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COMMUNITY TECHNOLOGY CENTERS  
AS MUNDANE TECHNOLOGIES

In May 2013, I found myself in the middle of a shoot-out walking to Games LAN House in Bairro da Penha. Having never been in such a situation before, I did not know where to run. I watched bullets shattering windows, people running, trying to find shelter, and children crying. In the midst of the chaos, I just followed the locals. I noticed that a large group of people ran into the LAN House, and so I followed. Once inside, I grabbed a CRT screen to use as a shield. Although I was reeling from the event, I noticed that people were calmer and more relaxed, even though the shoot-out was still happening outside. I asked the people why they were not scared, and Gabriel (seventeen years old) explained, “This LAN House is sacred for the community. No one will cause any trouble in here or will shoot bullets aiming for the LAN House. If something happens, Ronald will close this down and there’s no internet or place for us to hangout. It is just like the church and the school down the hill. These are the best places for shelter.”

My conversation in the middle of the shoot-out validated one of the most precious lessons from ethnography: follow the informants in order to identify and understand their lives (see Rubel 2003). The aftermath of the unexpected shoot-out made me realize that Community Technology Centers (CTCs), such as LAN Houses and Telecenters, represented something more than just cybercafés or computer labs. They represented safe spaces that favela residents appropriated in order to alleviate oppression in their everyday lives. As Paulo Freire (2000) emphasizes, the oppressed need safe spaces for exploration. In these spaces they could confront the hard social, political, and psychological realities of their existence as they pursue liberation. In the previous chapters of this book, I described favela residents’ Mundane Technologies as the appropriation of technological artifacts, such as *xinglings*, and processes, such as repair. In this chapter I expand our understanding of Mundane Technology to include favela residents’ appropriation of technological spaces, such as CTCs, to exercise their agency and

consciousness in order to cope with challenges associated with education, security, poverty, and access to the job market.

CTCs are generally understood as nonprofit, locally based organizations that provide access to digital technologies to groups that can't obtain it in other ways: mostly low-income urban populations. *Community Technology Centers* is an umbrella term that covers a wide range of types of organizations, such as Telecenters and libraries. In this chapter, I expand the understanding of CTCs as a category to include for-profit and local centers such as LAN Houses. Most centers focus on providing access to technology; a public library, for example, may offer a space for computers with internet access but no training. Other CTCs may offer either general or specialized classes—for instance, basic classes in keyboarding and how to use email and popular software applications such as Word, Excel, PowerPoint, and Photoshop. Others are oriented toward providing training that can empower participants to obtain jobs or excel at school (Davies et al. 2003). Some ICTD scholars have approached CTCs as mere spaces that provide digital technology services, while others have focused on how users engage with digital technology (Nemer 2018a). I go beyond the notion that CTCs are just spaces for technology use, instead arguing that CTCs are appropriated by marginalized communities to claim a vital social place. More than *just* digital technology spaces, CTCs—as a Mundane Technology—help people negotiate information-related challenges associated with their everyday lives.

#### RETHINKING THE ROLE OF TELECENTERS IN COMMUNITIES

The Telecenters of Vitória were funded by the city government, which contracted the Center for Digital Inclusion (CDI) to manage and maintain the CTCs. CDI was a nonprofit organization specializing in creating and managing CTCs in low-income, rural, and indigenous communities. They maintained centers in hospitals, prisons, and psychiatric clinics, with the intent to strengthen low-income communities by providing access to digital technologies (CDI 2015). In Vitória, two women managed the CDI branch, tasked with negotiating the Telecenters' plans with the city's Telecenter manager. They also hired and trained Inclusion Agents—the infomediaries responsible for taking care of each Telecenter by helping users with their computer needs.

The Inclusion Agents also organized weekly workshops, usually held on Wednesdays from 1:00 p.m. to 2:30 p.m., when they conducted activities

to help develop Telecenter users' skills. The workshops ranged from technical activities—photo editing, computer maintenance, and formatting CVs—to nontechnical activities, like how to prepare for job interviews and build board games from recycled materials. Workshops were not as popular among the Telecenters' users as free internet browsing. I attended eighteen workshops and observed an average of six to seven people in each. While the workshops were happening, I noticed that the waiting room would always be filled with people, mostly teenagers. I asked them why they didn't join the workshop, and Thais (seventeen years old) sighed and said, "We all have bad experiences with our [public] school. . . . The lectures we attend are terrifying and traumatizing. Why would I want to attend another lecture here in the Telecenter? I'm here to have fun." The idea of having a school-like lecture turned her off because it reminded her of bad institutional learning experiences. In other cases, young adults used the CTC to complete homework and school projects. Despite Thais's distaste for the idea, the CTCs complemented their academic needs. Among adults, CV typing and online job searching were the most popular activities. The Inclusion Agents printed openings from job database websites and glued them on the Telecenters' walls so people could easily read them.

The Telecenters were free of charge for anyone. Users had to bring a photo ID on their first visit so the Inclusion Agents could register them in the system. Users under twelve years old could use the Telecenter if accompanied by a parent or another adult. For people ages thirteen to fifteen years old, access was allowed with a letter of consent from their parents or guardians. If visitors were over sixteen years old, the Telecenter was open to their use. Each user was assigned a Telecenter ID number, which they gave to the Agents every time they returned to any Telecenter. The system stored the users' personal information—date of birth, name, sex, address, and access number—in order to generate a report at the end of the month with basic statistics about who accessed and used the center. The Telecenter manager was mostly interested in knowing where the users lived, so she could report to the city government that the CTCs were serving the local community. However, she said, the system was not developed with the local context in mind:

I want to know if the Telecenters are serving their targeted communities . . . like the communities around the units, but it is impossible to get that information. The users don't really know their address, neighborhood, or zip code. When they know their address they say, for example, they live in Consolação, but it is actually Gurigica. We can't get the actual address.

Administrators at Telecenters were unable to collect some addresses because regularization in Brazilian favelas remains an unsolved problem. Keeping favelas in a precarious status requires enshrining the rhetoric and practice of removal as a significant element of public policies (Valladares 2019). Since the many residents of Territory of Good did not own land titles, they lacked formal addresses. Hence the addresses they provided at the Telecenters were literally directions to their homes, such as, “the alley where Joe’s bar is and before Maria’s bakery” (José, fifteen years old). The address fields were mandatory, so the Inclusion Agents just went ahead with the information provided. Vania, the Inclusion Agent, just did her job as best she could, saying, “There’s nothing I can do. How am I going to check this information? Also, we don’t have formal addresses here, so I just go with what they tell me. When they tell me their neighborhood [favela or community], I usually look up the zip code on the post office’s website, but this is no guarantee that the area they live in is actually how the city sees it.”

