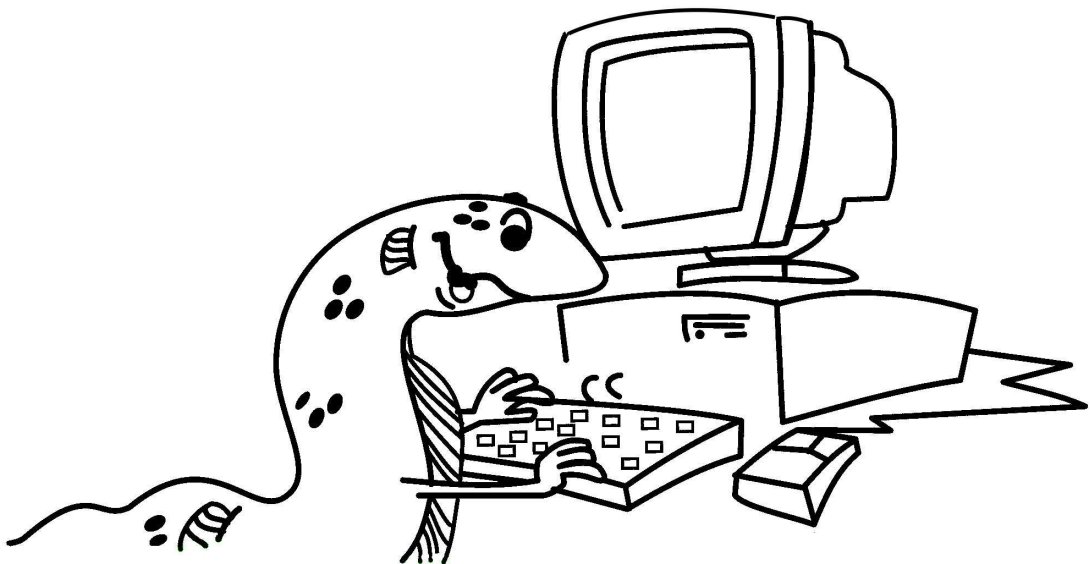


Amazonian Geeks and Social Activism

An ethnographic study on the appropriation of ICTs in the Brazilian Amazon



Marie Ellen Sluis, 6192645

ellen.sluis@gmail.com

Supervisor: Geert Lovink

Second Reader: Thomas Poell

Media Studies, MA New Media

Faculty of Humanities, University of Amsterdam

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The cover image originally comes from the logo of Projeto Puraqué, a collective of social activists that aim at digital inclusion throughout Santarém in the North of Brazil.

The image is modified in that I have removed the name of the project and the url <http://puraque.org.br/estudiolivres> that were both part of the logo.

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Acknowledgements

Although my parents' motto is "East or West, home is best", me and my brothers and sister have grown up in a very multi-cultural setting. I was only six years old when my oldest brother left for a one-year high school exchange to the USA sponsored by the Rotary Club, and ever since parents have received about 15 exchange students from all over the world "in return". In the meanwhile, my other brother and sister too replaced our small hometown for Canada and Brazil respectively, and the latter could not help returning to Brazil year after year. Eventually, she ended up living in São Paulo for almost four years. When it was my turn, I did not want to blindly follow my sister. Instead, I thought of Mexico or Ecuador, but Brazil was always in my head. And there was no way back. After visiting my sister over there in 2002, and having lived with the several Brazilian exchange students at our home, I knew I wanted to go there as well.

So, in 2004 I left my parent's home for Ascurra, a tiny little city in the South of Brazil. It was all but what I expected from Brazil; a very traditional Italian village, surrounded by traditional German cities, and there was no Samba, Capoeira, Caipirinhas or anything that corresponded with the image I had of Brazil. But there was already something that made me want to return. Now, when looking back, I know what that was. It was the Brazilian people.

In the Netherlands I finished my BA in Communication and Information Sciences, already with a strong focus on new media. After my graduation, I could not wait to apply what I had learned in another country. Without much deliberation, I decided to go back to Brazil. This time, I choose São Paulo, the artistic, economic and cultural centre of Brazil. Soon, however, I replaced by job at a fancy design studio (using pirate versions of Adobe Design) for a small NGO called Projeto Alavanca, located in a neighbourhood called São Remo. It was a space where community members could take free courses on various subjects (from arts, to mathematics to journalism to graphic and web design), in order to provide these kids free education and to get them off the street. In fact, their aim was to socially include these people.

In 2009 I returned to the Netherlands for my MA New Media. That was right after my return from Projeto Alavanca, and only then I had the time to reflect on my experiences there. What did social inclusion mean, and what kind of process is that? What is the role of ICTs? I realized the magic and the importance of ICTs for the youngsters at Alavanca, and I spoke about that during a personal presentation for one of the initial classes of the MA program. Geert Lovink, who eventually has been supervising this thesis, then said to me: "Please go back to Brazil for your final research". As he has been (and still is) very much involved in the tactical media

movement throughout Brazil, he lent me a book on net_culture and activism in Brazil¹ and introduced me to the people involved in grassroots, low-tech DIY technology and open source movements. I realized that I wasn't done with Brazil yet. It resulted in another trip to Brazil, this time to the tropical and Amazonian North, in order to conduct my research on digital culture.

Geert Lovink's enthusiasm and knowledge about things in Brazil have inspired me very much. I want to thank him for his optimism, encouragement and support before, during and after my research. Also, many thanks to efeefe who has indicated me the many names and projects throughout Brazil and introduced me to the metareciclagem network, which became one of the foundations of my research. Special thanks to all the puraquean@s in Santarém, especially to Jader, Adriane, Tarcisio, Dennie, Marcelo for allowing me to accompany their activities during almost two months, and for guiding me through my ethnographic research. I would like to thank Dona Alice and Seu Donato for hosting me all these weeks. Thanks to the Submidialogia people in Mirinzal, Maranhão; especially to Thiago, for getting me there, and to Gil, for the beautiful pictures, of which I have used several in this work. In São Paulo, many, many thanks to my Brazilian sis Ivi and her roommate Guiliana, metarecicleirxs Sílvia and Gera and my hacker friend Ale for their everlasting patience and interest to discuss Northern culture, tecnobrega, gambiarras, and digital inclusion/culture initiatives throughout the country, and of course, for their great friendship. And finally, back in the Netherlands, John for his nightly revision, Laura for her intellectual support and enthusiasm, other friends who have not forgotten about me while I spent weeks in the library writing and last but not least I want to thank my parents for encouraging me to know other cultures and for their proudness and support.

1 Rosas, R., and Vasconcelos, G., (eds) *Digitofagia*. Radical Livros: 2006

1 Introduction

Back in the eighties, Brazilian poet and singer Cazuza sung that Brazil is going to teach the world about solidarity²:

*Brazil is going to teach the world
Different races living together; blacks, whites, Jewish, Palestinian
Because here rancour doesn't exist
There is a jeitinho (way) for everything
There is a jeitinho for everything
And there is a jeitinho for everything
Brazil is gonna teach the world
The art of living together in peace
And, after all, to be happy
To respect your brother...*

While “the Brazilian” is formed by a variety of different cultural characteristics, religions and ethnicities, which causes extreme cultural and ethnic differences throughout the country, there is something that holds these people together, something they have in common. There is something that connects them, which might be their history of exploitation, discrimination, and the need to survive in a society marked by inequality³. Their strong social cohesion and solidarity is expressed through their warmth, receptivity and inexhaustible will to help and to collaborate, not just being polite.

This solidarity is reflected in their Internet usage. The Brazilian hunger for online social networking had already struck me in 2004, when everyone already had an Orkut account and a Fotolog.com, while in the Netherlands at the time hardly any of my friends used social networking sites. Social networking is Brazilian nature. Also, free and collaborative culture

2 Cazuza “Brasil vai ensinar o Mundo” from the album “Por aí” in 1991. Original text: *O Brasil vai ensinar o mundo, A convivência entre as raças preto, branco, judeu, palestino, Porque aqui não tem rancor, E há um jeitinho pra tudo, E há um jeitinho pra tudo, Há um jeitinho pra tudo, O Brasil vai ensinar ao mundo, A arte de viver sem Guerra, E, apesar de tudo, ser alegre, Respeitar o seu irmão...*

3 See Ribeiro, D., *The Brazilian People*, Florida: University Press, 2000. See page 149: concerns a research on the profile of the live condition of the population in 1962.

gains significant interest, which might explain the strong Free/Libre and Open Source Software (FLOSS) movement that is existent in the country. The FLOSS philosophy and usage is strongly and increasingly present. Even the current government of president Lula da Silva has adopted a very receptive attitude against FLOSS, and is planning to use Linux in a major part of his administration⁴.

Bearing in mind these characteristics I wondered how digital inclusion initiatives would relate to these (digital) cultural characteristics in Brazil. Brazil is the fifth biggest country in the world, and its number of Internet users is the seventh highest, with 36% of its population online in December 2009⁵. Most of the other 64% that is still on the "wrong side of the divide" represents the lower class population, indicating the enormous inequality within the country. Whereas the richest part of the Brazilians is centralized in the urban regions of the South-East of the country, in rural areas and in the North and Northeast of the country the poverty rate is tremendously higher. As a result of recognition of the (increasing) technological inequality and a new government in 2002, digital inclusion became government policy.

Often, however, digital inclusion initiatives tend to be strategic top-down initiatives in order to help those that are *excluded* from a certain way of living in which *we are included*, justifying these attempts by arguing that our way of living is *better* than theirs. In the last decade this way of living has become one in which possession of and access to digital technologies plays a fundamental part, thus considering one that lacks access to information and communication technologies (ICTs) *digitally excluded*. That means that besides other divides in terms of access to, for instance, education, health care or other resources or essential services, which connote a division between the haves and the have-nots, there is now the *digital divide*, a divide that lately has gained significant interest from various parties⁶. Access to ICTs would reduce (digital) inequality, "empower" marginalized groups and serve as a catalyst for economical growth and social development. Thus, *The Digital Divide*, and *digital inclusion* are terms and concepts which indicate that there is a certain (global) technological inequality, and this global inequality seems to be dichotomous; distinguishing being included and being excluded as two distinct forms of being in the world. However, isn't this a conceptualization too limited? Should we speak not of different *levels* of being digitally included, or rather of, *meaningful* digital inclusion?⁷ Or, at last, reconsidering meaningfulness, what does digital inclusion *mean* for the several actors involved in the digital inclusion process?

In Brazil, digital inclusion policy by the public sector has shifted from simply providing access

4 Freire, A., "Brazil and the FLOSS process", in: Lovink, G., and Zehle, S., (eds.) *Incommunicado Reader*. Amsterdam: Institute of Network Culture, 2005, pp. 11-29

5 "Brazil, Internet Stats and Telecom Market Report" Retrieved from <http://www.Internetworldstats.com/sa/br.htm> on 21/07/2010

6 See: Kucukaydin, I, and Tisdell, E. "The discourse on the digital divide: are we being co-opted?", in: *InterActions: UCLA Journal of Education and Information studies*. Vol. 4, (1), 2008. Retrieved from <http://www.escholarship.org/uc/item/85m2z8j2> on 22/02/2010.

7 See: Selwyn, N., "Reconsidering Political and Popular Understandings of the Digital Divide", in: *New Media and Society*. Vol. 6, 2004, pp. 341-362 (p 341)

to ICTs to projects in which the “diffusion of digital culture” has become the main aim. In this, the public sector is not the only actor on the Brazilian digital inclusion stage; the private sector, NGOs and networks of social activists too play their roles. The different actors have different characteristics, and thus different stakes in the process of digital inclusion. What is of interest in Brazil is the significant role civil society has come to play. Numerous informal and loosely organised groups of activist set up digital inclusion initiatives pursuing a grassroots and participative methodology for education, social engagement and innovation. They are connected through an *idea*, called *metareciclagem*, which departs from using low-tech and do-it-yourself technology. It stimulates the users' creativity and inventiveness by remanufacturing used hardware and garbage to create and appropriate technology, running free and open source software (FLOSS). They believe that this profound and meta-knowledge of technology enhances self-esteem, increases autonomy and would lead to social transformation.

In April 2010 I went to the Amazon, in order to conduct an ethnographic research on the usage, appropriation and role of ICTs. Pará is the second largest state of the country and possesses a vast quantity of natural resources and minerals, though simultaneously is the most deforested state of the Amazon⁸ and subject to mineral exploitation. The high poverty rate and the many cities and villages isolated from the urban regions that lack proper education, health care and access to communication and information are evidence of the discrepancy between the richness of the region and the unequal distribution of wealth among the habitants⁹. The region faces serious exploitation by transnational corporations and usually do not benefit from the wealth the area possesses, as people from rural areas face expulsion from their territories and have to move to urban areas. I imagined that, in a region without much infrastructure, access to ICTs would have an incredible impact on the people. I had read about indigenous people reporting on illegal logging by sending messages to Greenpeace¹⁰, and on a tribe leader that has spoken with the CEOs of Google in order to get their community on the map¹¹, both, however, initiatives by the West. But what about the millions of yet “digitally excluded”? Are they “being included” at the moment? And by whom? What are the different stakes by the different actors when including these people? Would they go *beyond* providing access? And whom would that benefit? That is, *in what* exactly are these people included?

In search for answers to these questions, I found Projeto Puraquê in Santarém¹², a collective of social activists who use ICTs not merely to digitally include people, but rather to socially include them. They focus on underprivileged groups throughout the region and offer them a

8 See: Vasconcelos, G., “Espaço[nave] – Manifestação Coletiva do Aparelhamento Midiático”. in: Rosas, R., and Vasconcelos, G., (eds) *Digitofagia*. Radical Livros, 2006, pp. 128-139

9 See: Vasconcelos, 2006

10 See: Banks, K., Concepcion, T., Elias, T., Iyoha, C., Muthond, G., Nnadi, K., and the Tactical Technology Collective. *Mobiles in-a-box, tools and tactics for mobile advocacy*. Tactical Tech: 2008 (p 17)

11 “Ragomakan (Google) goes to Amazon”. Retrieved from <http://googleblog.blogspot.com/2008/07/ragomakan-google-goes-to-amazon.html> on 01/12/2009

12 See appendix for map

large variety of courses, workshops and activities related to ICTs. They tend to go beyond digital inclusion and instead function as a social space in which people learn how to use ICTs in order to increase knowledge as a basis for sustainable personal development in the form of social engagement and autonomy. I got in touch with them thanks to the metareciclagem network in which people communicate through a mailing list, and thus have the contacts of everyone involved in the network. As I was interested in going to the North or Northeast of the country, Felipe Fonseca, who is one of the “inventors” of the network, indicated Puraqué in Santarém. He said: “It would be interesting to study Puraqué, because we don't know much about their work”. Puraqué is part of the metareclagem network, but they do not document and communicate their activities to the mailing list. People assume they are doing well, though they lack concrete proves of that.

I contacted Jader Gama, one of the founders of Puraqué. In the months before I would travel to Santarém, I had talked a lot with Jader via Google Talk¹³. Initially, I could feel his slight distrust about my intentions. Wasn't I another *gringa* that came meddling in their activities? However, soon he became very receptive and enthusiastic about my research. He assured me that they would help me as much as they could. I could stay at the project, use the kitchen and the bathroom. I would participate in the activities, and learn to know their everyday lives. And they would take me to rural and perhaps even indigenous communities in order to learn about their activities over there.

As they did not have any updated website or blog I depended on my communication with Jader in order to prepare my research and to have an idea on what to expect of their project and activities. For instance, one day he spoke to me on and asked me to pass my Skype address to him. A few seconds later about five unknown people called me at the same time. He then explained me that he was teaching a group of adolescents how to use Skype. The kids could not believe that they were talking to someone on the other side of the ocean. Soon however, the connection got worse and they went offline. Also, I remember that he responded my first email saying that they were curious to know me and my research. In response I asked him whether we could have a Skype meeting to talk things through. He then wrote: “Let's try to catch up this weekend, though it will depend on the good mood of our connection”. Apparently, that was reality in the Amazon.

Thus, equipped with a pretty concrete image of what to expect of digital culture in the Amazon and Puraqué's activities, I arrived in Santarém at the beginning of May. As soon as I spoke to Jader he said to me: “I need to tell you something. I hope this would not harm your research, but we are in the middle of a move of the project and all our activities at our base have paused”. Would that mean the end of my research that hadn't even started yet? Apparently not, as it allowed me to look beyond their methodology and investigate how it related to other digital inclusion projects. That means that my initial plans to observe the participants going

13 Google's instant messenger

through a process of "digital inclusion" at Puraqué gave way for a rather broader view on the activities on a longer term and a larger scale. I heard the stories of people that have been engaged with Puraqué for years, have studied what they do today, and what the impact of this project has been on their lives. Most undergo a profound social transformation, as they realize their capacity to cope with and understand ICTs, instead of being a mere consumer. Also, I had room to observe how this project positions itself within or next and articulates to other public, private and third sector projects. I lived together with the core group of the project and have seen them spreading their ideology throughout the region and simultaneously managing to sustain without any significant income. In fact, Puraqué turned out not to be a mere project. It rather is an idea, an ideology that was disseminated throughout the region. An idea with neither a particular physical space nor clear boundaries. Rob van Kranenburg told me that they once defined Bricolabs, a network that departs from the similar idea of collaboration and innovation, as a *smell*¹⁴. I would consider Puraqué a smell too. It spreads via other projects and initiatives, and via people. At some places it was stronger, at other weaker, but you could smell it nearly everywhere. However, their ideology was packaged in a certain methodology that was not as distributed as an actual *network*, but disseminated in a local though rather centralized manner.

My stay of almost two months in the North of Brazil gave insight in digital culture in that part of the Amazon. I spent most time in an urban environment, that of the city of Santarém, a city of nearly 300.000 habitants in Pará. In Santarém I stayed in the homes of the locals. These were simple houses though lively decorated with posters, large colourful fabrics to cover the brick stone walls, and improvised cupboards and other furniture. I experienced how they run out of water almost every day, usually for a couple of hours, live without landline telephone and lack an Internet connection. I have seen how life takes place on the streets, how people sit in front of their houses as soon as their working day is over. How they recognized me as the *gringa* who was temporarily living in the neighbourhood. They knew I was Dona Alice's guest, and always held me for a little chat with me when I passed by. They were always curious about my home country, though proudly told me about their region; about the forest, the marvellous beaches with clear fresh water, and the several typical and traditional festivities that occur during the year. I lived their lives, got to know their habits and day to day life. But also, I learned how the socio-cultural and political characteristics of the region were reflected in the electronic music scene and how they relate to digital inclusion practices.

In this work, I will discuss the several actors that are involved within the digital inclusion projects in Pará, the different stakes by each one of them and, most importantly, the effects they have on the to-be included. There is the private sector, the public sector, the third sector, activist networks (Puraqué), and the to-be included. In fact, there are the several "states of

14 See also "Final day presentation – Bricolabs", 09/03/2009. Retrieved from <http://networkcultures.org/wpmu/wintercamp/category/bricolabs/> on 14/08/2010

being digitally included"; varying from passive consumption to active participation and production, and several "stages" in between. Within the digital inclusion discourse, it seems that every party, according to their particular aims, has another conception of what digital inclusion should mean. In fact, it demonstrates the vague- and fuzziness of the concept, which allow the several parties to benefit from digital inclusion initiatives in a particular way. We might, for instance, wonder in what exactly a person will be included, and whether will this eventually benefit the users themselves.

I realized that these different aims and interests not simply result in a conflict, or a struggle, though that the intertwinement is rather complex. For instance, the activists at Puraqué do not in the first place intend to circumvent, or to subvert the top-down structures, though in many cases to establish a partnership and rather *hack* these programs by applying their "puraquean@ methodology" onto them. This rather interesting collaboration between the public and private sector and civil society is characteristic, as Fonseca once mentioned; this is possible because Brazil is so very disorganized¹⁵. After living there for a while, I realized that knowing the culture and their socio-political context was fundamental in order to understand digital inclusion and the impact or possibilities of ICTs on the people in this region, something that I could not have imagined without going there.

