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Can a community technology center be for-profit?

A case study of *LAN houses* in Brazil

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Abstract: *Community technology center* (CTC) is a term usually associated with facilities that provide free computer and internet access, and sometimes training, to people lacking the resources to have a computer in their home. Such facilities are generally established through a collaborative effort on the part of government and non-profit organizations, as well as corporate and private citizens. Libraries, telecenters and infocenters are examples of CTCs where low income people access such technologies. However, in Brazil, a majority of the population accesses computers and the internet in for-profit establishments called *LAN houses*, similar to cybercafés. Over the years, LAN houses have gained great popularity in the poorest areas of Brazil, especially in the *favelas* – slums located in urban areas. Since the marginalized residents are not able to afford personal computers and internet access, LAN houses have become not only the communities' main gateway to the online world, but also places where the locals socialize – even to the point of hosting birthday parties – and find safety from the constant conflicts involving the drug cartel. Based on ethnographic research of LAN houses located within the favelas in the city of Vitória, Brazil, this paper examines the benefits provided to the community by such businesses. It also argues for an expanded use of the term community technology center in order to include establishments such as LAN houses, since they are also oriented towards developing the community.

Keywords: community technology center, *LAN house*, ethnography, digital inequalities

Introduction

Maria[1] and her friends arrive almost every morning at Gyga Point LAN house to do the usual: chitchat about the 9 o'clock soap opera, check their Facebook accounts and look at recipes. But these days, the ladies from Itararé are coming in for an important cause: they are trying to raise money so the construction of the "little" square in their community can be completed. Tired of waiting on the city government, they go to the LAN house to learn new knitting patterns on YouTube to make from baby clothes to dishtowels. Maria sells their crafts every Wednesday in a stand at the farmers market, and their profit is used to buy cement and pay for extra people to work in the construction site: "I understand that the money raised won't be enough, but it will help a little bit and will get people motivated to make a difference in the community" (Maria).

One year later, Maria and her friends are satisfied with how things have turned out. The "little" square is ready along with the soccer field. The money raised by the ladies was also

[1] All names have been changed to protect anonymity.

enough to buy outdoor furniture such as tables and chairs. "Now I have two places to hang out at, the LAN house in the morning and the 'little' square at night". After raising money with the skills learned at the LAN house, the ladies from Itararé developed their own little business of crafts and snacks: "Working at Gyga Point is fun because I can learn new things and chitchat on Facebook" (Maria). Leonardo, the owner of Gyga Point, never thought his LAN house could one day help to promote local businesses: "People come here to print flyers, do taxes and learn new things […] I guess you can't really predict how people will use technology".

LAN houses have gained great popularity in Itararé, just like in other poor areas of Brazil, especially in the favelas. Since the marginalized residents, such as Maria and her friends, are not able to afford personal computers and internet access, LAN houses have become not only the communities' main gateway to the online world, but also places where the locals socialize – even to the point of hosting birthday parties – and find safety from the constant conflicts involving the drug cartel. Based on ethnographic research of LAN houses located within the favelas in the city of Vitória, Brazil, this paper examines the benefits provided to the community by such centers. The literature on community technology centers (CTCs) has been almost entirely centered on the United States, and has primarily concerned itself with a fairly narrow definition restricted to initiatives from government and non-profit (e.g.: Davies et al., 2009). This paper also argues for an expanded use of the term community technology center in order to include establishments such as LAN houses.

Approaching computers from the perspective of the marginalized offers a different window for understanding technological use, political processes, social tensions and cultural values, especially of those experiencing digital inequalities. We hope to encourage policymakers and technology designers to develop and promote more suitable technological solutions.

Digital Inequalities in Brazil

The marginalized population in Brazil is deprived not only of proper services for their basic needs, such as health and education, but also from access to technology and internet. Brazil is currently the 63rd country in internet access: only 33% of its population has access to the internet at home, just below the world's average of 33.49% and countries such as Uruguay, Chile, Russia, Serbia and Bahrain (Neri et al, 2012). While 75% of the upper social classes are connected to the internet, only 20% of the lower classes have access to the online world. Also, approximately 31.45% of Brazilians do not even know how to access to the internet (IBGE, 2010).