CDI purchased the data management system used in the Telecenters, which was custom-made by a software company in Rio de Janeiro. Such a system was one example of how technology is frequently developed from a vantage point of those who expect the same technology to function similarly everywhere. This approach is known in ICTD as one-size -fits-all; designers understand the center as the destiny of and model for developing areas. In other words, “the world at large is destined to become ‘like’ the one under construction in our research laboratories” (Dourish and Mainwaring 2012, 134). But even when the center is close, like Rio de Janeiro, technology developed remotely can produce more problems than it solves.

Each Telecenter was equipped with one printer, one server, and ten desktop computers running Ubuntu, a Debian-based Linux operating system. The computers were connected to the Vitória OnLine Wi-Fi link, which provided the users with open-source, free, and fast internet.<sup>1</sup> Although users were able to access any content or website they wanted, some felt that Ubuntu denied the freedom they wanted. For example, Jefferson (seventeen years old) found the open-source software constraining:

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1. The internet speed was 100 Mbps, and there was no blocked or censored website/content.

I do not feel free here. This system can't do anything; it asks for the password [admin] every time I want to install something. I can't play any games on Chrome, there's always error messages popping up from the plug-ins and I can't update Java. I wanted Windows, or at least Wine so I could install my favorite games. Who wants Linux to play Sudoku? Is this what you call free software? . . . I feel frustrated and don't want to come here.

Free-libre open-source software (FL/OSS) is seen in the literature as empowering users with full access to the software's code and library, allowing them to adapt the software to their needs (Lerner and Schankerman 2013). But in the favelas, people perceived FL/OSS as limiting their choices. They were interested in the latest games, such as *Counter-Strike* and *FIFA*, which were not supported by Linux. These informants were just overcoming the so-called *first-level digital divide* (Hargittai 2002) and developing skills to seek information and use it in their lives. They did not have advanced technical skills like coding that would let them benefit from FL/OSS. Although CDI claimed to be a supporter of FL/OSS, they had no plans to implement a program or workshops to develop technical skills so users could take advantage of using open-source software. The Telecenters' manager claimed that it was the city's choice to use FL/OSS "simply because it is free and we have to reduce costs by every means." Adopting OSS because it was "free as in beer" (Crowston et al. 2007; see Coleman 2012) may have promoted access to technology due to its low cost, especially in financially troubled areas, but it did not necessarily lead to the "free as in speech" use of the software. This is not to say that favelas residents weren't capable of coding and tinkering with the source code—they just don't find it useful for their goals.

The Telecenters I visited for this study, in São Benedito and Itararé, were open from 8:00 a.m. to 5:00 p.m. during business days. Itararé was at the foot of the hill, as described by the residents, and closer to the city's border with Leitão da Silva Ave.—hence it was the most developed area among the communities in the Territory of Good. Itararé was considered the shopping center of the region, and residents of other favelas walked down the hill to do their shopping there. Its shops included auto repair shops, clothes boutiques, electronics emporiums, sewing services, and restaurants. Itararé had the franchised supermarket ExtraBom and a large public square that the residents called *pracinha*. Here, a farmer's market took place every Wednesday morning, residents played soccer daily, and every evening, people of every group age flocked to the square. Mothers hung out and chitchatted while watching

their children playing, teenagers played loud music on their *xinglings* as they had their *rolézinhos*,<sup>2</sup> and elderly men played checkers. CIAS, a private hospital owned by UNIMED, one of the largest health insurance companies in Brazil, was located right next to the ExtraBom.

When I asked the informants if they were able to use the hospital, they immediately answered no. Tereza (thirty-two years old) told me that “they [hospital management] don’t even employ the people from here [Itararé]. They are occupying a space in our community but don’t give anything back. I wish it was a public hospital, so, at least, we could try to use it.” They did not understand why the hospital was there, since it didn’t benefit them. Despite being the most developed favela in the area, Itararé did not have a public hospital nearby, and the residents felt left out by the government due to the conditions they were living in. Roni (eighteen years old) summarized the residents’ frustrations, saying, “Now you can see what it means to be marginalized. If you get hurt, you can’t even go to the hospital right next to your house because they won’t take you in because you don’t have money.” Like Roni, Thais feared the institutional barriers of her school. “My school, which is public, of course, is a joke. Anyone can get good grades—we just need to memorize what the teacher says. The teachers don’t really care about us and we don’t really care about school. It becomes a vicious cycle. The only thing that works here is this [Telecenter].” Thais’s testimonial illustrates Paulo Freire’s description of the Banking Education, which is commonly adopted in schools throughout Brazil. Banking Education, according to Freire, is an educational model that assumes that the teacher has all the knowledge and the student doesn’t know anything. This model creates a vertical relationship in which teachers “deposit” their knowledge into students’ heads and, according to Freire, doesn’t promote critical thinkers. Rather, it trains students to become passive beings who conform to oppressive structures.

Public services such as schools in Vitória’s marginalized areas were precarious and frustrating. Hence, local residents relied on Telecenters to help them to overcome their precarity. The Telecenter in Itararé had a small waiting room, an office for the Telecenter manager, the computer room, a small kitchen, and two bathrooms. A maintenance lab hosted four young adults who maintained and fixed the Telecenters’ computers, printers, and networks. The waiting room was as active as the computer room. Users

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2. *Rolézinho* means “strolls, hangouts, gatherings.”

waiting for their turn to use the computers chatted about the community, as I observed in a conversation between Andre (forty-eight years old) and Jaciara (nineteen years old).

ANDRE: I'm here to research about my family roots and how they migrated from Italy to Brazil. I heard there's a lot of stuff about Italians who became trail blazers in Brazil. What are you here for?

JACIARA: To do some homework and research for a school project. My teacher wants me to write about the Independence of Brazil. Can you believe the [public] school doesn't have any books to help me? I'll let you know if I come across something about the Italians.

ANDRE: Thank you. Where do you live?

JACIARA: In Bairro da Penha, just after Nelson's barbershop.

ANDRE: Ah! You better be careful, I heard some meetings would take place this evening between some drug people. You know how these things end up. In Gurigica things will be like a grape.<sup>3</sup>

JACIARA: Thanks for letting me know. I won't stay long here and then just run home.