In the next chapter I will discuss theories on the concept of digital inclusion and the multi-stakeholder approach to bridge the "digital divide" as proposed at the WSIS in 2005. Subsequently I will outline local social reality and cultural practices in relation to ICTs in Pará. In chapter 4 I will introduce Puraqué and their grassroots methodology, followed by digital inclusion programs that are top-down and centrally implemented in chapter 5. In chapter 6 I will describe how these several projects and initiatives relate to each other. Concluding, chapter 7 gives room to several critical observations and discusses what "digital inclusion" includes today in the North of Brazil.

15 An anecdote by Felipe Fonseca quoted by James Wallbank at the Questioning Digital Inclusion Symposium at Access Space, Sheffield, on 14/07/2010

2 Digital inclusion. What does it mean?

"'Digital inclusion' is a vague and fuzzy concept. It allows different actors to have different stakes in the process, hiding this behind a term that suggests to be beneficial for the digitally excluded." Dougald White.¹⁶

Ironically, the rise of a "global information society"¹⁷ goes hand in hand with an increasing global technological inequality defined by the term *digital divide*. But, how global is this information society, as yet nearly 80 percent of the world population lacks access to the Internet¹⁸? And if the attempts to include this 80 percent will bridge this technological gap, could we then talk about technological equity? Or would there yet emerge another divide, such as, for instance, a *more advanced technological divide*? Where lies the boundary between having and having-not?

Over the last ten years there have been many attempts to digitally include those that lack access to ICTs, including the World Summit on the Information Society (WSIS); a pair of United Nations-sponsored conferences on the information society. The first summit took place in Geneva in 2003, followed by the Tunis summit in 2005. During these conferences the focus was among others on information and communication technologies as a tool for development (ICT4D) and one of the main aims was to bridge the global digital divide¹⁹.

The WSIS debates on the democratisation of access to ICTs raise a couple of questions. What does an information society mean? Who benefits from it? And who has a stake in it? Hans Klein argues that "a summit is an *institution*, a recurring social structure that constrains some actions and facilitates others". That means that certain opportunities are defined for particular classes of political actors in order to achieve particular outcomes²⁰. The WSIS summit aims at a global democratization of access to ICTs achieved by a multi-stakeholder approach (MSA)

16 A quote by Dougald White at the Questioning Digital Inclusion Symposium in Sheffield on 12-13 July 2010.

17 The term "information society" was coined at the World Summit of the Information Society and refers to a global society connected to ICTs.

18 According to the ITU in 2007 only 22% of the world population had access to the Internet. Retrieved from <http://www.itu.int/ITU-D/ICT/statistics/ICT/index.html> on 10/08/2010

19 "World Summit on the Information Society", Retrieved from http://en.wikipedia.org/wiki/World_Summit_on_the_Information_Society on 04/04/10

20 Klein, H., "Understanding the WSIS: An Institutional Analysis of the United Nation World Summit on the Information Society" in: Dean, J., Anderson, J. and Lovink, G. (eds.) *Reformatting Politics*. New York: Routledge, 2006, pp. 141-160 (p 142)

including governments, the private sector and civil society. This, however, does not as a matter of course benefit the entire global society equally, as every actor has a particular stake in it. These stakes are neither necessarily equal nor corresponding to one particular action or a specific outcome. In fact, within this approach exist two opposing models. The first, which is promoted by governments and private interests, sees deregulation of market and the neo-liberal logic as the condition for an "information society", in which information and knowledge become capital and can be "bought and sold on the consumers market".²¹ Secondly, as advocated mostly by civil society, prevails the idea that the information society should be open and inclusive to everyone, respectful of diversity and plurality, assuming that communication and access to information are a human right. Contrarily to the former knowledge and information are common goods²². However, these two models are contradictory. If information and communication become capital, it would fail to be a common good. Thus, the former model hampers the succeeding of the latter. Strikingly, precisely this contradictory model renders visible in today's digital inclusion policy.

2.1 Digital inclusion: between freedom and control

When talking about digital inclusion this usually includes *access to the Internet*. When we analyse digital inclusion initiatives the commercial logic of the Internet is a complicating factor, and it therefore has been heavily criticized by several authors. First of all, while the Internet is advocated for its democratic potential, this is threatened by the "ideological polarization around freedom and control"²³. Whereas *freedom* refers to the openness and freeness of the Internet, as a space in which every user can express him- or herself, regardless of race, religion, gender or ethnicity, *control*, on the other hand, increases when a user is digitally included and every step he takes online can be traced and controlled by authorities or companies, and when every bit of information he produces or consumes is linked to his identity²⁴. Of course, the freedom a user would experience online is an ideology in order to promote and "sell" Internet access. Market-oriented digital inclusion initiatives that aim at increasing the digital inclusion rate are usually promoted, or rather, justified as aiming towards a race-less, equal and global democratic utopia. Not only by "unapologetic capitalists such as Microsoft's Bill Gates", who claim that virtual equity is much easier to achieve than real-world equity, but also by "dreamy Californian "homesteaders" such as Howard Rheingold"²⁵. To the latter also belongs theorist Nicholas Negroponte, the founder of the \$100 laptop and the One Laptop Per Child (OLPC) association in 2004. OLPC is probably the most

21 Padovani, C. "Debating Communication Imbalances: From the MacBride Report to the WSIS" in: Dean, J., Anderson, J. and Lovink, G. (eds.) *Reformatting Politics*. New York: Routledge, 2006, pp. 181 – 204 (p 189)

22 Padovani, 189

23 Chun, W., *Control and Freedom. Power and Paranoia in the age of fiber optics*. The MIT Press, 2006 (p 170)

24 See: Chun, 2006 and Stallman, R. "Is Digital Inclusion A Good Thing? How Can We Make Sure It Is?" 2009. Retrieved from <http://www.gnu.org/philosophy/digital-inclusion-in-freedom.html> on 12/07/2010

25 Chun, 129, parentheses original

famous ICT4D example, which provides every child in developing countries with a laptop, in order to digitally include those children and expecting the simple laptop to bring about social change and future development of the country²⁶. However, to those that are socially excluded, mere digital inclusion is not a solution. The digitally included still faces the same unequal social, political and economic power relations. In fact, these power relations are enforced, as through digitalization a user can be increasingly controlled²⁷.

Also, the private sector neither aims at increasing freedom nor at socio-economical equity for the users. In fact they have a specific stake in digital inclusion. Through aiming at the amount of users yet to-be included, large Internet and hard and software corporations tend to maintain their oligopolies, and increase their sale. In this manner they are able to exercise a certain control over their users, by creating dependency on their hard and software standards. In this manner, ICT4D becomes “digital capitalism looking South”²⁸. Instead of democratizing access, market-orientated implementation of ICTs increases competition among individuals. ICTs (software and hardware), information and knowledge become capital, creating scarcity and competition²⁹. In this light, donating “free” (of cost) though proprietary hard and software to the excluded not simply increases the access rate, but instead retains oligopolies and increases competition eventually. That is, one might want to reconsider the *freeness* of the hard and software that is distributed. For instance, Microsoft has donated its software to the governments of several African countries, order to run Windows on their government’s national database systems. Thus, developing countries will take a step forward in the digitalization process and be able to participate in the global digital age. Universities and even literacy exams in several countries standardized their computers with Windows accordingly, justifying the decision to use the proprietary software by the idea that it is donated by Microsoft at very low cost or even for free. In fact Microsoft is interested in binding these new (potentially enormous) markets to its company, thus expanding capital in the South³⁰. Furthermore, the software may be cheap now, but once its users rely on the standards of the software, they may be charged the full price³¹. Such initiatives tend to provide ICTs for development in third world countries, but only for their personal interests, accumulating capital in those southern regions and creating dependencies on the standards of their proprietary software.

Accordingly, Michael Gurstein claims that “bridging the [digital divide] clearly has as its goal to

26 See: <http://laptop.org/en/>

27 See: Bandeira, O., de Melo Carvalho, “Os “incluídos digitais” são “incluídos sociais”? Estado, mercado e a inserção dos indivíduos na sociedade da informação”, in: *Liinc em Revista*, vol. 5, (1), 2009, pp. 19 – 31. Retrieved from <http://www.ibICT.br/liinc> on 02/12/2009

28 Nederveen, J. Pieterse., “Digital Capitalism and Development: The Unbearable Lightness of ICT4D”, in: Lovink, G., and Zehle, S., (eds.) *Incommunicado Reader*. Amsterdam: Institute of Network Culture, 2005, pp. 11-29 (p 19)

29 See: Santos, L., Garcia dos., “Consumindo o future”. In: *Politizando as novas tecnologias: o impacto sócio-técnico da informação digital e genética*. São Paulo: Editora 34, 2003, pp. 123-133

30 See: Reijswoud, V. van, and Jager, A. de, *Free and Open Source Software for development*. Polimetrica, 2008

31 Reijswoud and Jager, 38

ensure that everyone is accessible to consumer goods and electronically mediated marketplaces”³². Thus the *produser*³³ ideology of the Internet, where an active and participatory role is subscribed to the user, is being criticised, as structures of power are produced and maintained by only a few, being primarily governments and larger corporations. In fact, the ideological freedom of the Internet, and its participatory logic are coined as “communicative capitalism” by Jodi Dean³⁴. That is, the discussions about the openness and freeness of the Internet, and its inclusionary and participatory character distract us from what is really going on and “make appear as a public sphere what is clearly the material basis of the global economy”³⁵.

Thus, the inherently capitalist logic of the Internet and private-interests complicate the democratization of access to ICTs. Hard-to-resist offers—aid, investments, donations and free ICTs—from the private sector threaten the process of economical development as it hampers the development of sustainable, independent economies. As long as digital inclusion policy remains attached to and controlled by global market-orientated factors, access to ICTs remains scarce and competitive and therefore unattainable and unaffordable for many. While access to information and the ability to communicate should be a universal right, this fails to become self-evident³⁶.

2.2 “The city of control”³⁷

The existence of transnational networks such as the Internet accelerates the transcendence of traditional nation-state boundaries, and thus has a significant impact on today's politics³⁸. It increasingly eliminates territory and state authority, and the global private sector gains more and more power. However, the Internet also serves the government as it functions as a tool to exercise control over its online citizens. For instance, in his book *The Internet of Things* Kranenburg writes about information technology that is thoroughly integrated into our everyday activities and objects. He stresses its impact on our future by envisioning two cities; the city of control and the city of trust. In both cities citizens are constantly watched and traced by cameras, GPS systems, facial recognition, and RFID chips that are ubiquitously

32 See: Gurstein, M., *What is Community Informatics? (and why does it matter?)*. Polimetrika: 2007

33 See: Bruns, A., *Blogs, Wikipedia, Second Life, and Beyond: From Production to Produsage*. New York: Peter Lang, 2008. He writes about the shift from passive consumers in the mass-media era to a situation in which a user is allowed to produce, for instance, blogs, wikis, games. This he calls “Produsage”.

34 Dean, J., “Why the Net is not a Public Sphere” in: *Constellations: an International Journal of Critical and Democratic Theory*, Vol. 10, (1), 2003, pp. 95-112 (p 100)

35 Dean, 100

36 See: Bandera, 2009

37 See: Kranenburg, R. van, *The Internet of Things*. Amsterdam: Institute of Network Cultures, 2008. Van Kranenburg opposes two cities; The city of Control and the City of Trust.

38 See: Fraser, N., “Transnationalizing the Public Sphere”, in: Benhabib, S., Shapiro, I., and Petranovic, D., (Eds.) *Identities, Affiliations, and Allegiances*. Cambridge: Cambridge University Press, 2005, pp.45-66 and Sassen, S., *Territory, Authority, Rights: From Medieval to Global Assemblages*. Princeton: Princeton University Press, 2006.

placed in all kind of objects, creating extensive networks that control us (human and non-human beings). However, in the city of control the data is collected and used by authorities in order to increase their control over its citizens, while in the city of trust the citizens are given more control through a rather open network in which they have access to data, circumventing dominant power structures³⁹. Today digital technologies revolve around being a tool for both freedom and control. Although we already have the means to build towards a city of trust, currently we are still watched in a city of control. Usually the control of data is justified for security reasons. Increased fear of terrorism allows authorities to collect data in order to “increase the security of the citizens”⁴⁰. In relation to digital inclusion this means that the more a person has access to digital technologies, the easier authorities can exercise control upon him⁴¹.

Digital inclusion also serves the public sector as it facilitates communication between the public sector and the citizens. Through digitalizing all public facilities they eventually aim at an e-government, whereby a citizen is allowed to access all the government's services via the Internet. Naturally, digital inclusion in order to use the e-governmental services is promoted as being beneficial for the *people*; they no longer need to leave their homes and spend hours in lines waiting to be attended. Instead, all they need to do is download a form, fill it out and return it electronically. In the Netherlands the so-called DigiD (digital ID) is an example through which Dutch citizens can arrange all their public administration online. Clearly this not only benefits the citizens. A government will be saving billions by digitalizing public administration and the correspondence with its citizens⁴². Therefore, investing in digital inclusion programs is currently one of the primary interests of governments.

Another stake of the government, especially in developing countries, is the aim to use ICTs as a tool for economic growth. ICT4D departs from the technological deterministic thought that access to ICTs would capacitate people to enter the job market and thus contribute to a country's economical development. Particularly when the public and private sector increasingly become interwoven and governments ascribe a significant role to the latter in the

39 See: Kranenburg, R. van, 2008

40 See: Lyon, D. *Identifying Citizens. ID Cards as Surveillance*. Cambridge: Polity, 2009. In the paragraph called *Governance by Identification* (p 91) Lyon stresses how we are governed by constant identification in our everyday activities, as everything is digitized, such as for instance, credit card payments, registrations, etc.

41 See: Stallman, 2009

42 Report “ICT research, the Policy Perspective”. Retrieved from <http://cordis.europa.eu/ICTresults> on 26/07/2010

democratization of access to ICTs. Partnerships with ICT companies must result in the distribution of free hard and software in digital inclusion programs and increase free access to ICTs in computer labs. Governments tend to increase the digital inclusion rates within their countries, thus aiming at national economical development, facilitated communication with and increased control over its citizens.

2.3 Civil society's voice in policy making. Do they have a voice?

Over the years, civil society (CS) has come to play a bigger part in decision-making⁴³. Both organisations (NGOs) and other initiatives consisting of looser ties increasingly focus on digital inclusion of marginalized groups. For instance, during the second WSIS summit in 2005 in Tunis, CS made a number of propositions in order to define a new political framework of ICT4D in which ICTs are used as a tool to reduce poverty. Among these propositions were the creation of an ICT4D agency in all countries to ensure general coordination in order to put ICTs in the service of the poorest, the implementation of pro-poor regulations, support for community-owned and community-driven networks to use ICTs in rural areas and the development of free and open applications and contents that correspond to local needs⁴⁴. Strikingly, CS lacked the power or legitimacy to pressure other stakeholders, and as a result few of these propositions ever resulted in actual policy-making.

In fact, CS' power and legitimacy are two complicated factors, and one might wonder whether its power depends on its legitimacy, or on its organisational structure. CS lacks the power and legitimacy to influence policy making, though simultaneously its increasing bureaucratic and centralized structure hampers its efficiency and flexibility. Evan Henshaw-Plath claims that NGOs have become institutionalized. They maintain top-down, centralised and hierarchical structures, and operate like corporations and governments. Usually, the people at the bottom of the organisation's hierarchy experience very little decision-making power, let alone those that are *outside* the organisation, or rather, the citizens they are supposed to represent⁴⁵. Bernardo Sorj argues that NGOs are not so much alternative or opposed to the public and private sector but that they rather can be viewed as a continuum of them⁴⁶. Does an increased legitimacy or power also increasingly benefit the people it represents? For instance, several CS initiatives remain attached to the market and fail to focus on the individual. A Brazilian NGO called CDI (Comitê para Democratização da Informática) sets up digital inclusion initiatives in

43 See: B., "Civil society in the carousel: Who wins, who loses and who is forgotten by the multi-stakeholder approach?" in Drossou, O., and Jensen, H., (eds) *Visions in Process II – The World Summit on the Information Society, Geneva 2003 – Tunis 2005*. Berlin: Heinrich Böll Foundation, 2005, pp. 46-52

44 Peyer, C., "Financing the Information Society: From the almighty power of the market to the need for a development agenda" in Drossou, O., and Jensen, H., (eds) *Visions in Process II – The World Summit on the Information Society, Geneva 2003 – Tunis 2005*. Berlin: Heinrich Böll Foundation, 2005 (p 87)

45 Henshaw-Plath, E., "Network Technology and Networked Organizations" in: Dean, J., Anderson, J. and Lovink, G. (eds.) *Reformatting Politics*. New York: Routledge, 2006, pp. 129-140 (p 136)

46 Sorj, B. *Civil Societies North-South Relations: NGOs and Dependency*. Rio de Janeiro: Edelstein Center Editions, Publitz Soluções Editoriais, 2006 (p 18)

several countries across the world. They have established several partnerships with the private sector in order to democratise access to ICTs. For instance, one of their partners is Microsoft. The company donates its software in order to equip the PCs they use at their projects with Windows⁴⁷. Thus, they maintain strong ties with the private sector, expecting the market to be the solution for the technological inequality. This will not only enhance a user's dependency on this particular operating system, in this manner digital inclusion also maintains or enforces existent unequal power structures⁴⁸. A user is directed into a certain model that is proposed by software corporations. This impedes the user to develop skills that go beyond a basic usage of ICTs, which might eventually yield him several opportunities that are beneficial in a personal manner.

Writing on the North-South relations between civil society organisations Sorj too questions the role and power of NGOs in policymaking and to what extent they operate independently from the public and private sector. He claims that in the most powerful economies of Latin America, such as Argentina, Brazil, Venezuela, Chile and Colombia, NGOs lack the power to seriously influence state policies. At best they are contracted by the state, which happens in Brazil, in order to implement local services⁴⁹. As a result, these organisations become involved in top-down projects, instead of directly representing civil society at a grassroots level.

The above demonstrates how the attempts to make CS participation more effective and efficient have suppressed its main characteristic: diversity and plurality of voices. The pressure to organise CSO structures have concentrated this diversity into the “hands of a limited number of organisations”⁵⁰. This raises a couple of concerns regarding representation and participation in the process of policy making, as CS participation is often criticised for not responding to the local reality of the citizens it represents. Whereas in representative democracies the government has the mechanisms to measure the needs that are expressed by the people they represent, civil society organisations such as social movements that become institutionalized in the form of NGOs lack a legitimate vehicle for representation⁵¹. Not only is this problematic in terms of legitimacy, NGOs also come to define an issue for the public and not always conceive of the problem as the people affected by it⁵². The former might maintain deviating notions of a certain issue, which threatens democratic participation of CS in policy-making processes. Thus, as policy-making depends on particular interests and top-down organisations, they usually fail to take into account different cultural values and needs. In terms of digital inclusion, NGOs might have deviating ideas of what is beneficial for the digitally excluded.

Finally, what would be the stake of the to-be included? How would the excluded conceive of

47 See <http://www.cdi.org.br/notes/Parceiros> for an overview of their partners.

48 See: Bandeira, 2009

49 Sorj, 2006, 49

50 Busaniche, 48

51 Busaniche, 48

52 See: Marres, N., “No Issue, No Politics.” Amsterdam: Dissertation, University of Amsterdam, 2005

digital inclusion? Taking into account the stakes by several other actors, such as the accumulation of capital by the private sector and exercising increased control by governments, would a *user* aim at “inclusion in a consumerist society” or “being increasingly controlled by authorities”? Or would he rather, as according to other theorists, subscribe an active role to himself as an *active producer*, or a *produser*, rather than a passive consumer⁵³? Who decides what is beneficial for each particular user?