Policy makers have attempted to overcome the digital inequalities in Brazil by providing the marginalized classes with physical access to technology. It was stipulated by the Federal Law 9998 from August 17th, 2000, that the government would create a fund to increase the access of the marginalized to information and communication technologies (ICTs). The law was mainly concerned with encouraging the economically disadvantaged to purchase of computers and connect them to the internet. Such policy builds on a foundational assumption that considers ICTs to be the most important driver of societal prosperity, enabling the global use of new communication technologies that will eventually lead to a massive social and economic transformation.

In 2005 the Brazilian government invested over US$400 million in various programs such as "Computers for All", equipment, infrastructure and tools to extend technological access to the poor. The government was mostly concerned about lowering the price of computers and pushing them into people's homes, neglecting to provide social and educational programs that would lead to appropriation of the technology (Rebelo, 2005). Such strategies were deemed unsuccessful because the targeted people were not using the technology in the ways expected by policymakers.

Because of the past failures, Brazil is currently trying to face the issues of the digital inequalities with approaches that are less technologically deterministic and more focused on

individuals and communities. To that end, the country is currently promoting the spread of *telecentros* and *LAN houses*. Telecentros are facilities where the general public can access computers for free. The computers are equipped with a variety of open source, and sometimes closed source, software and are connected to the internet. Some telecentros offer computer lectures and workshops to communities in order to improve social and technical skills. Such activities are an attempt to promote use of the technology to fulfill individual and community needs like increasing human capital and employment. The government, NGOs, and the private sector own Telecentro units.

According to the Internet Steering Committee in Brazil, LAN houses are responsible for almost 50% of the internet access in Brazil; in marginalized areas they account for 82% of the access (Teixeira, 2009). Although LAN houses are privately owned businesses, the government provides credit lines and loans with low interest rates in order to promote and spread the number of facilities, especially in the marginalized areas where they are typically implemented.

LAN house's Context

The term "LAN" stands for local area network, and the term LAN house is used directly in Portuguese without translation. The concept of LAN houses originated in South Korea in 1996, as PC bangs, and it was first brought to Brazil in 1998 by the South Korean Sunami Chun. Chun was the director of Monkey, the first LAN house in Brazil. In 2003, it had 23 units in 7 Brazilian states and one in Mexico (Pereira, 2007). At that time, internet in Brazilian homes was expensive, rare and had a poor quality, which motivated the quick spread of the LAN houses in urban and rich neighborhoods.

Over the years, LAN houses became practically a rarity in these more affluent areas for two main reasons: users were able to afford internet in their homes because broadband was becoming cheaper, and the Brazilian government, at federal and state levels, was passing several bills that attempted to keep young users away from such facilities. For example, RJ state bill 4.782/2006 prohibited LAN houses within 1 kilometer from any school and bill 3.437/2004 required every underage user to have a special authorization signed by their parents. Such bills were designed under the assumption that the users were ditching school and spending long and late hours in the LAN houses playing games.

Around 2004, LAN houses gained great popularity in the poorest areas of Brazil, especially in the favelas – slums located in urban areas (Lemos & Martin, 2010). Since economically marginalized people were not able to afford personal computers and telecommunication companies did not provide them with adequate internet infrastructure, LAN houses became the communities' main gateway to the online world. With their proliferation in the poor communities and favelas, the Brazilian government saw in the LAN house phenomenon a way to promote the digital and social inclusion of the marginalized. Politicians, who once perceived such facilities as "bad guys" in richer neighborhoods, now are trying to revoke past bills, such as the aforementioned RJ 4.782/2006, in order to promote the spread of more LAN houses in poor areas.

In the favelas, entrepreneurial locals see the LAN house as a business opportunity since internet access is still an issue for the residents. LAN houses charge rates varies between US$1.00 to $2.00 for each hour accessing the computer, internet or playing console games. The customers are mostly youngsters who use the facility to socialize and play computer games such as *Counter-Strike* and *FIFA* (Lemos & Martin, 2010).

