Homelessness among young people aged 13 to 30 is a pressing problem with lasting social and economic consequences for the U.S. By one estimate, 3 million young people experience homelessness annually; that is, about 1 percent of the U.S. population is both young and homeless at some point each year [1]. The psycho-social factors of homeless young people have been studied extensively in the social sciences. In sum, this research shows homeless young people to be a heterogeneous mix of ages, genders, races, and ethnicities, and that the interrelated causes and effects of homelessness are multifarious. Among the common causes are intergenerational poverty, severe family conflict often connected with substance abuse, mental health disorders, and abuse and neglect by caregivers. Many homeless young people suffer mentally and physically from the long-term effects of childhood trauma.

Homeless young people also adopt digital technologies. Indeed, our own work shows that homeless young people desire digital technology in all its forms [2]. Moreover, particular uses of digital technology might have far-reaching impacts. Maintaining ties with family through Facebook, for example, appears to be correlated with reductions in sexual risk-taking behaviors among homeless young people [3]. Accordingly, we invite readers of this forum to consider how ordinary, everyday interactions with technology may be conditioned by the extraordinary circumstances of homelessness [4].

**Design, Service, and Research**

Since 2007 we have engaged a community of homeless young people in Seattle, Washington, allowing us to explore ordinary uses of digital media in extraordinary circumstances. Within this community, near the University of Washington, is an alliance of nine service agencies that provide meals, temporary overnight shelter, and other basics. We collaborated with one service agency to investigate how digital media and personal digital technologies are used by homeless young people and how new systems might be designed to improve their welfare and help them escape homelessness. Value Sensitive Design provided the methodological approach [5]. In an early project, we investigated existing information systems for the dissemination of paper-based resources at the service agencies. Finding a mismatch between espoused values and existing information displays, we sought to bring coherence to the material. This problem led to the development of four interrelated prototypes, which could be integrated as a community-outreach vehicle called the InfoBike [6,7]. The InfoBike has since been made real and put into service at community events, where it has been used as a site for investigating mobile phones and place-based safety [8] (see Figure 1).

In another project, in collaboration with homeless young people and service agency staff, we created a community technology center and designed a curriculum for computer-related life-skills classes. Then, as volunteer instructors, we worked with nearly 100 home-
less young people over 18 months, beginning in January 2009 [9]. As an incentive, young people who successfully completed the class received an iPod. Through this teaching experience, we began to gain insight into how homeless young people experience information systems and personal digital technologies; some overarching themes began to emerge [4]. Next, we turn to these themes, giving concrete examples and highlighting the ordinary and the extraordinary accounts that may be of interest to designers of universal interactions.

**Overarching Themes: The Ordinary and the Extraordinary**

The examples and quotes in this section are from a study that took place in 2010. In this study, we followed up with 12 graduates (eight men and four women) of the life-skills classes and asked questions regarding the ownership of personal digital technologies, including the iPods they had earned [2]. The 12 young people in our study lived in a range of tenuous housing situations—some lived on the street, some in friends’ houses, others in transitional or subsidized housing, while still others lived in abandoned buildings they had appropriated as communal living places (squats). A young woman living in transitional housing, for example, may describe herself as homeless, since she can be evicted for missing her curfew or breaking other rules. Or a homeless young man may call a carport home, if it provides access to an electrical outlet and is a place where he and his friends regularly spend the night.

**Creating goodwill.** Owning personal digital technologies was a common experience for homeless young people, with all 12 participants in the study reporting that they had at some point owned mobile phones and MP3 players. However, only two of the young people still owned the iPods they had earned in class, with the longest time of ownership reported as 12 months. The rest of the iPods had either been lost, traded, sold, or gifted, with three young people reporting that they had held on to their iPods for only one week.

Interestingly, six youths had disposed of their iPods in ways that created or reciprocated goodwill. Don (pseudonyms are used to identify participants) gave his iPod to his girlfriend, and Irene gave hers to her mother. Jazz sold her iPod to buy a dog for Al, while Al pawned his iPod to buy food for his friends. Greg lent his iPod to a depressed friend who left it behind in the dumpster where he had spent the night. And Kay sold her iPod at a very low price to Ed, who had previously sold his iPod and had recently been released from jail.

“I was staying with friends and nobody had no money. There was literally no food in the house. So I just [said], “Alright, [iPod], bye-bye.”” —Al

“My friend had a 16-gig iPod, and then she got this one [by participating in a life-skills class], and since I’d just got out [of jail] she sold me this one so I could have my own iPod.” —Ed

**Immediate needs.** Certainly in the U.S., possessing personal digital technologies is an ordinary experience. However, we found that homeless young people’s ability to hold on to personal
Jazz often charged her phone had been recently padlocked shut by the building owner (see Figure 2). Jazz spoke of the challenges that she encountered and the treatment that she had routinely received while trying to charge her phone. In fact, the external electrical outlet where Jazz often charged her phone had recently been padlocked shut by the building owner (see Figure 2).

I’m homeless! People are very stingy with their electric … Somebody catches you charging your phone on an outlet on the outside of a building, they will yell at you until you leave. —Jazz

Contingency. Finally, for the homeless young people we spoke with, being able to use digital media is largely, or perhaps always, contin-
gent. As the examples show, the experiences that homeless young people have with information systems and personal digital technologies are contingent on the desire to create and reciprocate goodwill, the fulfillment of immediate needs, and getting access to computers and electrical power. We see that rather than having the ordinary experiences with technology that their homed peers may have, the extraordinary circumstances of homelessness condition the relationship that homeless young people have with technology. That is, for homeless young people, technology comes and goes. In this way, the technologies that homeless young people hold may be vulnerable, just as homeless young people may be seen as being vulnerable.

Looking Forward

Norbert Wiener, responding in part to the technological developments leading to the invention of the atomic bomb, wrote that human beings had a great deal of know-how, that is, intellectual curiosity and knowledge for technological experimentation and advances. At the same time, he noted that what was lacking was know-what, the knowledge of purpose (know-what) before planning any interventions (know-how) in this community of homeless young people [12].

Building on four years of work, we will continue to proceed with precaution while moving from know-what to know-how. In one direction, we are currently designing information systems that help homeless young people and other community stakeholders find and successfully complete “mini jobs” in the neighborhood. At the same time, in a second direction, we also intend to investigate communities of homeless young people in downtown Seattle, Vancouver, B.C., and other cities, continuing to examine the experiences that homeless young people have with information systems and personal digital technologies. Long-term commitment and precaution are critical designer values in this work; rather than paralyzing forces of inaction, they are ways of moving forward in communities that lie at the nexus of the ordinary and the extraordinary.

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ENDNOTES:


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