2.4 The haves and have-nots dichotomy

The growing number of theories and academic readings investigating the attempts to overcome the technological inequality are not only disputable because of the top-down structures and the several actor's interests. The general conception of the term is also rather simplistic as it quantitatively refers to the global unequal distribution of communication technologies using a generally unique parameter of who has and who lacks access to ICTs⁵⁴.

Neil Selwyn outlines four conceptual limitations that exist within the general dichotomous notion of the digital divide and digitally excluded individuals, which is, to his opinion, "too limited and rudimentary an analysis". He argues that we should first analyse (1) what is meant by ICTs, as ICTs do not merely refer to the Internet or computers, and (2) what is meant by having access to it, assuming that there exists an hierarchy in the quality or quantity of access an individual experiences. Furthermore, (3) what is the relation between access to ICTs and the meaningful use of it and (4) how can consequences of meaningful engagement with ICTs best be considered?⁵⁵ The latter question should be seen in terms of social enhancement and transformation of individual users, such as social cohesion and autonomy. He proposes various dimensions of participation in society as a framework to see the impact of ICTs on digital and societal inclusion, such as *production activity*, *political activity*, *social activity*, *consumption activity*, and *savings activity*. These activities reflect the extent to which users are enabled or empowered to actively participate in society⁵⁶.

Sorj continues by arguing that we should not speak of *the digital divide*, which relates to only one particular communication artefact or the abstract average usage of all communication vehicles, but instead of *digital divides*⁵⁷. By that he means that people can have either a mobile phone, or a pc, or both. Thus, they cannot be placed on either side of the divide. Furthermore, the digital divide is inextricably connected to other forms of inequality (poverty), such as low-income and illiteracy⁵⁸. Consequently, the idea prevails that a more equal distribution of ICTs can lift those that are excluded out of poverty, as ICTs are advocated as a tool in the fight against inequality. However, increasing access to ICTs can reduce the absolute poverty rate,

53 See: Bruns, 2008. Note his optimism about the active role subscribed to today's Internet “user”.

54 Sorj, B. *Information Societies and Digital Divides. An Introduction*. Polimetrica: 2008 (p 63)

55 Selwyn, 346

56 Selwyn, 351

57 Sorj, 2008, 62

58 Sorj, 2008, 64

though simultaneously it can increase social inequality⁵⁹.

In response to the limited conceptualization of the term a re-conceptualisation of the digital divide instead *qualitatively* analyses the degree of digital inclusion a user experiences. Instead of the simplistic binary distinction between the haves and have-nots it observes what digital inclusion means for the *user*. By this, these authors make clear that having access to ICTs not necessarily means efficient use of or engagement with ICTs, nor does it directly lead to more societal and economical equality eventually. However, the generality or rather, the vagueness of the concept allows the different actors to have different stakes, and thus to aim at various dimensions of digital inclusion. A government might aim at digital inclusion in order to increase its control over its citizens, thus merely providing access to them, by preference in a rather passive and consuming manner, whereas grassroots activist networks rather aim at digital inclusion encouraging active participation. Thus, asking what is meant by “meaningful” digital inclusion depends on both the particular stake an actor involved in digital inclusion has and its digital and social context, and therefore varies from passive consumption to active participation.

2.5 Digital Inclusion Revisited

Technological inequality is a complex phenomenon. Theories on and attempts to bridge the digital divide turn out to be rather problematic in several manners due to the paternalistic, top-down and strategic character that underlies most of these projects, initiatives and policy-making. Marcelo Buzato explains this by arguing that digital inclusion is usually referred to from the perspective of the already included. The included considers “being included” as a state of stability and homogeneity which is “good” and “necessary” for everybody, and the included is inclined to bring into the same state of being the “excluded”. Thereby he neither takes into account particular needs and cultural values of the latter nor rethinks in *what* exactly the subject will be included. Thus, inclusion moves towards a form of exposure to hegemony. This is a process in which meanings, values and beliefs of the subject are subordinated to the ones of a superior class; the powerful elite in society. The latter exercise *strategic behaviour* upon the subordinated classes in order to control them⁶⁰. The more we move towards a digitalized or global information society, the more digital inclusion becomes crucial in order to maintain and expand these power-relations⁶¹. The subject is then included

59 Sorj, 2008, 65

60 See: Certeau, M., *The Practice of Everyday Life*. University of California Press, 1984. Certeau claims that within the current society the power is exercised by authorities; for instance, corporations and institutions, a theory which he outlines in his book *The practice of everyday life*. These *producers* exercise *strategic behaviour* onto the subordinating class. A strategy is an entity, perpetuated through the things that it makes, which is the autonomous action of the producer, aiming at mass production and the homogenization of its audience. That is, the authorities, institutions or companies *produce* in a centralized, expanded, rationalized, delimited and *strategic* manner. They are considered ‘the stronger’, the ones who use *strategies* to take ‘action towards’ their adversary targets.

61 See: Buzato, M. “Inclusão digital como invenção do cotidiano: um estudo de caso”. In: *Rev. Bras. Educ.*

within and again exposed to the controlling power relations that are dominant in today's society. That means that digital inclusion not necessarily leads to positive social transformation that benefits the to-be-included.

Another consequence of digital inclusion is a simultaneously enforced feeling of exclusion. In an ethnographic study on popular culture in urban Tanzania Brad Weiss points at the feeling of *global disconnect*. As relatively marginalised people in a consumerist society become aware and familiar with the details of the lives of people around the world—through TV and perhaps digital technologies—they generally become aware that their lives fail to bear any significant relationship to the lives of people elsewhere⁶². Thus, when a so-called "new user" becomes digitally included their experience and understanding of themselves as being a global actor simultaneously entails an awareness of their marginalisation and subjugation to more powerful forces within the global context⁶³. Reconsidering questions such as "how does digital inclusion lead to increased control?", "does inclusion simultaneously lead to a feeling of exclusion?" and "what does inclusion mean in the context of a consumerist society, in which technological development is always ahead of the local available versions?", we might then wonder what to consider meaningful digital inclusion, and how this particular state of being enhances social transformation. Or, what is the user's stake in digital inclusion?

Buzato answers this question stressing that being digitally included not only means that we become exposed to hegemony but that it simultaneously allows us to subvert, or rather, circumvent the existing power relations and oligopolies that are strategically covering our current society. This subversion is rather *tactical* and, as opposed to strategic behaviour, focuses on the "cracks" in the vigilance in order to deflect the influence of the strategies⁶⁴. In terms of ICTs this means a rather creative and subversive usage of low-tech technology, characterized by ephemerality, flexibility, irony, and amateurism⁶⁵. Digital inclusion, then, in terms of the democratization of access as a universal right should not in the first place aim at a critical rethinking of politically organized forms of reproduction of standardization but at a creative process and to some degree at ownership and self-managed appropriation of these technologies⁶⁶. It is important not to aim at inclusion of those people by imposing them certain standards of ICTs, which we consider as 'good' and 'appropriate', but to provide them with means to communicate, to access relevant information and to interact with others, without being hampered by dominating forces.

[online]. vol.13, (38), 2008, pp. 325-342. Retrieved from http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1413-24782008000200010&lng=en&nrm=iso on 11/12/2009

62 Weiss, B. "Sweet Dreams and Hip Hop Barbershops, Global fantasy in Urban Tanzania", Indiana University Press, 2009 (p 24)

63 Weiss, 25

64 See: Buzato, 2008

65 See: Cateano, M., *Technologias de Resistência: Transgressão e Solidariedade nos Media Tácticos*. Unpublished ms., 2006. Retrieved from http://pub.descentro.org/tecnologias_de_resistencia_transgressao_e_solidariedade_nos_media_tacticos on 11/11/2009

66 See: Buzato, 2008

Put differently, while transnational networks either enforce global actors to implement top-down policies, as occurs through the multi-stakeholder approaches by private interests and (transnational) government initiatives, simultaneously ICTs serve grassroots activist networks to antagonise these very networks in order to oppose or subvert these dominant structures. In his work Kranenburg describes Bricolabs which is a network of people connected through an "idea". This network was originally initiated by a couple of Brazilians involved in projects that recycle and remanufacture used hardware in order to create new ICTs that run open source software. The aim is to discuss other possibilities that can serve as an autonomous alternative to the actual global economic model. Thus, they focus on new democratic processes by "restoring the citizen as a major actor in the global community"⁶⁷, as opposed to the current, passive role that is addressed to him. Kranenberg describes Bricolabs as environmentally friendly and as a communication platform that is open to anyone, hackable, affordable, and democratic, without monopolies and properties and "with a freedom that is inherited by any possessor"⁶⁸. He demonstrates how these alternative technologies oppose or circumvent the existent patterns of control and power and lead to sustainable alternatives to the "mainstream ICTs"; that is, proprietary hard and software. Finally, these alternative technologies should help us focus on an open infrastructure that can function as a tool to bypass or exist within the entire radio frequency network and thus allows us to create our "own power". In this manner, digital technologies form ties between several actors and within communities and provide a fundamental element for the construction of an alternative network, independent of centrally controlled networks of power⁶⁹.

However, this does not mean that those networks are equal in power. Arguably, size, (global) reach and organisational structure of the network play a role in its operating and exercising power on different scales. In this work I will focus on the tension between the global and the local, between top-down and bottom-up approaches in digital inclusion initiatives in the North of Brazil. Top-down initiatives are sponsored by powerful actors—governments, large corporations—but create dependency and passivity. Bottom-up approaches correspond more closely with local values and needs, but consist of weak ties, lack power, efficient organisational structures and, oftentimes, financial means to sustain. This precisely reflects the paradox I mentioned earlier, in which civil society's aim to democratize access to information and advocate it as a human right *contradicts* the dominant (private) structures and their stakes in policy making. In the following chapters I will introduce several different scale digital inclusion initiatives and their complex relations, focusing on Brazilian digital inclusion policy and grassroots activism in a both rural and urban regions in the Amazon.

67 Kranenburg, 31

68 Kranenburg, 32

69 Gurstein, 20

3 Afro-Amazonian passion and popular music: Social reality in Santarém

3.1 Inventiveness, innovation and creativity: Gambiarra

“The gambiarra is [...] a voice, a cry—of freedom, of protest—or simply, of existence, the affirmation of an inmate creativity”. Ricardo Rosas.⁷⁰

Whether or not a remnant from their history of exploitation, colonization and inequality, the Brazilian people have developed particular skills in order to deal with several everyday problems and obstacles. This *jeitinho brasileiro* (Brazilian way) refers to using your creativity to achieve a certain goal alternatively⁷¹. A perfect example is an older man that came to subscribe to a free course on Internet usage at the Posto de Internet of AccessaSP, a government project of the state government of São Paulo. Subscription is possible during a couple of days, though as this course is the most popular, the course already fills during the first couple of hours. So they told him to come back for the subscriptions of the next month, and that he should come at least two hours in advance. Subsequently, the man asked if he could not *buy* his place in the course at that very moment. Though joking, this shows how he tends to find himself an alternative to being there at 7:00 am. Or, for example, the girls I shared an apartment with told me that their TV technician offered them to illegally liberate some private channels. Instead of paying for receiving these channels they pay him a cheaper price. Both the girls - paying the technician a cheaper price in order to get these extra channels - and the technician - offering this "special" service in order to earn some extra money – use their *jeitinho* in order to circumvent certain rules and ease their day-to-day lives.

The *jeitinho* usually carries a fraudulent connotation and often times another person is losing out on your *jeitinho*. It is a system of using and being used, an exchange of benefitting and being benefitted of by others. However, this inherently creative and inventive way of achieving thing is also being used as a “solution provider” to rather physical-material problems, using your creativity in order to adapt the original function of certain objects so that they can serve

70 Rosas, R. “The Gambiarra: Considerations on a Recombinatory Technology”, in Boler, M., (ed) *Digital Media and Democracy. Tactics in Hard Times*. Massachusetts Institute of Technology, 2008 (p 351)

71 See: Fonseca, F., Freire, A., and Foina, A., “O Impacto da Sociedade Civil (des)Organizada: Cultura Digital, os Articuladores e Software Livre no Projeto dos Pontos de Cultura do MinC” in: Rosas, R., and Vasconcelos, G., (eds) *Digitofagia*. Radical Livros: 2006

an alternative function. This phenomenon called *gambiarra* is based on recycling of material and products that are considered obsolete by our consumer society in order to give them a second life⁷². *Gambiarra* is “[...] a guerrilla tactic, a plan of action, transmission and dissemination”⁷³ and refers to the ability to create all sorts of ad hoc solutions to everyday problems, using any available material. It is the inventiveness to explore technology and creatively transform what one *has* in what one *wants* or *needs*. During this process people learn, observe, fail and try again, needing large doses of spontaneous innovation⁷⁴. For instance, in a distant community, due to a lack of a high mast, the antenna to transmit the Internet signal was installed on the church, tied to the cross. Or in Santarém PET-bottles serve many *gambiarra* solutions. Once I saw a fifteen year old boy using the top half of a PET-bottle as a inventory “speaker” in order to amplify the sound of the music he was playing out loud on his cell phone. Also, and this is one of the most common *gambiarra* practices, people attach a scourer to the TV antenna in order to diminish noise and improve the quality of the image.

Gambiarra means the pulling of these objects out of their original context and addressing another role to them, though it also simply refers to looking for an alternative manner to achieve something. While in this context *gambiarra* has a rather economical connotation, several Brazilians told me that it actually is a choice; a way of living. Brazilians like to use their creativity and inventiveness in order to achieve things. It is not merely a characteristic of the lower classes in order to “survive”, but rather an attitude that people prefer. In a way, it is *tactic*. It is a subtle protest against a consumer society and a wink at the power-structures that make them behave in a certain pattern; a predetermined model. Instead of a *mere* solution to everyday problems it rather seems a lifestyle. It is something that is inherently rooted in their everyday culture.

How does this characteristic relate to digital culture in the North of Brazil? There has been written a lot about *gambiarra* practices, do it yourself and low-tech technology. For instance, the ability to appropriate technology to local cultural characteristics and standards, which results in various practices and activities in which ICTs fulfil different functions. Though not always tactical, they obtain access to and use ICTs often in an inventive and often alternative manner. In this chapter I will introduce the local social reality, and demonstrate how the people have given a meaningful role to ICTs within their cultural characteristics and practices.

72 See: Rosas, 2008

73 Rosas, 351

74 “Sobre_About” Retrieved from <http://mutirao.metareciclagem.org/conteudo/SobreAbout> from 02/07/2010

3.2 Social reality in Pará

The North of Brazil is a very poor and (still) underdeveloped region. In fact, the Brazilian history of colonization, imperialism and exploitation is still present, as the design of the current power structures in the Brazilian society is a remnant of the colonization era. That is, the majority of the people work in the service of a small elite, the latter benefitting from the exploitation of resources and labour. While those who are natives of the land work so hard in order to retrieve the material resources that are proper to *them*, ironically they hardly profit from this richness⁷⁵.

This is reality in Pará and the consequences are clearly visible in the urban area of Santarém. Santarém is a city of approximately 300.000 habitants. The city is surrounded by forest and large rivers, which make it relatively distant and isolate. From most cities the only way of transport is by airplane or, more usual, via the rivers. This is reflected by Santarém's infrastructure; the city centre where the harbour is located is the liveliest area in the city, as opposed to the other rather quiet and mostly peripheral parts.

Though not very recent, according to an investigation that outlines the profile of the living conditions of urban and rural groups in various regions in Brazil, Ribeiro describes Santarém as the city with the ugliest profile, where the mass of the population sinks to the lowest level⁷⁶. Today, Santarém faces a high unemployment rate as people from rural areas are evicted from their land because of deforestation and monoculture and are forced to move to the city. Quality of life is very low and many people lack primary necessities such as health care, education, and alimentation. Formerly, these people lived self-sufficient lives without needing much money. However, when large soy or mining corporations invade these areas they offer these people an amount of money in exchange for their house and land. These people usually lack any knowledge on the value of money in urban regions and for them a sum of oftentimes less than R\$ 2.000⁷⁷ to sell their property seems reasonable. When they arrive in the city, however, they can barely buy a decent house. Thus, these people end up living in the peripheral parts of the city, representing an increasing part of today's Santarenhos.

Monica is a woman who lives in Belterra, a small town about one hour by car from Santarém. She learned me a lot about the socio-political reality in Pará. She struck me by her incredible intelligence and I was astonished when she told me that she was only 22 years old. Although she has never finished university, she is very much involved in several socio-political activities, following her mother's example who is part of the syndicate that defends the rights of the

⁷⁵ Ribeiro, 172

⁷⁶ See: Ribeiro, 2000. Page 149 concerns a research on the profile of the live condition of the population in 1962.

⁷⁷ R\$ 2.000,00 is approximately €900,00, on values of June 27th 2010

workers throughout the region. This year Monica became alderman for the Workers Party of the municipality of Belterra. Furthermore, she has been participating for years in the community radio in Belterra, went to Sweden for a course on cinema, has been coordinator of the local Telecentro, is recently contracted to develop the (virtual) collection of a new museum, which exhibits the history of the village⁷⁸ both online and offline, and participated in a commercial for the Brazilian telecom company Vivo. Through the latter she managed to obtain a notebook and a modem for her proper Internet connection, which allows her to be online at home. The latter is worth noting, as both she and her family lacked the conditions to purchase these kinds of equipment. They live relatively far from the village and do not have access to electricity or tapped water.

When I visited her home in Belterra she showed me the soy fields behind her house and told me that it is been only a couple of years that they logged the forest. Formerly, their house was sheltered by the high trees. Whereas this did not have direct consequences for her family it does affect many people in a terrible manner. She told me about an interview she had with a man who owned a self-sufficient farm in a small community near to Santarém. One day, a large soy company offered the community members a sum of money intending to buy their territory in order to plant soy. Different than the other villagers this man rejected the offer and refused to sell his land. The man witnessed the soy being planted on the other territories surrounding his farm, which was left as a little spot in the middle. However, after a couple of months his cattle and crops started to suffer severely from the contaminating chemicals used for the plantation of soy and eventually he was forced to sell his property. However, the company's bid had lowered so much that, finally, he literally left empty-handed.

Another case, which is quite famous throughout the region, is the village of Juruti. Several years ago a large mining corporation called Alcoa approached Juruti and reached an agreement with the local authorities in order to start their mining activities throughout the area. They achieve this by promising a city or village future development of the region,

78 The village of Belterra is formerly constructed by Henry Ford in order to retrieve latex for the production of his Ford Automobiles. The large houses built in a typical North American style in the village belonged to the American visitors, while the natives lived in the smaller houses or huts. The latter worked on the fields, retrieving the latex from the rubber trees.

increased employment, economic growth, etc. To start up the production activities in Juruti over 2000 labourers were needed. At the time, Juruti's population counted an insufficient number of labourers and people from other villages moved to Juruti, after selling all their properties back home. What happens usually in the mining process is that after the two years that are necessary to construct the mine the amount of jobs decreases. Thus, many people will be fired, and become unemployed. Subsequently, in Juruti violence, drinking and drugs usage increased and the quality of life in the village, which today has rather grown into a small town, got significantly worse. Monica explained that the problem is that these people lack the rights on their territory and the means to do anything against these invasions. As they have little knowledge of what happens and too little power to resist they often times remain fulfilling a passive role, accepting inequality and taking it for granted.

3.3 Cultural expression: the local music industry

In urban regions the local music scene allows people to escape from their daily reality. The cultural expression is "Afroamazonian" and "reinterprets new experiences of trade and exchange, transforming their daily lives at the lowlands and the flooded forest"⁷⁹. *Brega* is the regional music style which combines Caribbean rhythms, "absorbed" by the original Amazonian culture (Caboclo and Indigenous), and is transmitted via shortwave radio and the pirate CD sellers throughout the city⁸⁰. In the nineties, digital technologies already facilitated music production, and an improved quality of the sound, but only in 2002 emerged a new style called *tecnobrega*. *Tecnobrega* is a variation of *brega* for which digital technologies are used in order to mix local rhythms with electronic sounds, and to remix Western songs with local rhythms⁸¹. The lyrics are always in Portuguese, even when the original song is in English. The dancing style is typical (north) Brazilian. People dance closely together, enabling sensual moves. This not necessarily depends on the type of music or a specific rhythm. For example, in Maranhão, the state next to Pará in which the major part of the population is afro-Brazilian, they have appropriated reggae in a similar manner. Seemingly, Maranhão is the only place in the world where people dance reggae *agarradinho*, literally translated "stuck". Similarly, *tecnobrega* is probably the only type of techno on which people stick to their partners and *agarradinho* move on the sensual rhythm of the music.