LAN houses are places where locals socialize; game players often yell at each other and internet users walk around reading others' screens. The computers are arranged side by side without partitions between them, unlike "cybercafés" that are targeted for private and discreet internet access rather than online gaming. They are also different from the telecentros, which are places intended for silent, individual computer use without disturbing others. LAN houses have become the main place for updating and checking social networking sites, such as

Facebook, playing games and socializing, and this has transformed these spaces into a hotbed of activity for youth and others (Pereira, 2007; Silva & Gushiken, 2010).

Heather Horst (2010) observed that "this face-to-face socialization surrounding new media use, coupled with the sociotechnical support provided by many of the LAN house owners and workers, has led many to characterize the social and digital inclusion provided in these spaces as The LAN Revolution" (p. 446) The LAN house has become a significant social and cultural symbolic place, with both Brazilian and external scholars studying the phenomenon (e.g., Horst, 2011; Nemer, 2013).

The growing use of LAN houses sheds light on the debate regarding the role of the State and market in the dissemination of digital technologies. On the one hand, following the critical theories of communication, there are those who deny the LAN house as a digital inclusion space (e.g., Gonçalves, 2007 ; Gabler, 1999). They believe that only centers managed and maintained by the State, such as telecentros, are effective because their goal is not to be profitable but to promote the technology appropriation and democratization. On the other hand, there are those who believe that, given the ineffectiveness of governments, LAN houses promote the true digital inclusion and community wellness in Brazil since telecentros are few in number and are tied to government policies rather than local needs (e.g., Carvalho, 2009; Pereira, 2007).

This debate demonstrates the important role that LAN houses play, especially in low-income communities. In this paper, we do not consider LAN houses to be the villains of the "Brazilian digital inclusion program"; on the contrary, we argue that by dint of their important role in communities where they are located, LAN houses merit inclusion include under the "umbrella term" of CTC.

Ethnography in the Favela

The field site for this paper was the neighboring favelas of Gurigica and Itararé located in the city of Vitória, Brazil. Favela is the term for slums in Brazil, most often within urban areas; they are mostly populated by people from marginalized social classes and often referred as zones of social abandonment and "subnormal agglomerations" (Perlman, 2006). Gurigica and Itararé are areas of occupied by squatters, often lacking public services or urbanization. Favelas tend to be ruled by drug lords who ensure individual residents' safety through their actions and political connections. They maintain the order in the favela by enforcing their own laws. The drug lords are respected by the residents because they create an environment in which critical segments of the local population feel safe despite continuing high levels of violence (Perlman, 2006).

The most famous favelas in Brazil are in the city of Rio de Janeiro, like Rocinha and Cidade de Deus (City of God). In order to prove the city can be a peaceful venue for the World Cup in 2014 and the Olympic Games in 2016, the police have been expelling the drug traffickers out of Rio, and the ones who escape attempt to hide inside favelas in cities nearby, such as Vitória (do Val, 2013). Their presence in Gurigica has turned the slum into a war zone. The drug lords from Rio de Janeiro teamed up with the rival cartel, from Bairro da Penha, and are trying to take over Gurigica's territory. Thus, performing ethnography in Gurigica and Itararé was very challenging; the goodwill and help of the community leader and LAN house owners allowed us to learn our way around and gain trust from our key informants.

As is the case with most favelas, most of Gurigica and Itararé's population relies on LAN houses and telecentros to access computers and the internet. During two months of fieldwork in 2012 and six months in 2013, this participation observational study focused on three LAN houses: Gyga Point, Life Games e LAN house and Guetto LAN house. 40 semi-structured interviews were performed with the users and owners in order to elicit the views of residents, and participant observation assisted in gaining a greater understanding of the context. The interviews sought to understand the locals' experience in the LAN houses and whether these establishments are beneficial or not to the community.

Until recently, studies of community technology centers (CTCs) have focused on telecenters and libraries rather than for-profit establishments. They have also tended to place an emphasis on measuring traditional economic indicators such as wealth or income; conversely, they have tended to neglect other outcomes that are more difficult to quantify (Gomez & Pather, 2011; Kleine, 2010), although some recent scholarship has begun to address this imbalance (Sey & Fellows, 2009). An overly quantitative approach risks treating people and cultures as abstract concepts, statistical figures to be moved up and down in the charts of "progress" (Escobar, 1995).