The waiting room worked as an *information ground* where people shared their life experiences, technical expertise, and awareness of events in the favelas.<sup>4</sup> It was a social space where users had casual interactions that led to meaningful exchanges: female teenagers grouped around a *xingling*, pushed the phone's buttons, and discussed how to take selfies until they figured it out. Adults exchanged information about social programs provided by the government—such as Social Driver's License (CNH Social) and ProUni<sup>5</sup>—while young

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3. *Grape*, or *uva* in Portuguese, was slang used by favela residents to refer to tranquility and security.

4. As defined by Fisher, Landry, and Naumer (2006), "an Information Ground is an environment temporarily created when people come together for a singular purpose but from whose behavior emerges a social atmosphere that fosters the spontaneous and serendipitous sharing of information."

5. Social Driver's License (CNH Social) was a social program in which low-income adults could apply for a grant to pay for their driving school and license. The process of getting a driver's license can cost up to US\$1,000.00. ProUni is a program that granted full and partial scholarships for low-income people in a private institution of higher education.

men scheduled *peladas*<sup>6</sup> and tried to get on the security guard's computer. Teenagers felt comfortable and safe, as Marcos (twenty-one years old) described it. "The Telecenter is the best thing we have around here. . . . I always bring my *xingling* to transfer some music. . . . You know, you realize you are at home when your *xingling* connects automatically to the Wi-Fi." Though Telecenters were hardly a place for privacy, Marcos described them as "home" because he could relax and listen to music with friends.

What happened offline shaped the way users got online. Teens like Mariana (sixteen years old) vividly believed that Telecenters were about more than just access to technology. "I have a computer at home, but it is so boring to stay home alone. Here I have my friends, we can talk, play, and take photos," she told me. "They help me with stuff I don't know, and I help them with things I know. . . . So much happens outside the internet, in real life, that influences how we actually use the internet." True to her claim, my visits to Telecenters were saturated with social interactions. For example, while teenage girls used Facebook chat, instead of having the conversation with just the person on the other side of the screen, they often debated the topic of the conversation with each other in the Telecenter before responding. I also observed loose acquaintances develop a closer relationship because they helped each other. Mario (thirty-two years old) and Sergio (twenty-six years old) were regular users of the Telecenters, but their interactions had been limited to greeting each other. In July 2013, Mario saw Sergio accessing the ProUni website and asked if he could help him sign up for the program. One month later, they were meeting twice a week to study for the *vestibular* university entrance exam. Such appropriation of the Telecenter illustrates Paulo Freire's education for liberation, which happens in a dialogue between two humans. It is a collective construction in which teachers and students are engaged in a dialogical process open to mutual learning. Freire saw learning as a liberating, socially engaged activity, writing that "no one teaches another, nor is anyone self-taught. People teach each other, mediated by the world" (2000, 80).

#### BEING WATCHED AND FEELING SAFE IN TELECENTERS

Each Telecenter had a male security officer who sat at a desk in the waiting room and monitored security cameras on a computer screen. The officers'

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6. *Pelada*, a Portuguese term to refer to pickup soccer, means "naked" (in a female form), in reference to the naked and rough conditions that fields were usually found.



duty was to maintain order in the Telecenters and intimidate thieves and troublemakers in order to keep them out. Their computers were also hooked up to the Telecenters' network, so they eventually got on the web.

Although we are in an area of risk, I have never had a problem with people looking for trouble. This is not as stressful as I thought it would be; however, I need to keep my eyes always open and checking the [security] cameras. When the Telecenter is not as busy, I get online, check my Facebook and play *Social Wars*. I play against these kids, and now that they realized that I could get on Face,<sup>7</sup> they always try to get on my computer when they run out of time. I always tell them to stop; otherwise they will get me in trouble. (Security officer in Itararé)

All this security came at a cost. The city government paid a high price to keep all twenty Telecenters running in high crime areas. Looking through the Telecenters' financial books, I saw that the city spent approximately R\$120,000 (about US\$50,000) each month to maintain the Telecenters (facilities rental, Inclusion Agent salaries, and utilities). They also paid R\$300,000 (about US\$125,000) per month to outsource security to a local company. That is not even counting the cost of security cameras, which I did not see budgeted but only observed on-site. Due to the inefficient state presence in high crime areas, the city had to pay for security instead of funding at least fifty more Telecenters.

The informants did not voice privacy concerns regarding the security cameras. When I asked them if they felt that their privacy was being invaded, their answer was a unanimous no. Rodrigo (twenty-one years old) said that "the security guy and these cameras are intimidating to those troublemakers. Instead of feeling that I'm being watched all the time I actually feel free and safe. I can be myself." Instead of being paranoid about visible cameras, he was "really afraid of the invisible cameras, which are the eyes of drug traffickers out at the streets. We have to always behave differently, like we have a ghost watching us." Users like Rodrigo were in favor of Telecenter cameras because they perceived them as keeping drug cartel members and troublemakers out. As discussed in the literature (see Blanchette and Johnson 2002; Gregory 2010), security cameras can be used as tools to force people to monitor their own behavior. However, in the Telecenters, cameras were perceived as tools that allowed people to feel comfortable, have protection, and be themselves, as Rodrigo mentioned. It was the "invisible

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7. Brazilians often refer to Facebook as simply "Face" in Portuguese.

cameras”—the eyes of cartel members—that created the real panopticon feeling for users.<sup>8</sup> A conversation with the manager of the Telecenters also confirmed that “they [security cameras] are here to protect the users from the violence that happens outside. The images are stored in the local server and not shared with anyone, unless required by court.” The cameras were not to monitor routine visitors.

Inside the computer room in Itararé, Inclusion Agent Vania approached security cameras differently by enforcing Foucault’s concept of “discipline and punish.” Teenagers often begged Vania to let them stay longer on the computer after their time was up. She often let them stay longer, except when the Telecenter was busy and the waiting room was crowded with people waiting to use the computers. At these times, Vania would show one of the cameras to the teenagers to get them to leave, telling them, “My manager is watching us; if I let you stay she will yell at me and you. . . . You could get suspended from here.” The Inclusion Agent was not pleased to enforce the Telecenter rules, telling me, “I feel bad that I have to lie, but that is the only way I found to get them to leave. They know that I always let them stay longer when the Telecenter is not busy, but they always try to squeeze in every possible minute as possible on the computer.” The thought of being monitored gave her a diplomatic way to ask them to leave, even though she would prefer another solution. In these ways, the materiality of security cameras affected the behavior of Telecenter users, whether by making them feel safer or giving Inclusion Agents a way to enforce the one-hour reservation policy. Either way, the users did not have privacy concerns that security cameras usually raise in places like the US (see Dourish and Anderson 2006), where notions of surveillance are predicated on individualistic technology use built on frameworks of rights. The interactions of favela residents with cameras did not evoke the same ideas due to their understanding of the role of these artifacts in the CTCs.