Although *tecnobrega* is criticized for being *brega*; cheesy, cheap, non-ethical and non-aesthetic, especially by the higher classes and the people outside of the region, it also is a form of cultural and technological appropriation. Foreign music is downloaded and copied and mixed with other music styles and local instruments, and (cheesy) texts that correspond with the local culture. During my stay one of the most popular songs was Beyonce's *Single Ladies*,

⁷⁹ Vasconcelos, 130

⁸⁰ Vanconcelos, 130

⁸¹ See: Lemos, R., and Castro, O., *Tecnobrega: o Pará Reinventando o Negócio da Música the Music Business*. Rio de Janeiro: Aeroplano Editora, 2008 and Vasconcelos, 2006

which women used to play out loud on their cell phones while watching the videoclip they had downloaded from the Internet. Strikingly, part of the text in English was substituted by an alternative in Portuguese, not corresponding much with the original. For instance, when talking about her ex-boyfriend, *Cause if you liked it then you should have put a ring on it* became *When I miss you*⁸² *I call your name*.

The cultural and artistic expression has been disputed by several cultural critics and theorists. On the one hand they apply theories of alienation and a lack of creativity and aesthetics. They distinguish high and low culture, the latter being rejected by the elite⁸³. Not only theorists, in general the major part of the (higher class) Brazilian population disdains this type of music. For instance, the adjective "brega" is derived from the music style instead of the other way around. The fact that most music is simply "copied" is considered uninspired and non-creative and the texts are claimed to be non-poetical. It is claimed that tecnobrega functions in the service of the cultural industry, being the re-appropriation of existing music produced for the market in order to respond to the local demand⁸⁴.

Whilst disgusted by the majority of the (higher class) population to me tecnobrega was popular culture in its purest form, as it clearly corresponds with the local reality and socio-cultural characteristics. Some of the lyrics, for instance, I would consider romantic, relating to these extremely passionate people, others I found rather sexist. However, both reflect a dominant machismo, or rather, chauvinistic culture blended with the Amazonian warmth and passion. In everyday life I experienced the chauvinism through the distinct roles of men and women in which men are very protective and women jealous, showing strong dependence on them. In Santarém I lived in the homes of several families, though I spent significant time at just one of them. These people were *Dona Alice* and *Seu Donato*, an aged couple living in a neighbourhood called Mapirí. In their home the men-women relations were very different from other families in Santarém as both always pursued a strong will to emancipate. Dona Alice, for instance, has been a member of the women's movement since they left community

82 The literal translation would be *when the 'saudade' consumes me I call your name*. Saudades is a Brazilian expression for 'missing' or 'longing', though not translatable in a similar manner. Brazilians especially like to use this word in romantic contexts, and claim that it is untranslatable.

83 See: Barros, L., "Tecnobrega, Entre o Apagamento e o Culto", in: *Contemporanea UFRJ Rio de Janeiro*. Vol. 4, (12), 2009 Retrieved from http://www.contemporanea.uerj.br/pdf/ed_12/contemporanea_n12_07_lydia.pdf at 01/07/2010

84 See: Facina, A. "Indústria cultural e alienação: questões em torno da música brega". Unpublished ms. Retrieved from http://www.unicamp.br/cemarx/anais_v_coloquio_arquivos/arquivos/comunicacoes/gt6/sessao1/Adriana_Facina.pdf on 30/06/2010

life for urban Santarém. She fought for the rights of women throughout the region in order to emancipate them. “Because the problem there, in their region, is the ignorance and passivity of women”, she told me. “In fact”, she said once, “*the women are even more chauvinist than the man*. They raise their sons giving them more attention, and by privileging them over the girls. They search for this role in which they are being protected and can be passive. We try to talk with them. We show them that they have potential, that they can, or should, do more rather than giving birth to and raising children.” She continued that, however, “many women, and especially over the last years, seem to ignore us, they do not seem to care any longer”. Actually, that is a very interesting observation, which I saw reflected in the popularity of the tecnobrega songs. Most women seemed to enjoy the lines of, for instance, the incredibly popular song *Ela sai de saia e de bicicletinha* (She rides her bike wearing a short skirt) by Banda Amor Real, which go:

*One hand on the handlebars, the other covering her panties
I shiver when she rides, though here hand in front is disturbing
(...) I can no longer stand this situation, let's remove this hand
(...) I want to see the colour of your panties*⁸⁵.

Whereas this song is rather sexist the version of Beyonce's *Single Ladies* instead is very romantic. It demonstrates how the narrative in English, showing the woman's independence and the strength, is substituted by a narrative in Portuguese about a woman who is totally in love with a man. She tells how much she misses him and how she cannot live without him. The independence expressed in the English version does not correspond to the local culture and thus the text is adapted to a more familiar scenario. Similarly, other texts are *Eu só penso em você* (*I only think of you*), expressing passion and independence. Strikingly, these romantic lyrics are usually sung by women. Male singers sing rather sexist lyrics, such as the *Ela sai de saia de bicicletinha*.

Considerably, some of the sexist lyrics cross the moral and aesthetic boundary as they demonstrate very little respect towards women. Some women in fact criticise these very sexist and women-unfriendly lyrics such as *Ela sai de saia de bicicletinha*—for instance, Dona Alice

85 See video clip at <http://www.youtube.com/watch?v=WbvAzWECU5c>. Last viewed 07/07/2010

curses these songs—as the text is very disrespectful. However, these texts are a form of cultural expression which reflects their reality. Chauvinism is so deeply rooted in their culture that that these lyrics are natural to them and apparently there is no room or demand for rather provocative or protesting texts. In a way this means that whilst the tecnobrega scene reflects the local culture it simultaneously reinforces the chauvinist men-women relations, as people accept the content of these lyrics and take them for granted.

3.4 Social movements: ICTs as a weapon

During my stay I have met many people involved in socio-political movements, aiming at emancipation of the people in order to achieve social equality throughout the region. In many of these movements I have seen the activists using ICTs as a "weapon" in their fights. In her work on indigenous communities and their usage of online social networks Eliete Pereira demonstrates how these people in isolated regions have appropriated ICTs to their reality. The Internet serves them as a tool to make their voices heard online. In case of indigenous conflicts, their websites function as mediators between governmental institutions and them, the affected people⁸⁶. They gain more political power as it allows them to report about logging, poaching and other crimes that threaten their local living circumstances⁸⁷.

86 See: Pereira, E. da Silva., *Cyborgues Indígen@s.br: Entre a atuação nativa no ciberespaço e as (re)elaborações étnicas indígenas digitais*. São Paulo: Centro de Pesquisa ATOPOS – ECA/USP, Unpublished ms., 2008. Retrieved from <http://74.125.47.132/search?q=cache:0xjKd7ACn18J:www.cencib.org/simposioabciber/PDFs/CC/Eliete%2520Pereira.pdf+eliete+da+silva+pereira+ciborgues+indigenas&cd=2&hl=pt-BR&ct=clnk&gl=br> on 01/11/2009

87 Banks, et al., 17



Fig 1. *Feminist Graffiti*. "The Proletariat cannot achieve full liberty without the emancipation of the woman". Taken in São Luis, Maranhão.

A specific case that demonstrates the usage of ICTs for political activism and community mobilisation is Juruti Velho, a municipality counting 47 communities. It is located about five hours by boat way from Juruti, the village that got involved in the mining company, and about seventeen hours by boat from Santarém⁸⁸. As tensions between the mining corporations and the locals started to run high their social movement gained strength throughout their territory. The community associations of the several communities articulated through communication via the community radio and at the time and managed to organise and mobilise the social movement to, different than Juruti, fight *against* the large mining company that intended to exploit their territory. They have been very successful. They managed to prevent the corporation from operating upon their land and won their rights on their territory. However, other threats are already emerging. Glaucia, a teacher of the local school, told me how they are currently mobilising their social movement again in order to fight against a hydroelectric dam project in Belmonte. Although Belmonte is relatively distant this project will have enormous social and environmental impact on people, animals and vegetation in the entire region. Glaucia explains that they are now tending to articulate the various municipality

⁸⁸ The distance in hours demonstrates the relative distance, as the absolute distance fails to show how isolated the community actually is.

associations and social movements such as, for instance, the nationally operating MST (Movement Without Land) and thus strengthen their network. In order to communicate with these various other movements that are widely spread throughout their region, the Internet and especially email is *fundamental* to organise their actions. “In fact”, she said, “while during their other, rather local fights the community radio served us to articulate the activists today, on a larger scale, a lack of access to the Internet would be a major obstacle for the achievement of community organisation and mobilisation. It would significantly decrease our strength and efficiency”.

Pereira also demonstrates how the indigenous use the Internet to create online, though not necessarily global, communities to interact with each other, simultaneously enforcing their identities and meeting other people and cultures. Also, these websites and online communities serve to articulate to bodies of support and the distribution of news and information about their reality. Especially interactive platforms and networks which allow the easy update of information have increased participation and the production of information by the indigenous⁸⁹. For Monica ICTs have benefited her in a similar way. Access to ICTs have played important, if not determining role, in both her attempts to communicate about these threats they constantly face and try to fight against and the several opportunities she encountered. She tells me that she would never have been to Sweden without the Internet. And without the course in Sweden she would not have been able to involve in video production activities locally. That is, Monica takes part in a youth movement called *Rede Mocoronga*, an online network set up by an NGO in Santarém called Projeto Saúde e Alegria, which connects kids and adolescents from four communities, two on both sides of the river called Tapajós. Through the blogs on the portal of this network they communicate their local reality to the outside world. She explains that she is very annoyed by the numerous documentaries, usually made by strangers, that give either a very unilateral view on their truth or simply tell complete lies. Through this network they tell their stories via the blogs, photos, and through several videos they themselves have produced. Thus, similar to the indigenous using the Internet, ICTs yield her too a form of power and recognition, which increase her influence and perseverance as a young activist. Strikingly, now that she has the possibilities to communicate easily to and with the outside world, she said that she would “never ever leave Belterra for other another city, wherever in the world”.

89 See: Pereira, E., 2008

3.5 ICTs, community life and development

"I don't want to live in the city, I want to live in the forest but to have access to all basic facilities such as health care, education, information and communication." Glaucia⁹⁰.



Fig 2. *Maguarí – community life*

Different than in Santarém life in rural communities is simple though rich and self-sufficient. Difficulties they face are a very limited infrastructure and the threats of large corporations

90 Informal conversation on the village square in Juruti Velho, with public school teacher Glaucia.

that invade their territories.

What the above stories have in common are the tensions between the local reality of exploitation, forms of resistance against them and emancipating movements that tend to create awareness at the people. ICTs can play a role in the articulation of several activist movements throughout the region, as showed by Monica and the activists in Juruti Velho, though they also serve the people in their everyday lives, as they have a remarkable impact on their perception of time and space and provide them access to resources and services for which they formerly had to travel to the city.

Particularly in rural communities people rather see ICTs as a tool to enhance *community* development. Life in communities is less individual than life in the city and people share a strong feeling of collaboration and solidarity. Development for them means to have what we have, though within their rural environment. Until now cell phones do not work in the major part of this region and fixed telephone is very limited. The most common way of transport is by boat, as the few highways and roads throughout the region are in very poor conditions and are often inaccessible in the rainy season. Online communication facilitates their daily activities. Formerly they depended on actual visits to contact someone, or on a postcard. Through the Internet they obtain access to information on events, activities and business, and on subscriptions for university courses. They no longer need to go to the city to transfer money or purchase products, as they can do that online. Furthermore, several essential services such as healthcare and education increasingly become accessible at distance. Also, they use the Internet to access more informal information such as recipes, the website of a TV show and to frequently get in touch with distant friends and family through email, MSN and Orkut. Thus, community members embrace digital communication technologies both for providing them access to several material resources and services without the formerly

necessary effort and increased access to information and communication with the outside world. The latter decreases the feeling of isolation and primitivity of community life and in a way puts them on the map.

Although the Internet brings knowledge into an isolated area in which knowledge was always attached to time and energy, it will also change rural life. In today's globalising society this is inevitable, but the Internet will definitely accelerate this process. The head of the municipality school in Juruti Velho, *professora* Valcinete, fears that the youth will prefer games and the entertainment the Internet brings over physical work in the crops. She explained me how people are changing their source of income from agricultural and self-sufficient to commercial, for instance, importing electronics for reselling, or starting other types of mini-businesses online. This has enormous impact on community life. For instance, those that formerly used to plant *macaxeira* (manioc), which is the basic ingredient of the northern Brazilian kitchen, have substituted the tough work for other types of jobs, or businesses. Subsequently, the manioc prices have significantly risen. Thus, she fears, their community will increasingly depend on the market, and loses its self-sufficiency and autonomy. She thinks that an overt change will be visible when the next generation grows older. Whereas for them, the adults, it merely facilitates their lives the youth is more likely to undergo a cultural transformation, which she expects to be not merely positive. She fears that today's youth will be enchanted by the entertaining and commercial attraction of the Internet and lose its cultural roots and the ability to value rural community life.

When I discussed these issues with other community members it turned out that they believe that the Internet, though used in the “right” manner, can also provide an alternative to Professora Valcinete's concern of alienation of community life. The Internet instead allows the youth to access information about anything they want. For instance, they envision high school

and university courses on distance through which the youngsters and adolescents can continue studying without the necessity to move to a larger city. That is, a lack of secondary and higher education is for now the main motivation for leaving the community for the city. Thus, instead of professionals leaving the community they rather gain professionals, which eventually contribute to sustainable development and increased knowledge throughout their region. These people have dismantled the “misleading” stakes by the private sector and are very aware that digital inclusion is not necessarily a good thing. However, they do have a specific stake in digital inclusion whereby they address a specific role to ICTs in order to enhance their autonomy and self-sufficiency as a community.

3.6 Social networking

In *The Brazilian People* Brazilian anthropologist Darcy Ribeiro shows how the Brazilian culture and identity have become the product of a long history of colonization, slavery, exploitation and a mixture of the different ethnicities. However, despite the ethnical differences of the people, a strong collective identity is constructed not through shared characteristics, though rather through the feeling of diversity in a process in which they have been torn from their cultural roots and which has been similar for all of them⁹¹.

While above I demonstrated both the functional role of ICTs and the its role as a tool in socio-political activism, when observing Internet usage in both rural communities and urban Santarém made me realize that ICTs also serve rather informal practices. Bearing in mind the Brazilian passion and ability to socialize I was not struck to conclude that what is done most indeed is social networking. It is the digital realization of what Brazilians do most, namely, *socializing*. Vanessa Pereira conducted an ethnographical research in a cybercafé called X-play in the South of Brazil. She noticed that the Orkut, MSN, and two specific games (Tibia and Counter-strike) were used most. In X-play *everyone* had an MSN account and *everyone* “had Orkut⁹²”. Strikingly, Orkut served to maintain the offline social structures and thus the online and offline social networks became thoroughly intertwined⁹³. In the Telecentros I visited, Orkut too was one of principal activities when people access the Internet. What they mostly do is writing scraps and viewing one another's photos—especially of the opposite sex. Moreover, what struck me is that they actually use social networking in order to *obtain* new friendships and relations with people they do not know. Several times I entered an Infocentro, and the first thing people asked me was if I had Orkut, and then they immediately added me to their friends list without even having exchanged a word with me. Also, people told me they search

91 See: Ribeiro, 2000

92 Pereira, V., “Na Lan-House: ‘Por que jogar sozinho não tem graça’, estudo das redes sociais juvenis on e offline”, Rio de Janeiro: Dissertation URFJ, 2008. Retrieved from http://www.dominiopublico.gov.br/pesquisa/DetalheObraForm.do?select_action=&co_obra=109500 on 17/12/2009

93 See: Pereira, V., 2008

for other people online and simply add them. After that they start talking with each other and become friends.

In some cases a community lacked an Internet connection due to the infrastructural circumstances. As a *gambiarra* solution one of these communities had set up an internal network through which community members inside the Telecentro could access and edit the pages of this network. Thus, they could post content and communicate with each other. Even though they were not accessing the Internet it yielded them an alternative to digital social networking and their socializing practices. They could not talk to distant people online, though similarly to Pereiras experience this digital social network became an extension of the “offline” social network.

3.7 Tecnobrega: appropriating music (production) to the local reality

Finally, ICTs are playing a significant role in both the production and the dissemination of the tecnobrega culture. The *Paraense*⁹⁴ music industry shows how people have created an alternative to the existing and dominant model of music production and copyrights. They have recognised the possibility of reproduction provided by the new digital technologies, which allow a passive consumer to evolve in production activities⁹⁵. Thus, the commercialization of the local culture provides an alternative to a centrally controlled and global market as an alternative market is constructed in order to circumvent the centralized production and distribution that is concentrated in the southeast of the country; mostly in São Paulo and Rio de Janeiro. Instead, this alternative model allows a rather horizontal manner of production. Local artists that are usually not recognized by the record industry are now allowed to record their own songs, burn them on CDs, and copy and distribute them. This is important because the limited Internet connection in the region impedes many people from watching music videos on, for instance, Youtube. In this manner, access to culture is amplified as the prices to purchase a CD are lower and those that have the means can listen and watch music (videos) at home or in a cybercafé⁹⁶. In fact, the alternative music industry effectuates a certain form of inclusion⁹⁷.

How do the alternative market and the inclusionary character of tecnobrega relate to *gambiarra* practices? Is it tactical? Giseli Vanconcelos, herself a native of Pará, writes how the lower classes of the population always seek for and create alternatives of consumption parallel to those of the elite, such as the *Camilôs*, the pirate markets that substitute chic shopping malls in order to serve the poor. In this way, the tecnobrega industry too serves as a

94 Paraense: from Pará

95 See: Lemos and Castro, 2008

96 See: Lemos and Castro, 2008

97 See: Apperley, T. H. Piracy in the Caribbean: The Political Stakes of Videogame Piracy in Chávez's Venezuela. Melbourne: University of Melbourne DiGra, 2007, on pirate videogames in Caracas, which allow marginalized people to enter the global media culture.

popular alternative to the dominant industry of mass culture⁹⁸. Weiss emphasises the construction of sociality through popular performances. However, he points at a simultaneous feeling of *exclusion* as the construction of sociality also generates a collective understanding of their local reality in the world. This enforces a sense of belonging to that other world, which is mixed with antagonism and conflict⁹⁹. In Pará this paradox is visible as they *adopt* Western music though simultaneously *reject* it as they appropriate it to their local culture and construct an alternative model of production. First they “digest” something good and existent, and then they mix it with local cultural values and standards it to create something “better”¹⁰⁰. In fact, the *narrative* and the rhythm of the music are adapted to the local culture in order to *respond* to their local reality and to enforce the cultural bonds that connect them. In a way, this idea relates to *gambiarra* as they in a way tend to circumvent the existent dominant power structures existent in the centralized model of music and cultural production and find themselves and alternative manner to both production and consumption. However, the fact that an alternative market is constructed does not automatically means that it is a *gambiarra* practice. In fact, *tecnobrega* culture fails to be *tactical*. A friend of mine once sent me a couple of *tecnobrega* songs whereof the texts were very emancipatory and provocative. However, these songs do not seem very popular and are not heard very much. Vasconcelos points at the fact that we are being surrounded by an ideology of consumption and information. This organisational logic is similarly spread in the emerging alternative economies and cultures as “this ideological system [...] produces consumers before it produces the actual product”¹⁰¹. Although they appropriate ICTs in order to produce and distribute culture independently the production is based on demand. *Tecnobrega* has become a market, an industry. It consists of polarized power structures and is based on profit. It remains parallel to and a derivative of the existing and dominating market and concentrated power structures and unequal distribution of wealth and profit remain existent in a similar form. The majority still consumes and production is still concentrated by a few artists. While it is an alternative to a global market, it does not *actually* subvert or play with existing hierarchical and dominating pattern. It is a subculture existent within the larger or “legitimate” culture rather than entirely alternative. However, Vasconcelos stresses how the disgust and non-recognition of cultural expression by the rest of the population enforces the experience of the cultural singularity of the region, where, as a result of ICTs, this singularity in a global context enforces their cultural identity¹⁰².