In this paper, we shed light on the important role of LAN houses in the favela, the challenge these centers face and the positive outcomes for the community. Such outcomes were based on the users' perspectives and allowed us to broaden our understandings of CTCs by including LAN house as such centers. Although we contribute to the literature by focusing on qualitative outcomes, we also acknowledge the importance of economic indicators for LAN houses. These centers need to be profitable in order to keep running and develop the community since they are owned by local residents of the favelas.

Life in the LAN house

According to our informants, LAN houses are seen as a "sacred" and vital place by everyone - just like the local school, market and church. The mothers from Gurigica preferred to leave their children playing games there rather than letting them play in the streets, at a high risk of being recruited by the local drug cartel. They asserted that criminals do not go into these locally-owned facilities because they perceive them as being beneficial to the community.

The services provided by LAN houses also go beyond providing internet access, which are other sources of income. The locals can pay their utility bills, buy cellphone recharge cards, play video games (Xbox and PlayStation), print and copy their documents. The users are charged by the hour to use the computers and video games, one hour costs around $1.00.

Bruno, 17, is a frequent user of Life Games e LAN house. He spends most of his allowance playing FIFA, but recently his main activity has been chatting with his friends on Facebook: "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 traffickers in the region have kept the people away from hanging out on the streets and alleys. The favela dwellers have found in the LAN house a way to break the boundaries set by the drug cartel and to maintain their social ties.

Adults mostly visit LAN houses to type their CVs, seek jobs online and use e-Government services, specifically to print their criminal background so they can visit their relatives that are 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" (Fátima, age 56). They also seek other e-government services such as filing taxes and applying for government issued documents, but the limited number of online services provided by the government is often criticized: "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" (Lourdes, 31).

The LAN houses are also perceived as fundamental extensions of the two public schools in the area. The computer rooms in the schools are not open for the students after class time, and are only available upon the teachers' request. The computers are obsolete; they were recycled and brought in from many departments that belong to the city government. The Internet connection is slow, as the 1 Mbps connection link is distributed to 8 computers that are usually shared among 30 to 40 students: "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 Guetto LAN house" (João, 13). Adults are also benefitted by the educational potential of the LAN houses. Mr. Alvares, 57, was a frequent customer of Gyga Point, but he was mostly interested in services other than using computer. He was illiterate and was not motivated to use the Internet: "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 [Gyga Point], I became interested". Mr. Alvares had to overcome the first obstacle, which was to learn how to read and write: "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" (Leonardo, owner of Gyga Point).

Although the benefits afforded by the LAN houses may have turned them into shrines from the perspective of favela dwellers, they still face serious problems that could jeopardize their business and the community: "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" (Roberta, 28, owner of Guetto LAN house). Leonardo, owner of Gyga Point, is mostly concerned with the infrastructure in the favela: "Changing light bulbs here is a frequent activity, but they are cheap; what really concerns me is how often the power supply units fry. Most of the time I don't have the money to buy a new one right away, so I have to put the computers away until I can buy new power supply units [.…] It really hurts my business. I guess the ones I can afford are not good. I wish there were stronger and cheaper units."

Because of the current poorly built infrastructure, the internet providers are not able to provide fast broadband connection in the favela. Roberto and Leonardo contracted for their LAN houses a 3 Mbps internet plan, fastest available to them, but they have to share the connection with at least 5 computers. "The users don't complain too much because this is the only internet they can access [.…] 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" (Roberta). As Roberta mentioned, it is dangerous to have any business running after the curfew set by the drug cartel.

Although the LAN houses face serious issues, they have proven to be places that afford safety, citizenship, e-government services, social capital and even education. The real cases presented in this section illustrate just some of the potential that can be promoted in LAN houses. Due to the importance and benefits provided by these businesses to the community, we argue in the next section for an expanded use of the term community technology center in order to include LAN houses.