Some users found a way to exceed their one-hour slot limit by simply going to another nearby Telecenter. I noticed that people from the Territory of Good frequented both Itararé and São Benedito. These Telecenters were about one mile apart, so it took about fifteen minutes to briskly walk from one to another. When I talked with Felipe (sixteen years old) about his visiting habits, he laughed and said, “There’s no stopping me. . . . Isn’t this

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8. See Foucault (1977) for more about the panopticon.

our right? I mean . . . aren't the Telecenters for us? . . . So I'm not doing anything wrong. I get here, I play games, I meet friends, what else could I ask for? The walk from Itararé to here [São Benedito] is not so bad . . . when it's not raining."<sup>9</sup> Even though the teenagers had to cross boundaries set by the drug cartel, they thought it was worth the risk to stay close to their friends and inside the Telecenters.

São Benedito was located at the top of the hill. Unfinished homes, straight alleys, a small square, dirt streets, bars, and small markets comprised the favela. As I discussed in chapter 1, a drug cartel chose São Benedito as its territorial base due to its geographical advantage. It was easier for members to see when rival gangs or cops were coming up the hill, giving them more time to attack or hide. Another advantage was that they could attack with a top-to-bottom approach, making it difficult for rivals to advance up the hill. For this reason, other cartels were constantly trying to take control of the valuable top of the hill—hence the regular shoot-outs. The São Benedito cartel maintained its territory because it did not want enemies lurking. Everyone who came in or out was questioned; I got questioned several times about my intentions there and the outcomes of my research, since the cartel was not used to having researchers in its territory.

The Telecenter in São Benedito was also protected by the cartel, which is why it was the only Telecenter among the twenty in Vitória that did not have security cameras and personnel. The Telecenters manager explained, saying, "Right after we opened the Telecenter in São Benedito, the cartel told the Inclusion Agent, who is from the community, to get rid of the cameras and security. Otherwise, they would close the center and we wouldn't have peace. So far we haven't had a problem there." Patrick, an Inclusion Agent, was born and raised in São Benedito. He was a well-known and charismatic figure among the residents, and everyone respected his authority inside of the Telecenter. He told me he only had one incident in the CTC.

One time, the Telecenter was really busy and I had several people waiting to use the computers, then I asked this kid to leave the computer because his time was up. He did not say a word, just pulled his shirt up and showed me his gun. I couldn't do anything, so I just went back to my seat. A bunch of people saw the scene and was also terrified. . . . All I know was that someone that was here that

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9. *Raining* here means "raining bullets" (gun shoot-outs).

day told this story to some cartel members and that kid never showed up again. The cartel doesn't allow any of their members to come here; they understand that this is for the community and don't want anything happening in here.

Patrick went on to explain that the cartel knew its constant conflicts upset the residents. Hence, it wanted to maintain order by strategically keeping places—such as churches, shops, and the Telecenter—safe for the community. Having the residents unhappy and protesting against the cartel's presence would give the cartels another problem to deal with. A frustrated populace could weaken the cartels and make them more vulnerable to rivals. Even though the residents did not approve of the war environment created by the cartel, they appreciated that Telecenters were left out of their disputes. Jussara (thirty-one years old) expressed her frustration by saying, “What can we do? It seems that God has turned his back on us . . . so we have to rely on [the cartel]. [We] just pay attention where we have gone to. . . . We have to be thankful because they are letting us go to the Telecenter. It is safer than my house.”

#### THE BOTTOM OF THE SOCIOTECHNICAL PYRAMID

The Telecenter in São Benedito faced a different situation than the one in Itararé. The drug cartel members did not allow cameras in the Telecenter because they served as the “invisible cameras” that protected the CTC *and* watched residents on the streets. Violence was not the only problem faced by São Benedito residents. Although being on the top of the hill was strategically beneficial for the cartel, the favela's residents often lacked basic services. Access to water, electricity, education, and internet was much rarer on top of the hill than at the bottom. CESAN (the water company) and ESCELSA (the power company) did not invest in the infrastructure, which is why São Benedito residents had to rely on illegal makeshift pipes and wire taps; they were left with no choice. Ricardo (twenty years old) put his predicament as “not a matter of being illegal; it is a matter of surviving.”

The impoverished situation placed additional burdens on the Telecenter in São Benedito. The internet was brought to the CTC by a long-range directional Wi-Fi antenna that was located at the Telecenter of Itararé. The antenna boosted the Vitória OnLine signal so it could be received at the Telecenter in São Benedito, which shared the internet among their computers. This system was prone to failure. In June 2013, the receiving antenna

fell from its base in heavy rain and broke. The Telecenter was left without internet for a whole month, even though the residents and Inclusion Agent constantly requested a replacement. Patrick, the agent, complained that “everything up in here is hard. I’m not surprised that it is taking them [city government] to fix this. Every time a computer broke down, it takes ages for someone to come up here, pick it up, and fix it.” When I questioned the Telecenter manager, she described how she could not do much beyond requesting a replacement antenna through the city government. She believed that the problem was more legal and bureaucratic than technical.

It is not that simple. We don’t have access to the money to buy a replacement antenna. We have to start a licitation issuance process, so several contractors can bid an offer, and just after that, the government will give us the money to buy the cheapest antenna that meets with all the requirements. The same thing happened to CDI, for us to contract them, we had to start a similar licitation issuance process.

The licitation issuance process, dictated by law, was designed to avoid inappropriate use of public money. It applied to every branch of the government, including institutions and agencies funded with public money. The arduous bureaucratic steps needed to comply with the licitation issuance required time and effort. The episode with the internet antenna was just one example of how public administration in Brazil treated favelas. As Spilki and Tittoni (2005) explain, the incompetency of the politicians and the inefficiency of the bureaucratic state of Brazil perpetuated the dependency of the poor on the government. They suggested that bureaucracy was also the reason why hospitals and schools did not have updated resources.

During my visits in May 2013, the ten computers in the Telecenter in São Benedito were busy most of the time. However, in June 2013, the number of computers was cut in half, to five. Despite the lack of internet, the CTC’s waiting room was still busy with people meeting up, playing board games, and asking if the internet was back. In the beginning of July 2013, the Telecenters’ maintenance technicians finally fixed the broken antenna. However, it was not able to deliver the same internet speed as before. The internet was slower, and no one could really explain why. Knowing how things worked with the government, Patrick decided to not file another complaint. He believed that making waves would result in a wait for a new antenna, and perhaps no internet at all. “If I complain again, they will take

this antenna down and it will be another month without any internet until they can get back to us. But I've noticed that slow internet is what keeps people away from the Telecenter. . . . Forget rain, violence, and walking up the hill." During the time of no and slow internet, some users of the Telecenter in São Benedito used the CTC in Itararé instead. Other users, like Susana (twenty-two years old), were simply frustrated, without a way to communicate online.