Vasconcelos advocates the usage of ICTs in a tactic manner in order to transform a “critical

98 Vasconcelos, 138

99 See: Weiss, 2008

100 Brunet, K., “Do-it-yourself as free culture practices. Perspectives of Brazilian network projects.”

Unpublished ms. 2005 Retrieved from <http://docs.google.com/viewer?>

[a=v&q=cache:Yyzt5o0mZJw\]:mökk.bme.hu/centre/conferences/reactivism/FP/fpKB+Brunet,+K.,+DIY&hl=nl&pid=bl&srcid=ADGEESj7TzAO6Y8VOsghG_dAFfdneji40KK51UgGwuyD2GQjfxU7rXBB2ia4cI NnW0WzbjB_o7tKY5p9U0JVUnhcu0xBK9uqINw3oiBh_4Iy0XU9LSZH0f23efLuMNT4ovkoBICClj&sig=AHIEtbRgPrkz3IPI4QyQpLsbGMDRW2Qp9A](http://docs.google.com/viewer?) on 16/11/2009

101 Vasconcelos, 138

102 Vasconcelos, 136

situation into a critical vision” and thus, creating conscience on their socio-political reality¹⁰³. However, while the popular culture is a reflection of their local reality, it simultaneously enforces this cultural characteristic. In a sense this hampers the aims of the several social movements to liberate and emancipate the people throughout the region. Tarcisio, Dona Alice’s son who I will introduce in the following chapter, tells me that it is a lack of dreaming. “People don’t dream, they don’t have dreams, or they think their dreams won’t ever come true. They have never learned to take initiative, or to be courageous and they have a very low self-esteem. They see their parents’ misery and take that for granted. They have very little hope that their life will be better one day.” How can technology be either a handle for the people to socially enhance or to create autonomy? Or, differently, how can it serve as a means through which traditional cultural characteristics are enforced? How is their social reality determining in their usage of ICTs? In the next chapter I will introduce a collective of social activists who maintain a grassroots methodology for digital inclusion, which effectuates several *gambiarra* practices. In this process, however, it turned out that they use *gambiarra* in fact as a *strategy*, a method, rather than tactically. By way of this the idea to use ICTs as a tool for social enhancement and autonomy is spread throughout the region.

103 Vasconcelos, 139

4 Grassroots activism – ICT as a tool for social inclusion

The Puraqué is a fish that lives in the Amazon Rivers and causes an electric shock when you touch it. Puraqué adopted this name, since they want to wake up people through a shock of knowledge.

Gambiarra has been a fundamental element in the numerous grassroots digital inclusion initiatives that have emerged throughout Brazil. These initiatives aim at the appropriation of do-it-yourself and low-tech technology to the local social reality, pursuing an alternative to the top-down digital inclusion projects – often by the public and private sector – and in a way trying to create autonomy within the existent unequal capitalist model. In Santarém Puraqué is a collective of social activists that spreads an ideology throughout the region, aiming at social engagement and emancipation through increasing collective knowledge. As innovative Brazilians they search a form of sustainable development based on the *generation of wealth through knowledge* about the daily and local reality (exploitation, violence, drugs, sex and unemployment) of the people¹⁰⁴.

4.1 History

About eight years ago Jader and Tarcisio founded Puraqué in the neighbourhood of Mapirí, at the time one of the worst neighbourhoods in the city. Many adolescents were involved in gangs and drugs traffic and the extreme violence on the streets was causing deaths. Both come from families that had always been involved in social movements and activities. Dona Alice, Tarcisio's mother, considered herself a feminist and both Jader's parents have always been members of the local social movement. Also, Tarcisio told me that when they were teenagers, they already brought together a group of friends called GAEPA (Grupo de Amigos Estudando para Agir¹⁰⁵) in order to fight against environmental crimes. For instance, they started a campaign against fishers that used to throw bombs in the water in order to kill large amounts of fish, though simultaneously they killed all other vegetation and animals. When they grew older they fell apart, as some went to university in other cities and others got married or

¹⁰⁴Gama, J. "PURAQUÉ: Uma história do futuro do software livre na Amazônia". Retrieved from http://puraque.comumlab.org/?page_id=2 on 07/08/2010 and Lima, P. "Santarém terá Pontão de Cultura Digital". Retrieved from <http://pontaotapajos.redemocoronga.org.br/2009/03/18/pontao-de-cultura-digital-do-tapajos/> on 07/08/2010

¹⁰⁵Group of Friends Studying in order to Act

decided that they had to arrange jobs and incomes. Jader, for instance, had started a printshop. However, due to some internal frictions with his companion he decided to leave. Eight years after the young activists had split up Jader met Tarcisio again. As the former was disappointed by the corporate sector they both realized the importance of a kind of social project involving technology that would improve the then awful situation in the neighbourhood. Ever since they were determined to continue working in that same direction.

Since their first base in Mapirí, the *puraquean@s*¹⁰⁶ have been moving throughout the city, working a couple of years in several neighbourhoods that are in need of a project that enhances social cohesion. In Mapirí, for example, their activities have had significant impact on the situation in the neighbourhood. Tarcisio told me that at the time Mapirí was considered the most dangerous, criminal and poorest neighbourhood. Naturally, that was the main reason for starting the project right there, intending to occupy the young criminals through courses and workshops on informatics and to provide them an alternative space to the street. The first year this alternative space was the tiny garage of one of their parent's homes and they used a couple of old computers to realize the first courses. To gather the first students they approached the most dangerous gang leaders of the neighbourhood and convinced them to take classes and frequent the project. Rogerio, one of the *ex-puraquean@s*, told me: "Strikingly these guys, even when from other gangs, really respected each other *inside* the project. Whereas they would *kill* each other outside the building, inside they *collaborated*. And they were in the *same* classroom!" The main objective of Puraqué was to offer an alternative space for these youngsters, as they usually do not really have anywhere to go. Unfortunately, in the first couple of weeks an increased tension between two different gangs led to the murder of one man by three of the opposite gang. As a result, these three were sentenced to jail until today and quitted Puraqué. This sheds a light on the situation in that neighbourhood, which still is reality in many others today. Tarcisio told me the story of a kid's participation in a monthly journal they edited at the time during one of the courses. For one of the editions he wrote about his home situation; that he hated his father coming home drunk every night, beating his mother and his sisters. And that his older brother was following the same direction as he too started drinking more and more, just like his father, and yelled at his mother and sisters. He wrote how he saw that the alcohol was ruining his family and promised to never ever touch a bottle of alcohol himself. Then he drew a bottle of Cachaça 51 (the famous Brazilian cane sugar rum) with a big red cross through it. As kids depend on their parents and usually take them as an example, for them it is very difficult to find a way out of the misery. Even though the kid hated his father's behaviour at that very moment, if he would lack the means, hope or confidence to live independently he very likely would end up in the same way. At Puraqué he found room to rethink his problems and to express his feelings about

106 They use to write *puraquean@s* instead of *puraqueanos* or *puraqueanas*, referring to men and women respectively, because they do not want to distinct between male and female participants. They are considered all equal.

it without (feeling) his parents' oppression.

In Mapirí life has significantly changed. During my stay in Santarém I lived in Mapirí and although it remains a simple neighbourhood, life on the street is relatively calm and peaceful. The neighbours of Dona Alice, the lady who hosted me, all knew of the *gringa* that was visiting Santarém. Even at night people were always sitting in front of their houses, enjoying the fresh evening breeze, and usually had a little chat with me when I passed by. Nothing seemed to point at the violent and aggressive atmosphere that was so overt only a couple of years ago.

In order to attend a broader area they operate in different neighbourhoods. When things had improved in Mapirí they left in order to attend other areas. Recently they have moved to a very distant periphery called Santo Amaro in which activities will start off soon. Today, Santo Amaro too is a very poor neighbourhood. When they were still constructing their new base the local people were curious, though suspicious. Usually it takes a while before the locals accept the project and actually start to participate in the activities. Furthermore, besides the courses at their bases they give workshops in neighbourhood associations or at municipality schools and travel around to disseminate digital culture through implementation of Telecentros and teaching monitors in several communities outside the urban area. Thus, they both operate on their location and throughout the region.

4.2 Activities and Structure

The Puraqué base is where they perform their regulatory activities. During my stay they were still working on their new base in Santo Amaro. They had recently bought a medium-sized white house with three rooms and a small kitchen surrounded by a large terrain that was wildly overgrown by a variety of plants and trees. The three rooms in the house would respectively serve as an auditorium, a multimedia studio and a bedroom for possible guests. Notably, the bedroom and the fact that there is a kitchen demonstrates the homely and cozy character of the project. Anyone is welcome to come and join and the kitchen is used for lunch and, especially, the preparation of snacks for the participants. The large garage on the right side of the house will serve as the computer lab and is equipped with over twenty PCs. In the large backyard a fifteen meter high antenna mast was installed in order to receive Internet signal and they were building a 30 square meter *oca*¹⁰⁷, which they will use for particular activities, workshops and other events. Every single wall in and outside the house has been graphitised, varying from the word *Puraqué* on the front side to true artworks and an enormous and scary drawing of the Puraqué fish on the walls inside the house.

107 An *oca* is a robust hut originally constructed by (Brazilian) indigenous people.



Fig 3. *Puraqué*, work at the time still in progress (june 2010, by Marcelo)

At their bases usually occur numerous activities. There are several courses of three months. These include *basics of informatics*, *advanced informatics*, *audio*, *video*, *multimedia*, *blogging/Internet usage* and *metareciclagem*. Each course consists of 25 to 30 classes of 1,5 or 2 hours and after three months the participant receives a certificate. People can do as many courses they want to do as long as they subscribe. Once a course is full participation for that particular course is only possible when the course start again after three months. During the courses people are always welcome to use the computer lab in the free hours to help with activities and workshops or to get some responsibilities as a volunteer. When a participant is capable of teaching a course he will be doing that, or at least assisting, aside from the course

he is taking at the moment. A young woman named Biene, for instance, is already allowed to teach metareciclagem and does so when the usual metareciclagem teacher is not able to come, while she herself is participating in the advanced informatics class. They encourage people to develop multiple skills in order to maintain a horizontal structure. Therefore, people are both teacher and student at the same time and there is no “principal teacher” who has absolute decisive power. In this manner, as a project they not solely depend on one person and people have the chance to develop a broader knowledge as they know a little bit about a lot of things.

Participation at Puraqué is merely voluntary. The core group, which always varies, consists of people that retrieve a kind of income elsewhere and spend their spare time at Puraqué. For instance, Jader works for the Ministry of Culture as a “consultant of digital culture”, and simultaneously participates in the several activities when in Santarém. Marcelo, who is one of the core group members for two years now, is contracted by the Secretary of Education at the municipality in order to maintain the recycled PCs in the public school's computer labs. Thus, they combine their Puraqué activities through jobs that correspond to these activities or at which they can even apply or combine these.

4.3 The puraquean@ methodology

Through a more profound discourse on ICTs Puraqué tends to go beyond the basic principles of usage. Instead, they focus on socio-political issues that are related to ICT and today's society such as capitalism, consumerism and environmental issues, and tend to use ICTs in order to think of alternatives. Originally they departed from the gambiarra idea that instead of blindly consuming everything what is produced in the Western world they should rather focus on what is going on *around them* on the streets, and what they can use it for¹⁰⁸. For instance, they have once created an Internet antenna using oil cans. And in several cities and villages they built a FM radio transmitter of old components and pieces of a PC power supply. By this they demonstrate that they neither depend on the West nor on the capitalist market or on financial resources, but that they can create sustainable alternatives. These activities demonstrate people how to provide *themselves* access to ICTs in an alternative manner and simultaneously encourage the individuals to collectively use this knowledge in order to transform a region that is subject to exploitation into one in which the development of digital technologies could be the main characteristic. However, today their activities have become rather organised and, arguably, go *beyond* gambiarra. Their activities are no longer tactic and ephemeral actions in order to oppose public-private structures and initiatives. The informal activities have evolved into organised courses and a rather didactic methodology that stimulates collaboration, solidarity and critical thinking. Thus, they oppose the traditional paternalistic educational model, which, arguably, functions in the service of a capitalist system¹⁰⁹. In this way they do

108 Rosas, 2008

109 Kucukaydin and Tisdell, 2008

not focus on providing access to ICTs as an *end* but rather use them as a *tool* for a form of social enhancement, aiming at autonomy and sustainable development.

When accompanying their activities I could recognise four elements within their methodology, consisting of metareciclagem, using e-waste, FLOSS and critical thinking, which all together formed the socio-political discourse that revolves around Puraqué. In the next paragraphs I will by way of these four elements describe what their methodology includes when applied into practice.

4.3.1 Metarec

Metareciclagem is an idea that plays a fundamental part in their activities. Metareciclagem includes “recycling on a meta-level”, which means recycling e-waste (electronic waste) and garbage in order to create awareness and autonomy. Funnily enough, when abbreviating the word to “metarec” in Portuguese you pronounce “metahack”¹¹⁰

It includes a participatory methodology for social engagement, autonomy and innovation, stimulating a user’s creativity through deconstructing, remanufacturing and re-appropriating electronic waste. Metareciclagem not only extends the life of hardware that is considered obsolete, thus offering a solution to exaggerating amounts of electronic waste¹¹¹, it also allows users appropriate technology in a way that corresponds to the local and personal objectives.

In the early stages of the learning process metareciclagem consists of deconstructing a PC and rebuilding it after knowing the exact function of each piece inside the “black box”. For most of the participants the metareciclagem class is the first contact with ICTs and, therefore, the first time they see a computer from the inside. This actually helps them understand the various functions of the PC, as for those who use a PC for the first time neither the interface and structure of software make very much sense nor do they have a clear idea about the several parts of the PC. What, for instance, *is* software? One day I was watching a lady creating an email during a class about Internet usage. At one point she said that *the Internet* in my country would probably be very much advanced. This lady had no idea what the Internet actually was and assumed that it was similar to hardware or perhaps something like software. She was not able to visualize the several different elements ICTs consist of, which would allow her to

110 This “r” in Portuguese becomes silent, and is pronounced as an “h”.

111 See vídeos on e-waste on <http://www.youtube.com/watch?v=a0xpRk7MYNg> , http://www.youtube.com/watch?v=-j_Zohgg4S8. Last viewed on 13/06/2010

understand the working of it. Opening up the computer and explaining the function of each single piece allows the user to get a better understanding of the hardware and how each piece relates to the software. The instructors usually do this by comparing each piece with the parts of the human body or a human activity such as doing your homework: you take all your books (the documents), pens and pencils (applications to edit the documents) out of your backpack and put them on the table (random access memory (RAM)). After finishing you guard them again in your backpack (HD), so that they will not get lost. They also often compare the processor with an assistant who runs like crazy in order to fulfil all the user's wishes. Of course this is very stressful, though luckily the cooler and the ventilator can help keep his head cool. After knowing the specific function of the HD, the processor, the cooler, the ventilator and the RAM working on a file and saving it afterwards makes much more sense.

This process not only helps them understand their actions when working on a PC, they also realize that technology is understandable, touchable, and not magical at all. This kind of meta-knowledge about technology shows new users that technology is accessible for anyone, which enhances their self-esteem. For many this causes an enormous social transformation, as people are extremely shy and insecure. During one of Puraqué's workshops at a neighbourhood association a little boy struck me. During the introduction round in which everybody is supposed to present himself in a couple of words he remained silent. While everyone was looking at him the poor kid simply was too shy to say *anything*. It took him about two minutes to pick up enough courage to speak out loud his mere name. At the end of the workshop, however, he was the first to install Ubuntu on the PC which they just finished to rebuild, without erring or needing any help. The fact that he was capable of installing the software must have given his self-esteem an enormous boost.

Metareciclagem also helps users realize that technology is not merely available for the rich. Many think ICTs are simply too distant, too magical and too elaborate for them. However, they realize that they can open up a PC, take out and hold all the pieces and subsequently put them back without breaking or damaging any of the pieces. Also, they see that it actually is very easy to rebuild the computer afterwards. When they have put back all the pieces on the right place they close the computer again and switch it on. This is a very exiting moment because the puraquean@s usually warn the participants that when one of the pieces has been put incorrectly the computer will start to smoke. In the worst case it will explode. However, this is not very likely to happen and usually it switches on normally. Thus, they completely demystify technology, as participants realize that a computer is just a simple construction, rather than a

magical object.

The demystification of technology also helps them to overcome their fear to touch the equipment. As for most of the students this is their first contact with a computer they usually are afraid to get an electric shock or to damage it as they usually lack the financial means for compensation. Or, often in the case of (older) women, people stare at their screens without doing anything. I learned that this is a common phenomenon, as kids are usually not encouraged to explore and investigate things but are rather taught to be obedient. In these cases this would include not to touch or do anything without permission. For instance, one *puraquean@* once told me about a lady who was very shy and passive, because when she was a young girl her mother had been very rigid with her. That means that without losing this fear these people would not enter an Infocentro or cybercafé. They would simply be too afraid. Furthermore, many adults lack the curiosity that is familiar to children and adolescents and do not know what to do with or how to use a computer. For instance, when I showed a lady how to use Google Talk she asked me: “But what am I supposed to say?” or “Should I be formal, or rather informal?” Even when she was about to chat with their classmate. Knowing the secrets behind the screen and what is inside the black box makes people realize that they are capable of coping with technology. They learn that informatics is something everyone can learn and in fact is very accessible. The further they involve in the process of meta-knowledge of both the technical and social side of ICTs the more they realize that there is an actual role for them as both a user and a active participant in a space that goes beyond their geographical boundaries.

Besides learning what technology *is*, *metareciclagem* also stimulates a user's technical independence. After opening up the computer they also learn how to *maintain* the pieces. One of the most common problems of a PC is a dirty RAM. Especially in a dusty environment like Santarém due to the many dirt roads. Apparently, the computer is a very pleasant habitat as it is not uncommon to find spiders and other small animals inside. The PC will become very slow, frequently freeze or even stops functioning. However, mere cleaning of the inside of the computer would solve most of the problems. The problem is that people do not know this and unnecessarily substitute an “old” computer by a new one. *Metareciclagem* thus both enhances understanding of the usage of technology and self-sufficiency and independence from experts, as people learn how to maintain their computers in a good condition and to extend its duration. This not only a solution for those that lack the financial means to pay a technician to

solve the problem for them, let alone to pay a new computer. It also corresponds to the recycling ideology against the production of more technology in a world that is already full of e-waste.

4.3.2 E-waste as an opportunity (or necessity)

Most computers they use during their activities have been recycled. Recycling computers not only allows users to re-appropriate the technology in an alternative manner and to understand technology, it also serves to re-utilize or simply extend the life of technology that is considered obsolete for ecological and economical reasons. Thus, they tend to create awareness on the contamination caused by e-waste and providing a rather autonomous alternative to a capitalist and consumer society.

An example is Casa Brasil, a digital inclusion project by the public sector where Puraqué has installed the computer lab entirely with recycled PCs. Although these machines look rather old they still function very well. Also, they encourage participants to mess around with the pieces so that they can eventually build their own PCs. They have already propagated that they distribute “free” computers. When people show up it turns out that they indeed are free, but that they first need to be built. They promise that those who are able to build their own computer can take it home.

