism (Schement, 2009). Said differently, economic change will be catalyzed by political change.

### **Final Personal Reflection**

In closing, although these two KEYSPOT staff members – Maria and Evelyn – were not significantly featured in this dissertation, two statements they made during personal interviews encapsulate the tensions and challenges facing federal broadband programs like BTOP, particularly between the priorities of “prosperity” versus “participation” I have highlighted above (Schement, 2009). Though the interviews were initially focused on questions around skills training and workforce development, both participants repeatedly veered away from these topics in our discussions, and they each

insisted that political participation and community building should be the chief focus of technology training. When I asked Maria if she ever discussed the “digital divide” with the students in her classes, Maria pushed back on the entire conception of a “digital divide” altogether, pointing out that “policymakers” on the ground often do not differentiate between divides of internet access and economic divides. Subsequently, Maria explained that in her course, she talked with the students about the role of training, more generally, in facilitating political engagement. Maria clarified:

**We looked at the digital divide a little bit.** But, it was not like....there is this way where it is made into this big thing in [and] of itself. It is also like, if you just step back a little bit – it is okay, yeah. **People who are poor do not have heat and they also do not have internet! It did not really seem like there was that much to kind of study about it,** in that sort of way. But, I mean –I remember reading, like we read stuff around the citizenship schools and the civil rights movement and how, like, it was something that **started out around training.** Like, **teaching people how to read so they could pass the citizenship test to vote** and how that kind of education was linked to building the movement together.

In this way, Maria suggested that though she “looked at the digital divide a little bit” with the students in her digital courses, she did not see that “there was that much to kind of study about it.” How are divides in access to technology more or less separate from divides in access to basic resources, such the need for a heated home? And it is no coincidence, of course, that after she framed the “digital divide” as a divide of economic inequality, Maria immediately touched on how training, historically, has been used to

educate individuals in how to exercise their democratic right to vote. Said differently, because she framed the digital divide as an issue of social justice, the solution needed to overcome digital and economic inequality was political rather than strictly technological.

Similarly, when I questioned Evelyn, a program coordinator, about the most important aspects of BTOP and KEYSPOTs in my final interview, she did not emphasize job training or workforce development at all – even though as discussed in Chapter 4 and Chapter 5, this was one of the most significant and stressed dimensions of the partnership. More specifically, Evelyn likewise accentuated the potential social, cultural and political impact of ICTs in her community. Further, she stressed that it is important to make technology “relevant” to all participants. Evelyn explained this accordingly:

You know, **making technology relevant** to people with **actual needs**. You know, using technology for things like **community building, learning**, you know, and sort of –I guess making things possible that wouldn't be otherwise?

Like being able to **communicate** with someone thousands of miles away.

It is interesting to note that in her above statement, Evelyn implied that “actual needs” are not simply material or economic, but also included engaging communities or helping a participant talk to a faraway family member or friend. Therefore, according to Evelyn, the role of programs like KEYSPOTs should be to nourish communities –not simply in economic ways – but to make technology more socially, culturally and political relevant.

So, building on these critical insights from Maria and Evelyn, while the focus of this dissertation has been largely economic and technological, the solution to the problems of liquid labor are firmly grounded in the political. In fact, it feels somewhat strange to complete this project in the current political moment, where the issues of

“working class” instabilities and precarious global networked labor are more salient than ever, highlighted daily in newspaper op-eds and debated in town halls or on social media. Yet, at the same time, while the working class has become a source of renewed interest in the U.S. political consciousness, indeed the current proposed government solutions to the problems of widening class inequality unfortunately continue to be predicated on the same neoliberal values of self-work and self-reliance. For instance, this is made plain in the priorities of the 2017 Trump administration proposed budget I have hitherto discussed, which seeks to further slash the already threadbare social safety net.

Given these challenges, the goal for digital divide researchers will be to navigate with great dexterity between these poles of “prosperity” versus “participation,” to ensure that the same tools we champion are not used as a cudgel against the working class we purport to serve in our research (Schement, 2009). Said differently, we need to be more aware of the “digital myth,” especially when funders or other policymaker interests hope to use ICTs as a means whereby to further retrench the fragile welfare state. We should advocate for broadband programs that are more holistic, recognizing that technological tools alone cannot solve the complex problems of urban poverty or counterbalance the ways in which ICTs have reshaped the economic lives of urban families. In this way, I mean for “liquid labor” to be less a strict definition or explanation of online work practices, and more a mirror onto a precarious, shifting economic world. For I contend that Joanne and Mr. Wilson’s stories – though seemingly divergent and contradictory – reflect a deeper dislocation and disturbance stirring within the foundations of the informational economy.

### *Appendix I - Draft Interview Questions*

1. What is your name/age?
2. What brought you here today? How often do you come here? How did you hear about the lab?
3. What community are you from? Tell me more about it. Do you have children?
4. Do you have a computer? Do you have home Internet access? Do you have a mobile phone?
5. What activities do you typically do when you are in the lab on the computer? (Social Media? Email? Web surfing? Reading the news? Online shopping? Creating content? Others?)
6. Are you currently looking for a job?

*If yes:*

- a. Do you have other jobs now or ways you earn income? Tell me about more about those.
- b. In what sectors are you looking for work?
- c. What types of jobs are you looking for? What skills do you need?
- d. In what previous sectors have you worked? What jobs have you had?
- e. How are you using the resources here in your job search?
- f. Do you find there are any obstacles to finding jobs we have not discussed?
- g. What would be your dream job?

*If no:*

- a. What is your current job? Tell me more about that. How many jobs do currently you have? Tell me more about those.
- b. In what previous sectors have you worked? What jobs have you had? What skills did you need?
- c. What would be your dream job?

7. Do you have other ways to earn a living or income outside of a formal job? Some examples would be like, babysitting, fixing a neighbor's car, selling art you produce, selling food you make, etc. If so, tell me about them. (Paying attention to any intersections with digital media in the answers and following up with probing questions on these points.) Have you found instances where you felt your job or ways to earn income were regulated or like policed in some way by the government or business?
8. If no, do you have any friends here or in your community that do things like that?



*Appendix II – Draft Interview Themes*

<u>Interview Question Theme</u>	<u>Purpose</u>
<b>community</b>	Will provide context to the study. This can help give the term "poor and working-class Philadelphians" more dimension and local meaning.
<b>computer access and activities</b>	Benchmark question.
<b>sectors gaining jobs/ types of job</b>	This question will address RQ #2 & #4. Focusing on sector will help determine what fields/categories are popular for jobs; individual job can give more information on actual duties involved, skills needed, etc.
<b>other obstacles to finding work</b>	This question will address RQ #2 & #4. This question can investigate impediments to finding work more broadly and get a participant's perspective on issues in formal economy.
<b>dream job/ ideal job</b>	This question will also address RQ #2. Additionally, it will examine the disconnect between jobs participants want and jobs participants can (or think they can) obtain.
<b>other ways to earn a living</b>	This question will address RQ #3. It will differentiate formal work from informal work in a way participants will understand. [However, it is important to note that participant observation will help identify participants that might already be engaging in informal work.]
<b>friends with informal ways to earn living</b>	This question will provide feedback to redirect or find additional participants.

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