I work at the small restaurant by the bus stop; I only have one hour to come here [Telecenter in São Benedito]. But it pains me to see the internet so slow. . . . I spend about one hour to just check my email. I can't do much. I come here to talk to my sister who lives in Bairro da Penha, and now I can't. . . . It's been almost one month without news from her.

The experiences of São Benedito residents in the Telecenter mirrored their overall life experiences. They often felt frustrated with the public services provided and saw themselves at the mercy of the social conditions they lived in, as summarized by Felipe (sixteen years old).

See, this is just a taste of what we have to face in our everyday life in São Benedito. This is what it means to be marginalized. The Telecenter is here to help us, and the Inclusion Agent does so much for us. But unfortunately, it is still us that face slow internet, you know, poor internet for poor people, politicians that only show up when they want our vote, cops treating us like shit and criminals, and traffickers that pretend to be fighting for us.

Users in São Benedito felt neglected by the government, and such exclusion reinforced their desire for a better life. The life conditions experienced by the ones on the bottom of the pyramid—such as the residents of São Benedito and Itararé—were recognized by organizations working to empower them. The World Summit on Information Society in 2005 advocated for the application of technology to become one of the prioritized paths to fulfill the Millennium Development Goals (MDGs).<sup>10</sup> Due to the short timescales and pressure to show tangible delivery, Telecenters became a quick, off-the-shelf solution that could be replicated in developing countries' poor communities (Heeks 2008; Chouna 2013). Such a one-size-fits-all model has been heavily criticized by scholars (see Gurstein 2007;

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10. According to Prahalad (see Heeks 2008), the bottom of the pyramid is the three billion people who live on less than US\$2.00 per day.

Prado 2010) because it is often plagued by low utilization and an indifferent response from receiving communities. A universal solution approach also imposes preexisting designs with the expectation that the poor will adapt to them. This paternalistic perspective often prevents communities from organizing themselves to develop solutions.

Although these critiques and assessments of Telecenters have some validity, it would be unfair to call CTCs worthless. Most studies on Telecenters have overemphasized digital technologies as the drivers of empowerment and have been based on quantitative surveys of users. Both of these approaches provide a limited understanding of the social and technical roles such centers have in poor communities (Kleine 2013). The Telecenters were not an ideal solution to the issues faced by favela residents. However, they still were spaces that residents appropriated as their Mundane Technology so they could respond to community needs and pursue personal goals. The Telecenters not only provided their users with a myriad of social encounters and technical services but also amplified the tensions, resistances, and struggles lived by favela residents. Approaching the appropriations of Telecenters as a Mundane Technology allows us to study digital technology beyond its technical aspects and contribute to the literature that understands them also as social spaces (D. Miller and Slater 2000; Burrell 2012; Kleine 2013; Nemer 2018a).

In the ICTD literature, Telecenters were perceived as a failed innovation model for two reasons (Heeks 2008, 27). First, they were not sustainable. Telecenters failed to deliver and survive, which prompted concern with ensuring the longevity of such projects. Second, they were often buoyed by hype and uncorroborated stories, which fostered a new interest in objective impact evaluations. These evaluations attempted to measure whether Telecenters promoted the growth of local economies, increased employment, and improved standards of living. However, such an approach represents a technologically deterministic view of universal access to digital technologies “leapfrogging” sequences normally associated with traditional developmental stages (Ayoung, Abbott, and Kashefi 2016). Such an optimistic and naïve view may also underlie assessments of the adoption of Telecenters (Krishna and Walsham 2005). Therefore, I believe that failure was embedded not in the Telecenter’s model but in how sustainability and evaluation were conceptualized and formally defined by policymakers and funders. Their evaluations were too narrowly focused on the economic returns of

Telecenters, rather than embracing an expanded understanding of them as a sociotechnical Mundane Technology.

The Telecenters of Vitória were concerned with success because the city government was demanding such economic and objective impact evaluations to justify funding them. However, the Telecenter manager was not able to deliver statistics.

Every year I need to write a report to the city government justifying why the Telecenters should stay open. The number of people who access them is not enough; they want to know how much money the Telecenters are bringing into the community, the skills people are learning, how many jobs people are applying to and if they are getting hired . . . all these in numbers. . . . There's no way I can translate the rich experience that the users are having inside the Telecenters in statistics and percentage. Every year I have to face the same struggle. . . . They [politicians] don't understand that the main benefits don't always come as money. . . . If the Telecenters close down, the marginalized communities will become even more marginalized.

In this section, I describe why a sole concern with economic impact measurements ignores the value of Mundane Technologies to promote human agency and alleviate sources of oppression. Favela residents occasionally used Telecenters to improve their economic condition by seeking and applying to jobs. However, these activities were not the main purpose of their visits. They approached Telecenters as a space in their communities where they felt safe, turned casual relations into relationships, and participated in *information grounds*. Policymakers and government officials were focusing on what the Telecenters were not mainly used for, which makes it impossible to evaluate how they benefited the community. I concur with Michael Gurstein (2011), who suggests Telecenter funders believed that once the initial investment had been made in these centers, they would magically transform into “social enterprises.” Funders tend to believe that Telecenters could get enough revenue from their local communities to cover access, rent, salaries, and repairs.

Governments are not only unrealistic, but they are deeply hypocritical in requiring communities in which they previously made these investments because of their overall lack of resources, to somehow now come up with the resources to support these facilities. One additional observation, Telecentre funders repeatedly confuse the issue of Telecentre utilization rates with the issue of funding and sustainability. . . . Telecentres have or at least should have the mission of providing internet enabled



services and opportunities for access and use to those otherwise unable to obtain such access, make such use and thus achieve a degree of digital inclusion.