However, in some cases the reuse of old computers rather is a necessity and a solution, as they lack the means to purchase new computers. The problem is that these old computers often times not work very well, and remain unused. This is especially the case at the public schools with which they established the *Educational Informatics Network*¹¹², an initiative to equip all public schools throughout Santarém with an open source computer lab. The municipality lacks the financial means to purchase new computers and uses the recycled ones as an alternative. As a result sometimes over half of the PCs do not function and remain unused. Thus, students have to share computers or classes have to split up the students in order to have enough room in the computer lab. Subsequently, both students and teachers become annoyed with the situation. They have a computer lab but cannot use the computers. In these cases they fail to see the value of reusing e-waste and rather consider it as a disadvantage.

Ideally they would recycle used computers that function properly, using their inventiveness and creativity to use different pieces of e-waste in order to construct something that actually works. Unfortunately, e-waste is very hard to find in the North of the country. Just as capital is unequally distributed, in Brazil being polarised in the Southeast, so is waste. For example, a RAM in São Paulo costs R\$50,00, whereas Pará it costs no less than R\$150,00. This ironic scarcity of e-waste seriously hampers their activities. The difference in quality between a

¹¹² “Núcleo de Informática Educativa” is a partnership with the municipality in order to equip all public schools with a computer lab, and train the teachers how they can implement ICTs in their regular classes, according to the puraquean@ learning methodology. See also Appendix.

reused computer and a new one is not necessarily very big but in their case it often is. However, as long as the computer functions the users do not seem to care much about this fact. They do not realize that the technology is dated; having access for them is already something extremely exiting. For those that have never touched a computer, old-fashioned technology is as magical as the newest laptop.

4.3.3 FLOSS in a “hacker culture”¹¹³

Besides metareciclagem FLOSS plays a fundamental part in their activities. When they started the project in 2002 in Santarém overall digitalization was yet in its infancy and they were the first who brought FLOSS to the region. They disagreed with the fact that Microsoft was the only operating system that was covering the area. Once they learned the idea and philosophy of FLOSS they realized that it would perfectly suit their activities. For them the profound and meta-knowledge of technology allows the new users to actually *do* something with technology and the usage of FLOSS is fundamental in this process. Dennie, one of the collaborators of the project, explains:

*“We want to contaminate people with the “Digital Culture virus” and with the philosophy of FLOSS, because during the knowledge revolution the computer has become the main tool that converges all means of multi-media production. Also, the computer is an incredibly powerful tool for learning, communication, exchanging ideas, and to store information. People need to understand that, otherwise our society will never evolve the way we want. This is what we most accentuate here, since these days we are subject to predatory processes (mining, deforestation, soy) that will bring more and more misery to our region”.*¹¹⁴

They are tired of being exploited for the resources the area contains and they want knowledge to become the main characteristic of the region. Jader once told me: “We hope that our region becomes a reference in the development of open source digital technologies, instead of being known as an area of exploitation. We believe that the ancestral wisdom of their people and knowledge of technology, on the philosophy of FLOSS in a capitalist society and consciousness on electronic waste and the environmental damage it causes might actually change something, and increase the quality of our lives”¹¹⁵. Through the usage of FLOSS as the standard operating system, in combination with the reuse of electronic waste and donations of old PCs, they tend

113 See: Fonseca, F., “Em Busca do Brasil Profundo”, in Brunet, K., (ed) *Apropriações Tecnológicas. Emergência de textos, idéias e imagens do Submidialogia*#3. EDUFBA: Salvador, 2008. (p 94), 2005.

114 Fabrizio, D. “É o Conhecimento que move o mundo”. Retrieved from <http://arede.inf.br/inclusao/edicao-atual/2609-e-o-conhecimento-que-move-o-mundo> 12/05/2010

115 Jader Gama, one of the founders of Puraqué on 04/12/2009

to create awareness on today's consumer society and the negative consequences of it on the environment in a region in which the damaging effects are very visible.

Although Windows still retains its monopoly in the region Linux is more and more recognised as a safer alternative. The latter is not only low in cost and a solution for piracy, as it is easier to find a pirate than the legitimate version, it also prevents users from viruses and trouble with technicians. In Santarém hard and software retailers often mislead their clients through installation of poor-functioning applications and wrong configurations to create dependency on their technical support. Although Linux also requires support this is community based and free, while technical support for Windows is usually very expensive. In Santarém the public and third sector – NGOs, the municipality, the public schools and the state-owned banks such as Banco do Brasil – have already adopted Linux as their standard operating system. Thus, as Puraqué is disseminating Linux throughout the region the demand increases and knowledge of Linux becomes more valuable.

However, today this is not yet reality. While these people learn the basics of informatics using Linux and in some cases recycled computers, when they arrange a job outside the public sector the demand is still mostly Windows. That means that most employers prefer a Windows certificate (preferably obtained through a recognised private and expensive course) and thus, they will still have difficulty to find a job. Or in case their Linux certificate is accepted the PCs at their new workspace will probably run Windows. In this case they will switch to Windows and their knowledge and understanding of the philosophy of Linux is usually too little to sustain. Thus, Windows will remain their standard.

What struck me, is that in their discourse on FLOSS, particularly during the basics of informatics course, they fail to address an important aspect of FLOSS. In order to *advocate* it as their operating system they use the moral argument to *criticize* Windows. People usually are (still) very wary of FLOSS as it is for free, and rumour has it that it is not as good as Windows. Therefore they clarify the differences between FLOSS and proprietary software (in their region basically Windows) by mentioning *all negative aspects* of proprietary software. It is under copyright, you cannot share or adapt it, it controls its users, they spread viruses, etc. Linux, on the other hand, they mirror as a *solution* to all these problems rather than an opportunity in itself. It is true that Linux is beneficial in all these senses. However, they fail to

trigger user's curiosity to discover Linux as software with endless possibilities. Usually, when talking to the participants of the course only a few seem to be concerned with monopolies and closed source codes. Some do recognise the benefits that were just explained to them but had to admit that they find Windows easier to use. The latter understand *why* to use Linux, according the capitalist argument, but did not think it was *cool* or interesting to know more about it. Whilst Jader once mentioned that they want their region to become a reference in open source software development they do not focus on this aspect in the outset of the courses, which is the crucial moment in which they tend to “contaminate” people with their ideology.

4.3.4 The Internet for Critical thinking

Finally, and crucial in their methodology, Puraqué aims at increasing critical knowledge among the participants. The puraquean@s argue that knowledge is what their region lacks in order to develop in an equal and sustainable manner and ICTs can serve as a tool to obtain this knowledge. Therefore, they not merely focus on accessing, using and understanding ICTs, they also imbed this discourse in several extra activities. For instance, they organise several projects and events in which they question and discuss these issues. There has been the “Free Fair” in the beginning of April this year where hundreds of people gathered. These were not only participants but also people from the private and public sector that were interested in their ideas about FLOSS, recycling (open source) hardware and collaborative projects. Also, they organise debates and events about several socio-political topics and cine club nights (watching art house movies and discuss them afterwards).

They have also implemented this discourse within the courses. I have watched several classes in which the students had to design a flyer about environmental threats. One group made a flyer about deforestation. They had to access the Internet in order to retrieve relevant information about a topic they wanted to write about. After visiting a couple of relevant websites they copy-pasted parts of the texts and rewrote other parts, thus informing about the environmental and social consequences of deforestation. They also searched for a couple of images which they edited in Gimp (GNU Image Manipulation Program). Subsequently, they imported both the text and the images to Inkscape (graphics editor) in order to finish the

layout of the flyer. As it is a group assignment the students interact with each other, exchange opinions and discuss the information and thus collaboratively increase their knowledge of both the content and the form. Problems, for instance, are a certain image they want to use with a part of the text which in fact does not correspond to the content of the text. When they discuss this and compare it with the particular image they profoundly engage with the topic of the class. As they encourage the participants to use the Internet as a source to retrieve information about socio-political topics the students learn how to use the other functionalities of the Internet. This is important, as one of Puraqué's main aims is to use ICTs in order to obtain knowledge and develop critical thinking skills rather than merely using it for social networking or consumption.

Muraquitã

Corresponding to their ideology of sustainable development and autonomy they developed an alternative payment system for participation in the courses. In Santarém garbage is a serious problem. I have never seen so many Urubu's – a scavenger of the condor family of which the diet is composed of carrion, dead plant material and garbage – on urban streets. Puraqué recognized the importance to create awareness about and to find a sustainable solution to this problem. Also, as they want the courses to be accessible to anyone, they do not want to charge money for participation. Therefore they decided to develop a particular social coin, called Muraquitã, that simultaneously provides a solution for the garbage problem in the city. The Muraquitã equals twenty PET bottles. Participants are supposed to bring a sufficient amount of PET bottles in order to pay the course (a three months course will cost around 30 Muraquitã) and Puraqué sells¹¹⁶ this plastic to a plastic recycler. Thus, plastic garbage on the streets will decrease, people become aware of the garbage problem, and in this manner anyone can participate in the courses. They are trying to disseminate the coin throughout the city, though yet only a few companies are actually willing to recognize the coin as a form of payment.

116 For one kilo of PET bottles (equals 20 bottles) they gain 1 real in return. In average, it costs them 33 cents to create the coin and they have to manually cut and flatten each bottle. Thus, they make no significant profit out of this process.



Fig 4. *Recycling PET bottles*. From left to right 1. puraquean@ bringing the PET bottles to the recycler and 2. PET bottles collected by the participants (By puraquean@ Marcelo)

Where the first step is to create a profound technical knowledge of ICTs in order to stimulate social enhancement and autonomy they eventually aim at increasing critical knowledge as a valuable resource throughout the region. By contaminating and educating others this knowledge will exponentially increase. As the puraquan@s are activists their ideology in fact is their stake in the digital inclusion process. They fight against capitalism that exploits their region, destroys their environment and causes their poverty. As according to theories on “digital capitalism looking South” and “informational capitalism” I introduced in chapter 2, they wary the private sector and tend to create autonomy through open source technologies (hard *and* software). They want to make people aware of that and collaboratively work on this alternative to the existing model by increasing collective knowledge and using this in order to think of and create sustainable alternatives. This too includes a form of active participation in which the users are able to *produce* content or critically analyse information rather than being a passive consumer. Most important, however, is to socially enhance an individual, departing from the idea that the user can decide what is beneficial to him without implying him certain rules or ideas¹¹⁷.

117 See: Buzato, 2008. He shows several concrete examples of a Telecentro's collaborator who has a certain vision on how to “include” a user and what to teach him, from the perspective of the “already included”. The user, on the other hand, oftentimes uses the technology in a different way, which directly benefits *his* needs. Not in the first place to use ICTs for other educational or professional purposes, which the included considers more important or beneficial and which might lead to inclusion in the job market eventually, but merely for informal purposes. For instance, the cases of a mother who accesses a website of a TV program to download a recipe and a boy searching for information about his favourite football team explain why many only visit the Telecentros for accessing the chat rooms or social networking sites.

4.4 The puraquean@; a couple of portraits

Jose and Jessica are two ex-puraquean@s that at that moment of my research were working in an Infocentro of a project by the state government. The first time I met them I had a chat with them in the Infocentro, because I wanted to know more about their work and hear about their puraquean@ experience. Although these women were young, Jose was 21 and Jessica only 18, I directly felt a connection with them; a spontaneity and maturity that not many girls or women in Santarém share.

4.4.1 Jose

Jose lives with her parents and brothers and sisters. She told me that when she first visited the Puraqué she was about twelve or thirteen years old and she had never touched a computer in her life. She is Tarcisio's cousin and he told her about their activities and convinced her to participate. She went and ever since she continued participating intensively, first as a student in the basic courses and later as a volunteer; teaching courses and giving workshops throughout the region. Since last year the puraquean@s indicated her as a monitor for a new Infocentro in the neighbourhood of Aeroporto Velho where she is now employed for 30 hours a week. Although she still talks a lot with the core members of Puraqué she no longer frequently participates. "Since the project has moved to the other end of the city, it has become very difficult for me to continue visiting the project. Due to my job I have very little time left, and in order to get there I need to take two buses. This takes very much time and, besides that, it is very expensive", she explained. Instead, she uses her spare time to study in order to prepare herself for the *vestibular*, which is a concourse in order to pass for the state universities, for the course Computer Networks. "It is a very difficult and competitive exam, though the public universities are the best. And also, I simply do not have the means to pay for a private university, as they are really expensive".

Although she has left the project, for Jose Puraqué is still very much alive. She told me very proudly that she has been asked to give a workshop for the members of the dwellers association of a community a couple of hours away from Santarém. "Instead of approaching Puraqué", she said, "they had thought of me and invited me to visit the community". This really flattered her. When I asked her whether she thought she would be capable of doing that on her own she very confidently assured me that she was. "If they would ask me something of which I

would not know the answer, I will just look it up or would try to find out the answer together with the participants. That is the best way to find solutions to problems, right?"

Her knowledge of informatics has brought her several opportunities. She has a nice job where she can access fast Internet whenever she wants and has several other offers besides her work. The week before I left Santarém, I met her again at a neighbourhood party and she told me that she had opened her own cybercafé. For now she is still hiring the place, which is equipped with twelve machines that run Windows and the necessary desks and chairs. However, she plans on buying the entire furniture and moving it to a neighbourhood that still lacks an Infocentro. "In our new place I want to install Linux on the computers and offer several courses and different activities related to ICTs, similar to what I have done at Puraqué. People have me that I would make more money opening a regular cybercafé with pirate versions of Windows, but I refuse to do that! I want to do something that is important in that neighbourhood".

Until today Jose's family has no computer at home, though her father wants to purchase one any time soon. "How I regret it that I have never taken seriously the *puraquean@s* when they said to us that the one who would be able to construct his own computer could take it home. I have built so many computers there", she joked. "But on the other hand", she continued, "I have access to the Internet everyday at work. And now that I have opened my own Cybercafé, I might be able to buy one myself".

4.4.2 Jessica

Jessica told me how afraid she was when she had to switch on a computer for the first time. "I was a very shy girl! I never, for example, would have talked to you like I am doing now, because I would have felt too big a distance between us." However, when one day Jose's mother gave her a flyer about Puraqué's activities she got curious about it. She asked her mother if she could go with Jose to follow the same course but her mother said she was too young and did not have an *RG* (the Brazilian identity card). "When I kept on nagging, finally, my mom let me visit the project", she said. "And now I am even studying at the federal university, and I am teaching! I work with what I like and I even have free and fast Internet every day."

I asked her whether her parents have supported her in what she did. She told me that they have always been very supportive, though that they were not very enthusiastic when she chose to study Informational Systems. "When I passed through the *vestibular* exams they had rather seen me studying Law, or Medicine, as that would guarantee me a job and a good salary". But she explains that she would not be happy working in that area. "Working with informatics is what I like most!" Now her parents understand and even see the advantages of it. For instance, they ask her advice and help if any electronic device is out of order or not working well. "Everyone in my family has difficulties with all electronic devices! Even the DVD

recorder, you know. So now they always ask me when they have some doubt or problem with technology. Because, when you know how a computer works, you can mess with any electronic device.”

However, when she was a teenager her parents also complained at times, as she usually spent more time at Puraqué than at home. “Puraqué was like my second home. I went there everyday after school, and even on Saturdays, to do workshops and watch lectures on, for instance, environmental issues. My parents used to tell me that I should not work so hard. They complained that Puraqué was taking advantage of me, because I was not paid and did not get back anything in return. But the experience was worth everything”. She was working with something she actually liked and learning all these things she considered more valuable than money.

A concrete example of that is, for instance, the facility with which she has passed the *vestibular* exams. These are known as being very difficult and competitive, though she passed in one of the first places. Also, during a subject on algorithms she already knew everything, different than her colleague students. “When I was studying at high school my ICT skills really helped me with my schoolwork. As one of the few students I knew how to use the Internet to investigate and learn things. It really increased my knowledge. I taught my friends how to use the Internet, and the ctrl+s, ctrl+v and ctrl+z combinations. And always when people have some trouble using ICTs they asked me. At my high school they used FLOSS, but no one really knew how to use it. Even my teacher sometimes had to ask me.”

What struck me when talking to her was a comment by someone else that was listening to our conversation. She told about a trip she wanted to make and the man asked whether her boyfriend would let her go alone on this trip. She then said: “Oh why not? My boyfriend is very modern.” Letting your girlfriend go on a trip by herself is not very common, as most men are very jealous and protective. She considered her boyfriend modern, as he did not seem to care so much about her being independent and travelling on her own. Although only eighteen years old, seemingly she has chosen someone who gives her enough space to develop herself and to do whatever she wants to.

Since three months Jessica works in the same Infocentro as Jose. She stresses that the Puraqué

experience and learning how to work with low-tech DIY technology stimulates people professionally. “We can work in this field, as I am currently doing, and we learn to be actual IT professionals. It opens broad possibilities for a good job, and a career!”

4.5 Realizing your potential

What struck me when talking to the several people that have joined Puraqué for a while is that these people actually undergo a social transformation. Not only because they have access to ICTs but because learning about and using technology makes them believe that they are capable of something. It stimulates them to pursue their dreams or simply to have dreams. As they focus mainly on marginalized groups most of the children live in very simple and poor circumstances. The courses at Puraqué allow them to realize that they actually *have talents* and that they can use technology in a professional manner. An example is Jose who has opened her own Cybercafé, in which she plans to install FLOSS on the PCs and eventually will teach courses and workshops on ICTs as well. Instead of searching for a job she believed that she had the potential to start her own business. However, the best proof of the effect of this knowledge and consciousness is the difference I perceive in self-esteem between people that have been involved in these projects and people that have not, especially when informally talking to several Santarenhos about their lives, families and other daily experiences. For instance, Jessica who told me that she would never be talking to me like that before she started to frequent Puraqué. She would have felt a very big distance between her and me and therefore being too shy. This I felt when I tried to have a chat with participants in the courses at the several Infocentros. These people were usually too shy to look at me and just responded with the necessary words. Apparently, whereas those without such an experience often remain living in ignorance and “accept” social inequality because they lack the means to resist, (ex)-puraquean@s have become sometimes very young people who know what they want, who are self-confident, critical and eager to learn more. They actually realize that they have potential.

5 Top-down projects affecting the local

The Brazilian government is known for its pro-digital inclusion policy, especially since President Lula's Workers Party (PT) gained power in 2002 and singer Gilberto Gil who became the new Minister of Culture declared himself a *hacker*¹¹⁸. Ever since there have been three steps in the Brazilian fight for digital inclusion; namely (1) bringing computers to the people, (2) providing access to the Internet and (3) disseminating digital culture. The latter, more specifically, includes the appropriation of technology in order to diffuse this self-created content and share it with the world. The Ministry of Culture has translated this idea into the so-called Pontos de Cultura (Culture Hotspots)¹¹⁹. While in theory this third phase has initiated a couple of years ago, in practice several programs still revolve around the second. However, in areas where they still lack Internet they have not even reached phase two yet. Also, while the third phase departs from the idea of bottom-up production and dissemination of (digital) culture most projects remain top-down and centralized. In general, these projects maintain a certain form of efficiency but simultaneously create dependence.

In this chapter I will describe a number of digital inclusion, or rather, digital culture projects by the public and (organised) third sector with a focus on the realization of these projects in Pará. Most of these are realized in conjunction with several ministries, established partnerships with the private and third sector and articulations to civil society in the form of informal activist groups, social movements and civil organisations. This leads to several interesting problems and advantages for the “target groups”; the to-be included at the bottom of the very project.