Discussion: LAN houses as CTCs

So far, literature on CTCs has been almost entirely centered on the United States, and has primarily concerned itself with a fairly narrow definition restricted to initiatives from government and non-profit. For example, Davies, Pinkett, Servon, and Wiley-Schwartz (2003) assert that CTCs are "generally nonprofit, locally-based organizations that provide IT to groups that do not get access to it in other ways" (p. 7).

However, other scholars and practitioners have defined CTCs in a broader way that can include community-oriented for-profit ventures. For example, Servon and Nelson (2001, p. 280) 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." For them, an essential characteristic of CTCs is that they do not originate from a top-down initiative: "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 (Miller, 2000, p. 212). Among their members, they include not just "non-profit organizations, churches, academic institutions and the like," but also "training centers, internet cafes, shelters and such" (CTCNet, n.d.).

It is helpful to conceptualize the goal of CTC as digital inclusion; as a consequence, defining digital inclusion can give us specific criteria with which to identify a CTC. Crandall and Fisher (2009, p. 5) develop a definition for digital inclusion that draws on the seminal report from the United States' National Telecommunications and Communication Administration entitled "Falling through the Net" (McConnaughey, Sloan, & Nila, 1995).

Digital inclusion involves not just the provision of computer and Internet access, but also skills development and content production. For Servon and Nelson (2001) each of these three items can be characteristic of a CTC.

Based on these criteria, we argue that favela LAN houses are in fact CTCs serving that constituency. First, they clearly provide access to a population that would otherwise not enjoy it. Second, by offering opportunities for informal instruction and mentoring in computer usage, they open up opportunities for skill building that would not normally be provided to the favelas. This function is illustrated profoundly in the story of Leonardo, the proprietor of Gyga Point, and Mr. Alvares. In this example, connecting with family members provides a motivation to acquire not only computer skills, but also more fundamental literacy skills. The LAN house owner plays a first-hand role in offering informal training to the user.

The third criterion, content creation, is harder to identify within our data from LAN houses. Servon and Nelson (2001, pp. 286-87) state that CTCs oriented toward content help their users both assemble content from the open Web and use it to create new content. Even so, it is significant that those authors see this content-related function as only characteristic of some CTCs; the clear implication is that other CTCs do not share this function, and hence that content creation is not strictly essential to the definition of a CTC.

In summary, then, our study finds that favela LAN houses fulfill the most essential characteristics of other sorts of CTCs by both providing access to computers and the Internet and – informally – offering training. Although content creation is considered by some authors to be part of digital inclusion, as well as a third function of CTCs, there does not seem to be support for the view that this function is *essential* to the definition of a CTC. In short, then, favela LAN houses are a kind of CTC.

Conclusion

Through this exploration of LAN houses in the favelas of Vitória, Brazil, we have noticed the commonalities between such technology centers and CTCs, and thus, argue for an expanded use of the term community technology center in order to include establishments such as LAN houses.

CTCs can be characterized as places which provide not just computer and Internet access, but also skills development and content production (Servon & Nelson, 2001). As shown in our data, LAN houses clearly provide access to a population that would otherwise not enjoy it, and, by offering opportunities for informal instruction and mentoring in computer usage, they open up opportunities for skill building that would not normally be provided to the favelas. The content creation is harder to identify within our data, not because LAN houses don't afford it, but because Brazil, as other countries in the global [technological] periphery, has a long history of content consumption, of any kind, instead of creation (Miranda, 2000). Hence, it is an issue that requires a much deeper analysis involving cultural and socio-economic factors, and not just technology access and skill building. In any case, content creation is not strictly essential to the definition of a CTC and, therefore, doesn't go against our main argument.

Although LAN houses face several issues that affect their business negatively in marginalized communities, such as lack of proper infrastructure, curfew set by the drug cartel and inefficient public policies, they still remain vital to the community as the main gateway to entry for the marginalized in the digital world (Nemer, Gross & True, 2013). LAN Houses serve important functions to the people such as providing a safe location from drug cartels, informal learning, social capital maintenance and providing technological access. These technological spaces have come to have a far greater meaning ascribed to them than the quantifiable advances often associated with technology. Shedding light on people's experiences in LAN Houses broadens our view of different ways that technology and internet is used, and perhaps thereby facilitate the development of more appropriate policies and technologies for this population.

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