According to Gurstein, calls for greater sustainability are misplaced, since Telecenters serve as spaces to alleviate problems caused by the lack of investments by the government. In 2014, Brazil passed law 12.965, Marco Civil da internet (Brazilian Civil Rights Framework for the internet), which declared access to the internet as a right to every citizen. Thus, the internet was reclassified as a universal service that every Brazilian citizen has the right to access, similar to how education and health care have been classified in the country's constitution. However, in Brazil, the focus of the debate about public schools and hospitals centers on improving the quality of their services and stopping embezzlement rather than making these spaces sustainable. It is understood that the government is responsible for using taxpayers' money to provide such facilities to its citizens—but not as an investment vehicle. With this in mind, why are Telecenters being criticized for being unsustainable? Even drug cartels saw CTCs as vital spaces for the communities, so why didn't the government? One of the goals of this book is to call for a reformulation of how politicians perceive CTCs and who is responsible for keeping them running for populations in marginalized communities. I believe it is necessary to think of realistic ways to steadily maintain the CTCs without being so dependent on unstable governments.

#### LAN HOUSES: CAN A MUNDANE TECHNOLOGY BE FOR-PROFIT?

The LAN Houses I visited in the Territory of Good were located in Gurigica (Gueto LAN House), Itararé (Point LAN House), Bairro da Penha (Games LAN House), and Jaburú (Cyber LAN House). Gurigica and Bairro da Penha were set in the middle of the hillsides, between São Benedito and Itararé. These communities presented similar geographic characteristics; they were heavily populated and had all kinds of houses, from shanties to three-story brick houses. Walking into these favelas gave the impression that every space was taken up by houses. The unplanned settlement led to the formation of narrow, endless alleys that sprawled across the entire hill like a giant spiderweb, connecting the bottom of the hill (Itararé) to the very top (São Benedito). One of the few differences I noticed between Gurigica and Bairro da Penha was that the latter had a very tense environment, since the drug cartel there was in constant war with the cartel settled in São Benedito.

The LAN Houses were owned by local residents and located in spaces adjacent to the owners' houses. Gueto LAN House had five desktop computers, two inkjet printers, one Xerox machine, and two first-generation PlayStations, each hooked up to a small TV. Lisa maintained the space during the day, and her husband, Rogério, helped in the evenings. Rogério was also in charge of the computer and network maintenance. During the day he worked as an office boy for a local bank. Office boy is a common occupation in Brazil in which the person performs several tasks related to office work, but mainly delivers objects of value or picks up documents. At Games LAN House, Ronald took care of the grounds and computers, while his wife helped with printing services, burning CDs, and typing CVs. Games LAN House had nine PCs, two Xerox machines, and four video game systems (three PlayStation 1s, one Xbox) hooked to one TV each. Cyber LAN House had three computers and one printer; Point LAN House looked more like a traditional internet café, with ten computer stations, two printers, and a service desk where Luis helped people find specific websites, burned CDs, and fixed computers.

LAN Houses were buzzing with activity during the day. People were coming and going, gathering in the middle of the room, chitchatting, buying one-hour slots, and requesting photocopies. I never saw the LAN Houses completely empty; there were always people purchasing something or just hanging out, playing *FIFA* on PlayStation while jovially pushing and punching each other. The space and environment of the LAN Houses replicated the favela lifestyle. The walls were decorated with posters of their favorite games and local business flyers—a very different appearance from similar centers in other countries, which impose a particular vision of how they should be used. In *Invisible Users*, Jenna Burrell (2012) describes Ghanaians having a different approach to internet cafés—decorated to give their consumers a sense of being in the Global North (US or Europe).

In LAN Houses, computer users demanded attention from the owners because they needed help finding specific websites or transferring files from the web to their pen drives (USB flash drives). Thus, help from the owners' spouses was constantly demanded in order to properly serve the users. LAN Houses were more accessible to the favela dwellers than Telecenters because they were inside residential areas. As I described earlier, LAN Houses were rooms built off the owners' houses, whereas Telecenters were located at both extremes of the hill. In Itararé, the Telecenter's area was

mostly commercially oriented, and in São Benedito it was located away from the houses and the base of the drug cartel. LAN Houses were opened from 8:00 a.m. until 9:00 p.m. every day. Although these centers were geographically more accessible to the residents and stayed open for a longer period, the cost of using the technology was a factor that affected people's access, as mentioned by Rafael (seventeen years old):

We are all poor here; it is not like we have the money to stay on the internet or video games all the time. I try to save my money as much as I can, and when there's money left, I always come here [Gueto LAN House]. I come here about three or four times a week but get on the computer about twice. What I like about the LAN Houses is that they have Windows; I can play *Counter-Strike* [CS] and it doesn't crash as much as the computers in the Telecenters. . . . It's not like I don't like the Telecenters—I think they are great and just as fun . . . especially because they are free. That's where I do my homework and watch YouTube. But when I want to have fun, I come here to play CS.

The favela residents did not perceive LAN Houses and Telecenters as being in competition. Instead, they saw them as offering complementary social and digital experiences, with different operating systems, opening hours, and locations. In LAN Houses, the PCs were equipped with old, large CRT and flat screens and pirated versions of Windows XP. Luis, the owner of Point LAN House, mentioned that he tried to use Linux before, but the users did not like it. He said that “the people hated Linux; they found it hard to use. It was also hard for me to keep the machines updated. Every time there was a major update, which would significantly change the layout of the system, it caused lots of complaints from my customers.”

Lisa similarly tried open-source software (OSS), complementing Luis's observations by questioning the business viability of OSS and original copies of Windows. She told me, “I tried Ubuntu here, but their word processor is bad. Have you tried BR Office? It crashes all the time and it constantly requires updates. My internet can't afford to update stuff this often. I find MS Word to be the most reliable.” Software and cost remained a persistent concern for her. “Also, my users' favorite game is *Counter-Strike*, which doesn't work on Linux. . . . I can't afford to buy legal copies of Windows; they are too expensive. I wouldn't be able to keep my business open.”

The owners did not let me know how much money they made per month with their LAN Houses, but they mentioned that they were profitable. They made enough money to “get by” and live an “acceptable life.”

Ronald described his situation: “The money I make here, I can pay my bills and save some. It’s not like I’m rich or I can leave the favela, but I can’t complain about my economic situation. [The money] stays here in the community anyways. . . . I buy all of my stuff here in the little markets.”

According to them, original copies of Windows would not be financially feasible for their centers; a single original Windows copy was priced at R\$650.00 (approximately US\$270.00 at the time). Rogério and Ronald mentioned that they acquired computer and network maintenance skills by watching online tutorials and spending time tinkering with machines. As I observed, they also provided maintenance for favela residents. People said they had computers at home, with some mentioning a dial-up internet connection, and all relied on LAN Houses to fix their PCs. Creuza (thirty-two years old) described her gratitude for this service by saying, “I’m really glad Lisa and Ronald are around. . . . My kids break this crap [computer] all the time. . . . I don’t have the money nor the time to go to Reta da Penha [a wealthier area with formal computer repair shops] to fix it.” With an ironic laugh, she asked, “How am I supposed to bring this encumbrance [CPU] in a bus packed [full] of people, travel for forty-five minutes, spend all my money and still make it to work? All in one day? Life is hard . . . even when you have this magical technology.”