118 Fonseca, Freire, and Foina, 276

119 Grassmuck, V. “[Tactical Media in Brazil – Submidialogia conference report by Volker Grassmuck](http://waagsarai.waag.org/?m=200512)”. Retrieved from <http://waagsarai.waag.org/?m=200512> on 07/08/2010

5.1 Pontos and Pontões de Cultura

The *Pontos de Cultura* occur on a national scale and are subsidised by the Ministry of Culture, though are locally set up through articulations with civil society organisations or groups. A certain community, association, organisation or institution writes a proposal for a cultural project – not necessarily including ICTs – and when approved it might become a Ponto de Cultura. It will then receive a subsidy of R\$185,000 spread over five semesters, including a multi-media kit composed of a PC for editing, a server, photo and video cameras, microphones, a mixer, a scanner and a printer¹²⁰. After two years a revaluation of the project occurs and if successful, the subsidy will be extended.

In Santarém, the *Pontão de Cultura Digital de Tapajós* exists since November 2008 and at the moment of writing the project is being revalued. The Pontão the Cultura Digital de Tapajós is well structured and organized and the subsidy will probably be extended. They established a partnership with, among others, a local, though large NGO called Projeto Saúde e Alegria, with the Navegapará program and with Puraqué. These partnerships not only strengthen the organisational structure, they also provide financial and technical support, as the Ponto de Cultura subsidy would not cover all the expenses. This allows them do some very interesting things; there is an Infocentro that offers several courses, they teach public school teachers how to implement ICTs in their classes, give several ICT workshops and realise numerous other activities related to ICTs. Through their strong organisational structure they not solely depend on one funding body and thus they increase their chances to sustain. In this manner they guarantee that the subsidy will be extended year after year and they can remain operating on the same level.

Ironically, smaller-scale projects that lack the means to establish partnerships, usually due to isolation and a lack of recognition, face several difficulties in the process of becoming or maintaining themselves a Ponto de Cultura. Besides the subsidy being relatively low and only available for a limited period these small and independent organisations usually face a lack of support by the government. For instance, a community in Pará at the bank of the river received the multimedia kit in order to implement a Telecentro. When everything was installed properly and functioning well the antenna broke due to a lightning. This hampered them to continue their activities, as they no longer had Internet. After two years the project was revalued. As their activities had seized, they lost their subsidy and the Telecentro had to close its doors. This shows how vulnerable the smallest communities are. Even though they often use the equipment for cultural and artistic expression and think of numerous very interesting activities these communities remain very dependent on financial and technical help from above. They have very little power and lack means to communicate and demand help and support, especially when one of their main communication channels – the Internet –

¹²⁰The Ponto de Cultura will receive R\$185,000, an equivalent of €70.000, spread over 5 semesters, which is about €2.300 per month. During the first semester a sum of about €25.000 will be used for the acquisition of the multi-media kit.

no longer functions.

Another example is a *Quilombolo*¹²¹ community called Frechal, located in Maranhão, the state left of Pará, which had become a Ponto de Cultura in 2004. After two years their Ponto de Cultura had not been extended and they were no longer receiving the subsidy when I visited the community in 2010. The reason for my visit was a Submidialogia meeting in this community. Submidialogia is an open network of people connected by the motto “the art of re:volving knowledge logos by practices and disorienting the practices by the immersion in sub-knowledge”¹²². They come together a couple of times a year in order to “materialise” the network and apply their ideas into practice. Hereby the context and locality are important factors in the appropriation of technology for social liberation¹²³. While the event was supposed to bring together a big group of artists, activists and researchers and to organise many activities, workshops, debates and lectures by “important” people such as the ex-Minister of Culture Gilberto Gil, they faced some trouble with the subsidy for this event and it ended up being just me and four media activists and researchers doing several workshops with the people from Quilombo Frechal. In fact, this was a very fruitful experience because both “parties” had a lot of time and attention for each other. This led to a better understanding and an interesting exchange of knowledge, culture and experiences.

When I first arrived I was struck by the beauty and peacefulness of the village. In Frechal live about 70 families and the total number of habitants is less than 300. When walking to the *casa grande*¹²⁴ I was surrounded by chicken, pigs, ducks and cows, walking all over the path that served as the only road in the village. Most people were shy, though very receptive, warm and open. I was surprised by their lively cultural expression. They perform African dances, play traditional music, capoeira and practice their traditional religion *Tambor de Mina*. Several photographers have already noticed the photogenic-ness of the people and the village and came to photograph community life. They certainly are not isolated from the outside world and are very well aware of and interested in cultural, artistic and communicational practices. Jocienne, one of the women that are very much involved in the cultural activities told me how this encouraged them to apply to become a Ponto de Cultura in 2004. They received the subsidy and the multimedia kit, though unfortunately nobody came along for technical support. For instance, the PCs came with Linux but the software was not installed yet, let alone the several applications for video and audio editing. Thus, she explained, they had all the necessary tools to start their project but they could not use them. When after two years the Ponto de Cultura was revalued they concluded that the project was not functioning well and

121 A Quilombo is a afro-Brazilian community, which emerged after the abolishment of the slavery. The former slaves occupied the village and the farm that was inhabited by the colonizers and constructed their own community in which they until today maintain their traditional cultural habits.

122 Ferran, B., and Fonseca, F., “Sica – Mapping e-culture in Brazil”, 2008, retrieved from <http://www.virtueelplatform.nl/2646> on 15/01/2010 p. 179

123 See: Ferran and Fonseca, 2008

124 The Casa Grande was the house that was formerly occupied by the landlord, while the slaves lived in small huts. Today, in Quilombo Frechal the Casa Grande serves as a cultural centre in the village.

therefore the subsidy would not be extended.



Fig 4. *Community Life in Frechal*. From left to right 1. the antenna through which the community radio is emitted 2. Raul taking pictures 3. kids having fun in the river 4. a lady with her hand radio 5. community radio "quilombola" and 6. community members in the "auditorium" (1, 2, 3, 4 and 5 by Gilberto Manea)

In their case it was certainly not a lack of will or enthusiasm. When the youngsters saw the equipment we brought when we arrived in the community they got all extremely excited. They were obsessed with our photo cameras and for the rest of the week they took account for the

photos. They learned incredibly fast and they have taken several *beautiful* pictures. Although unused, all the equipment was there already. Thus, we only needed to install the antenna and explain how it works in order to create their long desired community radio. We gave them a couple of workshops on how to use the transmitter and explained them how to maintain a horizontal structure in the organisation so that it would indeed remain a community radio in order to enhance communication. From the very moment the radio was installed many community members got involved and the radio has been booming ever since it functioned. Our visit merely was a catalyst for the radio to function, as their enthusiasm and strong cultural expression accounted for the rest.

Support usually is necessary to start up the projects, though, unfortunately, misses in the Pontos de Cultura program. This is problematic as particularly the smaller communities, which often lack the organisational or financial means to find technical support to continue their activities, need these subsidies most in order to survive.

5.2 Casa Brasil Santarém

Casa Brasil is another project by the federal government under responsibility of several different Ministries, which aims at digital and social inclusion in areas of low index of human development. Through the implementation of computers and connectivity in these regions the project provides these marginalized communities access to open source technologies combined with culture, art, entertainment, community articulation and participation¹²⁵.

One of the Casa Brasil projects is based in Santarém. In Santarém Casa Brasil offers several workshops and courses to underprivileged kids, adolescents and adults, which include basics of informatics, advanced informatics, multimedia and metareciclagem. In the first semester of 2010 320 students were enrolled in the courses. Different than the Pontos de Cultura Casa Brasil is a predetermined and top-down implemented project. They pursue a certain methodology, which is applied in every Casa Brasil base. However, some input occurs on a local scale depending on the collaborators in each Casa Brasil.

Casa Brasil in Santarém is in the care of Adriane. Adriane is a biologist who is very concerned with social, political and environmental issues and tends to bring up this subject for discussion at Casa Brasil. She is also one of the core collaborators at Puraqué since its initiation eight years ago, and therefore the structure of this project is very similar. The courses go beyond *learning to access and use* ICTs but in fact use the classes on ICTs in order to engage the participants in a discourse on several socio-political topics.

An example is the Copo Livre campaign she set up in order to make the students of the courses aware of the exaggerated amounts of garbage throughout the city I told about earlier. Copo

¹²⁵“O que é Casa Brasil?” Retrieved from http://www.casabrasil.gov.br/index.php?option=com_content&task=view&id=275&Itemid=74 on 11/05/2010

Livre encouraged students to bring their own non-disposable cups to drink water during the classes instead of using the plastic disposable cups, as the latter would create more unnecessary garbage. During the campaign all classes treated the subject extensively. The multi-media students made a video the separate collection of garbage, and in the advanced informatics (graphic design) classes they made a flyer informing about the threats the environment faces such as deforestation and contamination.



Fig 5. *The Copo Livre project at Casa Brasil*

Besides offering several professional courses on ICTs Casa Brasil Santarém serves as a socio-cultural space in which people can come together any time to discuss several topics and exchange knowledge. This occurs during particular extra activities, such the monthly Cine Club. That is a particular evening on which classic, politically relevant or artistic movies are passed and subsequently discussed. In one of the Cine Club evenings I participated Adriane chose to pass *Eles Mataram Irmã Dorothy*¹²⁶, a documentary that tells the true story about an American missionary who sets up a social movement in order to fight against deforestation and exploitation. During her fight she has been murdered by a soy farmer. Subsequently, Dorothy's American family brings the case to both the state and federal court. Whilst they gain support by thousands of Brazilians they are not able to win the case. The documentary demonstrates the powerlessness of the people in these fights against exploitation. Afterwards, they discussed the cinematographic aspects and, more importantly, the socio-political issues they had just seen in the documentary. What is interesting is that almost everyone participated. Most people gave examples that demonstrate the unequal power relations and the few rights the local people have. And even one of the youngest volunteers, a eight-year old

¹²⁶They Killed Sister Dorothy. By Daniel Junge in 2009.

and very shy boy, said that he disagreed, as trees too are living beings and therefore should not be logged. These activities not only provide people access to movies, as Santarém (still) lacks a cinema, let alone an art house specialized in alternative movies, they also bring people together in order to exchange experiences and thoughts about these topics.

5.2.1 Romilson and Bruna, two Casa Brasil “orphans”

Through these additional activities and the several courses Casa Brasil tends to give the students the opportunity to develop the skills they want to. In fact, the project provides a space for kids and adolescents in which they can play and learn and escape the poor day to day reality of their homes and the street. Some of them become volunteers and have certain tasks, such as assisting teachers during their classes, fixing PCs (if they have the skills already), or keeping an eye on the reception. Others just go there in their spare time to mess with the (pieces of the) old computers, study in the library or just hang around. Romilson is one of the students of the *metareciclagem* class. He is a very quiet and shy boy of about thirteen years old. He is very interested in the technical part of ICTs, messes around with all the e-waste and tries to fix the old computers. He told me that the teachers at the public school where he studies went on strike. “There are no classes for over a month. And at home I do not have anything to do. So I rather come here to help, to access the Internet and to mess about here in the [metareciclagem] lab”, he explained me. The week before I would finish my research he proudly invited me to come watch him and his friend that next weekend, as they were going to install Linux on the computer they were building at that moment. Unfortunately I had to leave Santarém before the weekend and I was not able to witness this memorial moment.

Bruna is another “orphan” at Casa Brasil. She is a fifteen year old girl who, just like Romilson, spends all her spare time at the project. She had already participated in several other courses, including the basics of informatics and *metareciclagem* and was now joining the *metareciclagem* classes again in order to help a bit and to learn more. When I met her she was particularly interested in software and really liked to play around with Linux. She told me that she had even contaminated her cousin with her enthusiasm. “My cousin has once done a private course at an informatics school. There they only use Windows in their courses. I often go to his house to use the computer, because we do not have one at home. In the beginning, he used to tell me that Windows was better and easier to understand. He told me that I had to learn Windows instead of Linux. But when I showed him what you could do with Linux; the enormous amount of free applications you could download and how you could reprogram all these kinds of things, he got very curious about it. And now he even wants me to install Linux on his PC at home so that he could learn programming too.” Bruna very enthusiastically told me this story and she was very proud that she seemed to know more, or at least, other things

about ICTs than her cousin.

The possibility to find out all these tools and functions is something these teenagers found extremely interesting. And simultaneously, though in a very playful manner, they develop skills that are of very much value in their region. ICT professionals are increasingly demanded for web and software development. And also, whilst FLOSS is gaining more and more recognition throughout the region, until today there are no more than a handful of experts.

5.2.2 Forgotten and Excluded: the kids and the elderly

Casa Brasil pays special attention to the elderly and the kids in Santarém. Whereas in other courses the minimum age is twelve there is one special course for kids younger than twelve called Curumim Digital. Curumim means *little boy*, or *kid*, and originally comes from the indigenous language Tupi¹²⁷. The other course, called MID (Digital Elderly)¹²⁸, is meant for the elderly who have difficulties to accompany the regular basics of informatics courses.

At the outset of the course both the kids and the elderly are very insecure. They think they cannot touch the computer because they will damage it or get an electric shock. Or, as one lady from the elderly class told me, “I was ashamed to come to participate in the course, as I did not know which button to press in order to switch it on! I was always afraid that they would want me to switch on the computer and that I then had to ask in front of my new classmates how to do that”. This idea had always prevented her from taking classes earlier. In order to respond to the generally low self-esteem of the participants they start the course with a couple of metareciclagem classes that will explain and demystify technology. After that they learn how to use the mouse and the keyboard through games such as Tux Typing. Subsequently, they learn how to use the operating system, how to create a file, type a text document and how to save it. Finally, they introduce the Internet and teach them how to create an email account and how to post a comment on the Casa Brasil blog.

The Curumins

Within the *Curumin* group the difference between the kids was striking. Some had the greatest ease to navigate through the software, while others remained staring at the screen, too afraid to click the wrong button. The latter mainly applied to the girls. Probably, as most families raise their girls very protectively and strictly their parents have told them to not do anything without permission of the teacher. However, other children learn very fast, find out and investigate the things by themselves and hardly need any help from the teacher. Usually, they have the greatest facility with the mouse and keyboard, and soon develop the finest

¹²⁷“Curumim”. Retrieved from <http://pt.wikipedia.org/wiki/Curumim> and <http://pt.wiktionary.org/wiki/curumim> on 11/08/2010

¹²⁸Melhor Idade Digital

locomotory skills.



Fig 6. *Tux Typing*. Retype the letters that appear on in the fishes before they fall into the water. (Google Images).

During one of the classes I accompanied a very shy and tiny girl called Franciane. They had to create a Google mail account and the teacher had just passed the instructions. This girl struck me because she was staring at the Gmail webpage without a blink. She had properly written her name and surname in the first two boxes, but in the third box where she was suppose to write her email address she had written her two surnames with a space. And there she got stuck, too shy to ask for help.

I decided to give her a hand, though the entire hour she has not said a word. She just did what I told or asked her to do, step by step, and together we created her account. At one point I

wanted *her* to take decisions and to choose what she wanted to do, so I said: "Go ahead, play, discover and click on any button you like. And then you will see what happens!" Although I assured her that nothing could go wrong, she continued staring at the screen without doing a thing. It probably was too scary for her and it seemed that she needed my commands. Subsequently, I guided her through Gmail. I demonstrated her new messages and she could compose a new email. I even showed her Google Talk, assuming that it would be a fun application as I saw all the other kids already chatting with each other. Again I wanted her to decide and asked her what she wanted to do. She then chose to read her new emails, which were all three emails sent by Google in order to welcome the new user. This was probably the less scary option. Once she opened the first she returned staring at the screen and froze again.

However, Franciane was not like the average student. At the end of the class most were already chatting with one another and sending emails to the teacher. Several of these very assertive kids will be asked to stay as a volunteer once they have completed the course. A couple of the kids that have become volunteers after the previous course were teacher assistants in these classes I joined. They were actually helping to teach the kids of their own age, which resulted in a very informal way of learning. These kids had the knowledge, though lacked authority. Thus, instead of the volunteers *teaching* the course participants everybody was in fact *collaborating*.

The MID

The participants in the MID class were very much like Franciane. In general they were very insecure. I spoke to one lady who said that in the beginning she was afraid of any electronic device. "I was afraid of the electricity and of the machine itself or to get an electric shock. But I also realized that I lacked sufficient knowledge of technology, because today this is important, or fundamental to function in today's society!" Whilst she must have had over fifty years the lady said she had always wanted to study at the university or work for the First Aid. But only today she started to take the course. Now she realized that she wanted to continue learning and studying. This surprised me because by her poorly written Portuguese I could see that she must have had very little education. However, this course had stimulated her curiosity and her desire to learn more, which was probably something she never had considered herself capable of. When she was telling me all these things during class she had stopped typing for quite a while. Suddenly the screen turned black as the PC turned to sleep. She panicked and asked: "What is wrong? What did I do? Is it broken?" Apparently, she found technology something very magical.

What struck me most during these classes was the difficulty they had with the physical part. After the first couple of metareciclagem classes the first “regular” classes teach them how to use the keyboard and the mouse. Even after a couple of weeks practicing one lady struck me as she still had the greatest difficulty clicking the mouse. Every time she wanted to click her hand simultaneously moved the mouse and thus she always clicked next to her target. This, of course, caused her very much frustration. Furthermore, typing is another very intensive activity and usually it takes them about an hour to write 200 words. Their writing process is also decelerated through their perfectionism, as most of them take the course very seriously. For instance, they were asked to write a comment on the Casa Brasil Santarém blog. The text was supposed to be very short and informal, though the fact that it could be read by anyone made it appear a very big thing.

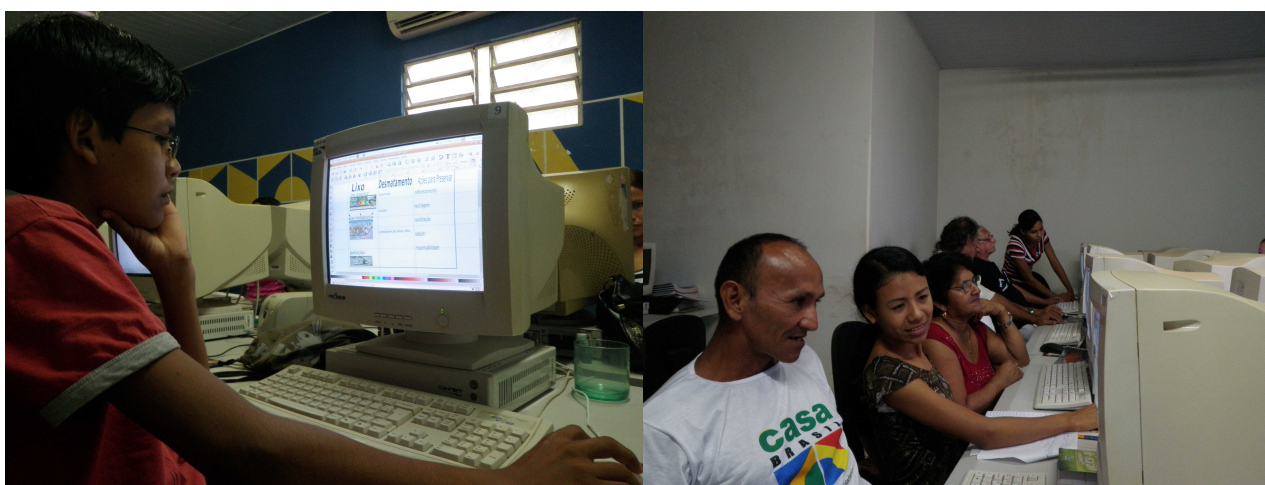


Fig 7. *The forgotten excluded at Casa Brasil.* From left to right 1. Curmin student and 2. the elderly

Within this group there was little difference between the level of knowledge and skills. The participants all seemed very eager to learn but also very critical. That is, especially at the outset they often question things the teachers explain or the answers they give. The difference here is that the little kids are usually raised to be very obedient and thus accept anything the teacher explains, while some of the elderly, especially the men, have more difficulty to respect and listen to teachers. Particularly because the latter are all very young adults and mostly girls and assisted by the volunteers of the Curumin class. However, the further the elder evolve in the course the more they become used to this situation in which their knowledge is inferior to the youngsters and that they can actually learn something. Thus, their respect increases and along the course they become all involved in a *discourse*, instead of a one-way stream of information.