Expanding LAN Houses to also be repair shops was an opportunity that both owners saw balancing their desires to help the community and have an extra source of income. Ronald, owner of Games LAN House, said,

Nowadays everyone can buy a computer, especially because they can buy it in installments and pay it in forty-eight months. The problem is that they don’t know how to use it properly. . . . People would come and ask me if I could fix their computers since I maintain the computer at my LAN House. I saw it as an opportunity to broaden my business. . . . Now I get computers with a thousand viruses, fried boards . . . and if it wasn’t for me they wouldn’t be able to fix their computers since I charge them a fair price and usually recycle boards.

Scholars and practitioners (see Mori 2012; Soares and Joia 2014) have stated that the business model of LAN Houses was fated to disappear due to the fast spread of personal computers and the internet. Both were becoming cheaper and more accessible, even to the poor. However, besides being important community centers, LAN Houses have proven adaptable to market needs. In the early 2000s, these centers were solely focused on computer

and broadband internet access (R. Lemos and Martini 2010). Throughout the years they have expanded their business to provide access to imported video game consoles. At the time of this research, LAN Houses were not relying on technology access as their only source of income but had expended to bring broadband access to nearby houses and provide repair and maintenance services to the community's technology. They become the de facto internet service providers of the favelas.

#### LAN HOUSES AS SAFE SOCIAL PLACES

LAN Houses were not only one of the community's main gateways to the online world—they were also places where the locals socialized and found safety from the constant conflicts involving the drug cartel. Despite being different from Telecenters, LAN Houses were also appropriated by favela residents as their Mundane Technology. LAN Houses were seen as a sacred space by everyone. The mothers from Territory of Good preferred to leave their children playing games there rather than unattended at home or playing in the streets, and they even hosted birthday parties there. As Magdalena (a thirty-one-year-old domestic worker) described it, there was a high risk of teens being recruited by the local drug cartel. They believed that criminals did not go into these locally owned facilities because they perceived them as being beneficial to the community. She said:

I don't have the money to pay for a babysitter to take care of my children. My life is rough, you know; their father got lost in life and I have no one to help me. I work all day to put some food on the table. It breaks my heart to know what could happen to them. I can't leave them unattended. I'm more relieved to know that they stay in the LAN House. I give them some money, enough for one hour to play on the computer, but then they hang out with other friends in there.

The case of Magdalena is representative of many women domestic workers living in favelas. Existing since the early years of Brazilian society, domestic work originated in the exploitation of slave labor during the colonial period. Although the country's constitution now recognizes domestic work as a profession and workers enjoy the same rights as other workers, the sector is still predominantly composed of women who are poor, Black, and undereducated. Domestic workers, usually considered the country's poorest-paid women, have little formal education, and their cultures and ethnicities are stigmatized by the hegemonic system of values (Brites 2014).

An occupation dominated by women (about 92 percent) also registers very high levels of informality, meaning that 70 percent of them don't have their work cards signed by their employers (Elias 2019). As claimed by the Brazilianist and historian Brian Owensby (2001), domestic work represents a central element of the classist structure of Brazil's society since it affirms the identity of the middle class, marking a distinction between a class that should not be engaged in manual labor and another that is destined to take care of it. LAN Houses, as Mundane Technology, became safe playgrounds where women workers left their children so they could face subalternity and receive a modest paycheck for taking care of children from upper classes.

Other services provided by LAN Houses also went beyond providing internet access. The locals could pay their utility bills, buy cell phone recharge cards, play video games, print documents, and make copies. Gueto and Game were centers of the community in other ways, too; every day the mailmen dropped off a box in the LAN Houses with the mail of the people that lived in the area. One of them explained why he could not deliver the mail directly to people's homes:

The address written on the mail does not correspond to the actual place where the addressees live. The people here don't have formal addresses so they just give out an address of places close by hoping that their mail will reach them somehow. I have been working in this area for a long time, so to make their lives easier I just drop everything here in the LAN House so they come to just one place.

The LAN House owners had a drop box where people came to check for their mail. Yet, the owners said they did not have the time to sort the mail. Lisa laughed and said simply, "It is not my job and I don't have the time for that. . . . Also it is not necessary, people here in the community trust each other; no one will steal anyone's bills and pay them." Although Lisa was joking, her statement referenced the sense of belonging that favela residents shared. Residents felt they mattered to one another and to the group, and they shared a faith that their needs would be met through their neighborly commitment.

The LAN Houses charged the users by the hour to use the computers and video games. A single hour cost around R\$3.00 (approximately US\$1.75), with another R\$2.00 (US\$0.75) for Wi-Fi internet. Jefferson (seventeen years old) was a frequent user of LAN Houses who spent most

of his allowance playing *FIFA* on PlayStation. Recently, his main activity had been chatting with his friends on Facebook because, he said, “I can’t go to talk or play soccer with my friends that live up on the hill or at Bairro da Penha. It is too dangerous for me to go there. . . . There are always shootings going on.” The constant conflicts between drug cartel members in the region kept the people from hanging out in the streets and alleys. Yet, the favela residents found a way to break the boundaries set by the drug cartel by maintaining their social relationships in the LAN Houses.

Adults mostly visited LAN Houses for the same reasons they visited Telecenters: to type their CVs, seek jobs online, and use e-government services. For example, Fátima printed her criminal background document so she could visit her relatives in prison. “My nephew is in jail in Viana, and my brother can’t visit him because of his background, so I end up being the spokesperson between them. . . . Living here in the favelas doesn’t make me feel part of Vitória, but when the web page finds my information [background check system] I feel that I’m still part of the city.” Adults sought out other online services such as filing taxes and applying for government documents, but the limited number of services provided by the government, such as issuing criminal background certificates or booking vaccination appointments, was often criticized for being inflexible. Lourdes (forty-two years old) told me, “Our lives are already filled with problems and the government could at least try to make things easier. . . . I can’t afford to take a day off from work so I can go to São Lucas [public hospital] just to schedule a doctor’s appointment.”

Despite the limitations of e-government services, LAN Houses, just like Telecenters, became the point of contact between central governments and these communities. Favela residents worked long hours and depended on inefficient public transportation. They had to leave home very early and return late. Their busy schedules left no time to go to the city hall to deal with bureaucratic services, as mentioned by Jair (forty-nine years old): “I lost my ID last month and I haven’t found the time to go to the civil police office, which issues a new ID. . . . My boss won’t let me take a half day off to go there and deal with this.” Jair’s situation was quite common among favela residents, who often couldn’t find a way or the time to deal with anything that needed to be resolved by the government and had to rely on the e-government services available at CTCs.

## BRINGING HOMEWORK TO THE LAN HOUSE

LAN Houses were also perceived as fundamental extensions of the public schools in the area, because students got together after school hours and used the computers for their assignments. The computer rooms in the schools were not open for the students after class time and were only available upon the teachers' request. The computers were also obsolete, having been recycled and brought in from departments that belonged to the city government. The internet connection was slow—João (seventeen years old) reported that a 1 Mbps connection link was distributed to eight computers usually shared by thirty to forty students. He described his frustration with the limitations: “The classes in the computer lab are useless. I can't do any research; it takes forever . . . and to do research for my homework I have to go to Gueto LAN House. Here, at least, I can find help online and offline.”

Children from different ages and school grades developed a peer-learning process where they sat in groups of four or five in front of a computer and did their homework together. First they debated their questions and studied topics with each other. Then they would get online only if they could not figure out an answer or to clarify the topics they were studying. They were able to afford this peer-learning process every day because they split the cost of using the computer—usually a fraction of one hour. Although those children did not engage in dialogic learning with their schoolteacher, as Paulo Freire (2000, 72) proposed, they still created the conditions for dialogue among themselves. According to Freire, their actions fostered the epistemological curiosity of the learner, promoting free and critical learning.

Adults also benefited from the educational potential of the LAN Houses. Mr. Alvares (fifty-seven years old) was a frequent customer of Point LAN House. However, he was mostly interested in services other than computers. He was illiterate and initially unmotivated to use the internet. When I asked what he did there, he said, “I would come in to meet people and buy cell phone recharge cards, but after watching and listening to what my friends were doing here [Point LAN House], I became interested.” But to accomplish his goals, Mr. Alvares had to overcome the first obstacle: learning how to read and write. Luis, owner of Point LAN House, admired his persistence. “It was a hard task to help him, but he was always getting help from me and his friends that were on the computers next to him. . . . Now he is able to communicate with his grandchildren on Facebook.”



Although the benefits afforded by the LAN Houses may have turned them into shrines from the perspective of favela residents, the businesses still faced serious problems that could jeopardize both them and the community. Lisa described time-based challenges that users confronted, noting that “the drug cartel is setting a very early curfew for the community, so the people can’t leave their homes and use the LAN House after school and work.” Because of the current poorly built infrastructure (discussed in the previous chapter), the internet providers were not providing fast broadband connections in the favela. Luis and Lisa contracted a 3 Mbps internet plan—the fastest available to them—for their LAN Houses, but they had to share the connection with at least five computers. According to Lisa, users didn’t complain, for the most part, because it was the only internet access they had. However, “the problem is when I have to make a security or Windows update. It takes forever to update every computer I have. It is dangerous because I have to stay in for the whole night and expensive since I have to pay for electricity.” It was unwise to have any business running after the curfew set by the drug cartel.

Despite these issues, LAN Houses proved to be Mundane Technologies that afforded safety, citizenship, social relationships, and even education. The cases presented here illustrate just some of the achieved promises of LAN Houses. So far, literature on CTCs has labeled such private access venues as sites for individuals to simply interact with and through the internet. However, as I describe, LAN Houses served the community by helping residents to achieve broader social goals and activities. A limited understanding of CTCs is a consequence of the literature focusing almost entirely on the United States and a fairly narrow definition restricted to initiatives from government and nonprofits. For example, Davies et al. assert that CTCs are “generally nonprofit, locally-based organizations that provide IT to groups that do not get access to it in other ways” (2003, 7). However, other scholars and practitioners have defined CTCs in a broader way to include community-oriented for-profit ventures. For example, Servon and Nelson state that “broadly defined, CTCs are community-based efforts to provide computer access and training to disadvantaged populations that would otherwise not have such access” (2001, 280). For them, an essential characteristic of CTCs is that they do *not* originate from a top-down initiative. Instead, “in the absence of comprehensive public or private efforts to close the technology gap, community technology centers have emerged at the grassroots level.”

A similarly broad vision of CTC is espoused by CTCNet, a network of organizations and institutions that adopted that name in 1996 (P. Miller 2000, 212). Among their members, they include not only “non-profit organizations, churches, academic institutions and the like” but also “training centers, internet cafes, shelters and such” (CTCNet n.d.). One may argue that LAN Houses could be financially exploiting an already exploited area. However, LAN Houses were owned by favela residents, and the profit made from them seemed to stay in the communities, as mentioned earlier by Ronald, who said he would “buy all of my stuff here in the little markets.” I argue that favela LAN Houses are the functional equivalent of CTCs. As I have articulated in this chapter, they are Mundane Technologies that afford favela residents the ability to alleviate sources of oppression and to mobilize themselves toward a quality of life they desire. LAN Houses were social spaces that went beyond the technical: they offered not only computer access but also opportunities for informal instruction and mentoring, opening up opportunities for skill building that would not normally be provided to the favela population. This is illustrated profoundly in the story of Luis, the proprietor of Point LAN House, and Mr. Alvares. Connecting with family members motivated Mr. Alvares to acquire not only computer skills but also more fundamental literacy skills. LAN House owners played a firsthand role in offering informal training to users.

Why is it important to classify LAN Houses as CTCs and a Mundane Technology? LAN Houses have received a lot of bad press in Brazil, which compromised their reputation and potential. These centers were blamed for teenagers staying out late at night and ditching school to play games. LAN Houses were also labeled as “gambling houses” (Angeluci and Galperin 2012).<sup>11</sup> Although these centers could be used in these ways, I have presented the other side of LAN Houses. As a Mundane Technology, they contributed to the well-being of the favela residents, promoted human agency, and alleviated sources of unfreedom. The centers provided a space that helped the residents overcome the difficulties of living in a marginalized and unsafe area. Understanding the potential of LAN Houses and reclassifying them as CTCs could lead to policies that promote their propagation. Consequently, rather than enacting laws that create barriers for CTCs, such as those that forbid their presence near schools (Law #4.782/2006), socio-digital inclusion could become the norm.

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11. Gambling houses, illegal in Brazil, are often associated with organized crime.

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# Technology of the Oppressed

## Inequity and the Digital Mundane in Favelas of Brazil

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