However, whereas their methodology closely corresponds to that of Puraqué – in fact, many of

the teachers are *puraquean@s* – it remains a rather fixed and top-down structure. For instance, the predetermined content of the basics of informatics course at Casa Brasil introduces the Internet in the penultimate class. During this class they create an email, which is a task that some students not even manage to fulfil in the given 1,5 hour. The last class is used to learn the students conduct a simple query in Google. When the course had finished I asked a couple of students to have a chat with me about their experiences. I perceived that they did not know what to use the Internet for, besides querying Google in order to retrieve information on a certain topic. And even this was something of which they had only learned the very basics. For instance, they had never heard of other search engines and neither of, for instance, Wikipedia. Also, while they usually spend more than one class on creating an email address this did not seem to have many advantages for them. During one of these last classes I saw the kids that were helping as volunteers creating a *new* email account. I asked why they were doing that, assuming that they already created one when they were enrolled in the course previously. They said that they had either deleted their account as they never used it or they had forgotten their names and passwords. Apparently, as one of their basic interests is communicating, Orkut and MSN already fulfil these needs. In fact, they must already have an email account, as they *need* an email address to sign up for these services. However, they do not *use* these addresses. Thus, this trajectory to obtain the basic informatics skills not necessarily corresponds to their desires or rather, necessities. Whereas Casa Brasil assumes they would need an email in order to register for specific websites or services or to subscribe for university courses, they fail to introduce these topics during the classes. In this way participants might retain deviating purposes.

Both the Pontos de Cultura and Casa Brasil are “temporary” projects by the federal government. Ideally, the subsidy will be extended for a couple of years but eventually they will need to search other funding bodies in order to sustain. Therefore, the municipality in Santarém has taken responsibility for the salaries of the collaborators and a partnership with Navegapará, a program I will further describe in the next section, is going to donate them twenty PCs in the coming semester. Also, the computers they currently use are all recycled machines by Puraqué. Thus, Casa Brasil increasingly becomes an autonomous project that can give its own shape to its structure, methodology and activities. The idea is that the Pontos de Cultura eventually do the same thing, though the smaller a project, the more fragil, and thus the more difficult to sustain.



Fig 8. *Boy using free access at Infocentro Esperança.* Searching videos on Google Video is what most users do.

5.3 Navigating through Pará: “The major digital inclusion program in Brazil”

In Pará, digital inclusion is government policy. The political party on state level is, akin to the federal government, the PT (Workers Party). While over the last eight years the PT has disappointed many Brazilians, as they could not keep (all) their promises and have failed to live up to the (high) expectations of the people, in Pará I still encountered many true petistas (loyal voters of the PT). Currently, the state Secretary of Development, Science and Technology has developed a large-scale digital inclusion program called Navegapará to elevate the digital inclusion rate in the state. When reconsidering the three stages of digital inclusion Navegapará revolves around bringing PCs to the people and providing access to the Internet.

When I arrived in Belém, the capital of Pará, one of the first things that struck me were the wi-fi spots throughout the city. Not only meant for the digitally excluded a wi-fi hotspot allows people to bring their laptops to the chic restaurants and bars at the docks, looking out over the big river. In Santarém the wi-fi hotspot covers a nice square at the city centre. Especially at night people bring their laptops and use the Internet to enter their Orkut's and use MSN. In order to provide electricity they have installed plugs so that people can charge the laptops.

However, most is done in order to digitally include the lower classes of the population. The main objective of the program is to augment and expand the opportunities for regional development through the democratisation of access to ICTs, as digital inclusion is a fundamental need, akin to access to public services like health care and education. Since 2008 many Infocentros are implemented in the majority of the cities and villages throughout the state. An Infocentro is a computer lab with usually ten to fifteen PCs that can be accessed for free. They are open to anybody and are monitored by, usually, a member of the community in which the Infocentro functions. While they do not disseminate “culture” – who is responsible is the state Secretary of Development, Science and Technology – they do a little more than just providing Internet and PCs to the people. Navegapará developed a course on the basics of informatics that gives insight in how to use the operating system (Ubuntu), and particularly the Internet. The so-called monitors are trained according to a centrally developed course, which capacitates them to teach the course and take responsibility for a number of basic organisational and administrative tasks. Also, they are supposed to keep an eye on the

Internet usage, as pornographic sites and commercial games are prohibited and they should encourage the users to visit websites such as those that offer information on cultural activities, employment, education, health care and other services that might contribute to a better understanding of the potentials of the use of ICTs.

The state government too uses FLOSS in its digital inclusion program. However, in their digital inclusion report they justify this decision arguing that this reduces the costs for implementation and maintenance, instead of promoting it for its open and collaborative character. Ironically, they use Windows at the secretary's office. Also, when I visited several Infocentros in Belém I witnessed how a lack of knowledge about the philosophy and potential of FLOSS resulted in several misunderstandings. Although the monitors are selected according to, among others, their knowledge of informatics in most cases they lack both philosophical and extensive technical knowledge of FLOSS. I have seen several users complaining, as some who were already used to Windows had problems understanding Linux. As Windows seems the standard users automatically consider Linux inferior. Apparently, the fact that they not immediately understand the software says something about the quality of the software rather than about the skills of the user. Also, I have seen users who wanted to play a certain game that required Windows. For them it often was very frustrating if the monitor was not able to offer an alternative that was cool enough. Instead of viewing FLOSS as something different with other and extensive possibilities it rather appears an inferior replication of proprietary software that merely has financial advantages. Thus, not very unlikely users complain that they prefer Windows.

Navegapará maintains a very top-down and centralized structure. These projects serve regional development, focusing on the potential to use these tools for cultural expression and social engagement. The purpose of this program is to implement technology on a broad scale in order to digitally include many users on the short term. More specifically the aim is, among others, to promote access to ICTs to low-income groups in order to improve the quality of education, to reduce the unemployment rate and regional disparity (between the cities and rural areas)¹²⁹. Strikingly, the government emphasizes the importance of a digital inclusion program to elevate the quality of education rather than investing directly in the public education program. When I visited a couple of public schools I saw that most of these schools have a particular class room reserved as a computer lab, though that these are not necessarily equipped with computers, let alone are they functioning well. Also, I have spoken to various teachers that lacked the skills or interest to implement ICTs in their classes. As a result, the computer lab usually remains unused. Although the government envisions digital inclusion as a prerequisite for regional development and an increased quality of public education the digital inclusion projects occur outside the school. They justify this by the fact that they attend civil society—community centres, neighbourhood associations—in order to strengthen the social movement and that the empowerment of these communities increases their chance of

129 Digital Inclusion Report by Navegapará, Secretary of Development, Science and Technology

qualification for public (higher) education¹³⁰. Thus, improving the quality of education here means increasing the chance to obtain access to education of a better quality through basic knowledge of using ICTs. Clearly, the public sector considers a certificate on the basics of informatics of higher value than the improved quality of public education.

Usage of ICTs thus becomes not so much cultural, social or a tool for political engagement but rather economical, focusing on inclusion in the job market. A government has a certain stake in digitally including its population as it facilitates control upon its citizens and significantly reduces many costs (correspondence and information). Focusing on quick and broad results through an increase of access they avoid using the potential of ICTs to benefit the particular individual. In fact, this impedes a user to appropriate ICTs in a manner that corresponds to the particular goals he pursues.

5.4 Projeto Saúde e Alegria

Projeto Saúde e Alegria (PSA) is a NGO based in Santarém. Their aim is to promote and support participatory processes for sustainable community development, which will eventually contribute to improved public policies, quality of (community) life and citizenship¹³¹. Projects including ICTs are only part of the work they do. Besides digital inclusion they focus on community organisation through improved health care, the generation of income, education, culture and communication.

I have visited several Telecentros which they have implemented and I knew several people who have worked with them. As I mentioned before, PSA has established a partnership with the Pontão de Cultura de Tapajós, they have set up the Mocoronga network I mentioned in chapter 3 and they have installed several Telecentros throughout the rural areas around Santarém, which use solar energy and Internet via satellite.

What struck me when visiting two of these Telecentros was that they were not quite as “successful” as I had expected. One of the main reasons, I realized, was that the community members had not demanded the Telecentro. In Maguarí, for instance, people I spoke with did not seem to be very passionate and enthusiastic about the Telecentro. It was mostly empty and there were no courses or other activities yet. The Telecentro in their community lacked both motivated monitors and users and the few visitors that used to come visited the Internet merely for social networking sites or a school assignment. This even escalated when a lack of attention by the monitors resulted in young users entering pornographic sites and the Telecentro had been closed for several months. Since February this year Rene has been contracted as the new coordinator and he is planning to teach several courses and organise

130 Interview with Bruna da Souza of the Secretary of Development, Science and Technology in Pará. She coordinates the implementation of the Infocentros of Navegapará. 05/08/2010

131 “O Projeto Saúde & Alegria – PSA”. Retrieved from <http://www.saudeealegria.org.br/portal/index.php/home/conteudo/2> on 02/08/2010

activities. However, until today, things seem very quiet in Maguari. A blogpost on August the 5th by Rene says: "I returned in the fight to preserve the Maguari Telecentro"¹³². Different than other communities throughout the region Maguari is located in a national park. They do not face direct corporate threats, such as deforestation, mining and soy plantation. Their region is protected, they live relatively near to the city and obtain a community income through eco-tourism. Seemingly, ignorance on social problems outside their community resulted in a lack of interest in using technology as a tool to obtain knowledge about such issues and in their case the technology is rather used in an informal manner. This does not mean that it would not be beneficial for them. For example, in their case "passive consumption" of ICTs could facilitate their lives increasingly and would allow them to access important or interesting information without the need to travel. However, the majority of the community members did not seem to have much interest for these rather informal activities either. In their case, they obtained a Telecentro but they failed to embed this in their community life.

Furthermore, the Mocaronga network seemed an interesting initiative but similarly failed to correspond to the local demand. The blogposts on the platform are concentrated by only a handful of people. Also, when I spoke with Nataleusa, the coordinator of the Telecentro in Belterra which is one of the nodes in the Mocaronga network, she said she did not know what was going on in the other communities, as they do not really interact with one another. In the case of Belterra, they are actively posting news on their blog. However, for them, the network rather functions as a messenger to the *outside world*, instead of a means to enhance community communication.

This might also explain her ignorance about the situation in Piquiatuba, a community that is also part of the Mocaronga network. They have not written a blogpost since November 2009, because they lack Internet. During my visit the Telecentro already existed for over two years, though their Internet connection has worked only during the first fourteen days. Therefore, they cannot interact with the other communities. This means that they remain even more isolated and increasingly dependent on, in their case, PSA. Even complaining about the lack of their connection is hampered by their lack of Internet. Instead, they have to travel to the city (2-3 hours) in order to make a phone call or access the Internet. The coordinator in Piquiatuba told me that she was so angry: "Every time when I go to Santarém I call them, or send them an email, and they always say that they will come to fix it. So we wait, and wait, but they never come! It's been two years now." She also told me that she is afraid that when she tries to approach other partners that PSA will get mad with her and seize their aid accordingly. Also, without cell phone, landline or Internet it becomes very difficult to find these new

132Arcanjo, R., "[O Blog do Maguari esta de volta ativa!](http://maguari.redemocaronga.org.br)", Retrieved from maguari.redemocaronga.org.br on 17/08/2010

partners and to contact them. As they are a very small community without much organisational structure, demanding subsidies is a very difficult process. Subsequently, they lack access on other calls for project proposals in order to obtain new subsidies and partnerships, which are chances they need to get Internet to their community eventually.

The lack of Internet results in many people quitting the courses, as their main objective and motivation is accessing the Internet rather than classes on the usage of a word processor, spreadsheets and slide shows. However, this inconvenience resulted in an alternative appropriation of the technology. As they lack Internet access they started to use the technology for internal community communication. For instance, they developed a monthly journal in which they spread local news. The participants thus learn to use the word processor and applications for graphic design such as Gimp. This demonstrates how for some technology can be magical and attractive even without an Internet connection, whereas for others the latter seems essential.



Fig 9. *Telecentro Comunitario de Piquiatuba*. From left to right. 1. the Telecentro and 2. the solar panels.

PSA sets up projects departing from a similar idea and methodology as Puraqué. Sustainable development is one of their main aims and the usage of FLOSS is fundamental in their activities. However, they not necessarily develop projects that benefit the local people or that correspond to their reality and their desires. They have certain ideas and goals when they implement the Telecentros but in the two cases of Maguarí and Piquiatuba the results are different than was meant at the outset. This happened because the initial attempts did not correspond to the local demand. They set up a network, though people do not seem very

interested in communicating through a network. Or they have installed a Telecentro but people have (yet) failed to imbed the digital technologies in their day-to-day life. Interestingly, however, as they failed to provide sufficient technical support, the local people have appropriated the Telecentro in an alternative manner.

5.5 The insignificance of the small versus the power of the big

Civil society organisations and third sector projects are in continuous need for funding. The government with its several projects such as Pontos de Cultura is an often consulted body for subsidy. Also, numerous public and private institutions constantly call for specific project proposals in order to choose projects for funding. Usually, *anyone* can write a project, varying from NGOs and an informal group of people to other types of organisations and institutions. However, the response to these calls is enormous and not all projects can and will be read. That means that the usually larger, well organised and established institutions are a step ahead in this process, which hampers just competition for the rather informal groups. Thus, there is a clear asymmetry between those that are recognized and those that need most; the strongest demand the subsidy, leaving the less powerful empty-handed.

This is problematic because, usually, the rather informal and unorganised groups related more closely to the local people and their ideas more likely correspond to the local social reality. That is, governments operate very centrally and top-down and usually have a certain stake that does not correspond to that of the “excluded”. This is also the case with NGOs or other larger projects that involve several parties, which are usually very organised and thus manage to sustain through several partnerships. They too define the problem (being digitally excluded) for those that lack access to ICTs and simultaneously make use of the subsidies that are available for “civil society initiatives”, such as several calls for proposals by several funding bodies or, for instance, the Pontos de Cultura. As a solution, the informal group's initiatives tend to articulate to the rather powerful projects in order to sustain, though lose a bit of their character through the top-down projects that influence these initiatives from above. In the next chapter I will demonstrate how these several actors are related and intertwined and how this affects the digital inclusion initiatives.

6 Spreading the ideology: the Puraqué parasite

6.1 The puraquean@ methodology beyond its physical boundaries

In chapter 4 and 5 I have described the different projects in and around Santarém separately, though at some points the boundaries between the several projects dissolve. That is, most projects are deeply intertwined and use each other either in order to improve their sustainability or to adopt one another's methodology.

Puraqué has been a major driving force in the articulation to and the establishment of partnerships with several projects. This allows them to maintain the project without any significant or fixed income. That is, they all work voluntarily and depend on donations of used technology by the private or public sector in order to continue their projects. Also, via calls for project proposals by public institutions they here and there generate a subsidy. However, as these donations and subsidies are one-off or temporary, a lack of resources would hamper their activities. As a result, they (often using the labour of volunteers) offer workshops and courses on FLOSS and the application of their methodology to public schools with computer labs (not all schools have such labs) and the Infocentros financed by Navegapará. They seek top-down projects that are sustainable (especially the public schools) or have financial resources (such as Navegapará or the GESAC project by the federal government¹³³), and *hack* them in order to disseminate their methodology and ideology. What is maintained is not the project, but their methodology. Thus, the physical boundaries of Puraqué dissolve, but their methodology extends pervasively.

The dissemination of their methodology occurs through the dissemination of their people or through “contaminating” others. Over the last couple of years the team of Puraqué consisted of about fifty people. Lately, the core group found the majority of the participants jobs in the field of digital inclusion, most of them as monitors in the Infocentros, and others in various local initiatives, like Casa Brasil and the Pontão de Cultura de Tapajós. Obviously, these people have a profound knowledge of technology, as they have learned the principles of programming through using FLOSS, done a lot of *metareciclagem* and have gone through an intensive learning process during all these years they spent at Puraqué. This allows them to teach the visitors of the Infocentros according to the puraquean@ methodology: the rather profound

¹³³The “Electronic Government Service for Citizen Attendance” is a project by the Ministry of Communications and the private sector in order to provide distant communities with satellite or broadband Internet connections.

discourse on open source technology, e-waste, and using ICTs as a tool to increase critical knowledge. Whereas in the Infocentros in Belém many monitors often fail to really understand the philosophy and the advantages of FLOSS, many of the ex-puraquean@s actually focus on the social and political aspects. For instance, they include several additional activities within the basics of informatics course. They also try to give the participants a little more room to discover and develop things by themselves, thus stimulating their curiosity, creativity and inventiveness.

In this way, Puraqué both assures these people a job and an income and the expansion of their ideology and methodology throughout the region. In the following sections I will further demonstrate this by describing Jessica and Jose's Infocentro, Rogerio's classes at Casa Brasil, Monica and Nataleusa's Telecentro in Belterra and the Telecentro in Juruti Velho as four spaces in which the puraquean@ methodology is disseminated outside the physical boundaries of the project.

6.1.1 Jessica's and Jose's Infocentro

Ex-puraquean@s Jessica and Jose are both monitors in the Infocentro located in Aeroporto Velho, which is inside the building of the neighbourhood association. The space is equipped with thirteen PCs, so that is also the maximum number of participants of a course. Classes are either three times a week (Monday-Wednesday-Friday) one hour, or two times a week (Tuesday-Thursday) 1,5 hour. In total, fifteen to sixteen different groups are taking the course at the same time, which means that during one course of three months about 200 people are enrolled.

Potential monitors need to participate in a workshop of a couple of days in order to become a monitor in the Infocentros. The program requires them to have a basic knowledge of Linux, usage of a PC and the Internet in general, and on the content of the course which they are supposed to teach. Jessica told me that those that have never joined Puraqué are not very likely to know Linux. Windows is still the standard operating system for those that learn the basics of informatics at a private course or at private schools. As it was Puraqué that introduced FLOSS in the region—at the time nobody knew what it was—others usually have difficulties using Linux. Therefore, puraquean@s certainly are a step ahead and have a broader knowledge. As Jose and Jessica have participated in the activities at Puraqué for many years, they already complied with most of these requirements, and a short explanation of the

content of the course and a couple of rules that they needed to follow was sufficient.

I asked them whether there is a difference between them, ex-puraquean@s, and the “regular” monitors. Jose said that the difference is not very big, as they have to follow a similar structure. But then Jessica added that they are more critical. “If we do not agree with some of the rules, we change them”. That is, within the fixed framework that is imposed by the existing program through the structure of the course, which predetermines the topics and assignments of each class, they tend to give the course a different flavour. For instance, they disagree with the sequence of the classes. The Internet is supposed to be the subject of the last classes, but they think it is fundamental to start with a couple of classes on the Internet. For instance, during a class about the use of a word processor, I noticed a girl downloading music while she was working on her assignment. While some teachers would disapprove this type of activities, Jessica said that she thinks it is important to let them discover these kinds of activities. For the girl, the Infocentro is the only place in the city where she has access to fast Internet, and thus the only opportunity to download music. Through using the time she spends in class to download music, she learns new things and simultaneously takes advantage of the connection to download her favourite songs. Also, Jessica and Jose let the people use the Internet freely in the last ten or fifteen minutes of each class in order to explore different sites, or do some necessary things for which they would otherwise not have time. Furthermore, in order to combine different subjects within one class, they let the participants do an image search online during the class about presentation slides, or a text from a website of their choice in the class about word processing. If they had left the class about Internet until the end of the course, users would not be encouraged to use the Internet for these ends.

According to Jessica, the course is not complete. “Many important, perhaps fundamental, things are missing. I want to show them more than how to use a word processor, spreadsheets and Google. Therefore, I am planning on giving graphic design classes using Gimp and Inkscape, or to implement these programs within the existing courses.” Also, in the past, they have already offered a course on the creation of blogs and another solely on Internet usage. Thus, they tend to give an extra dimension to the “basic” activities in the Infocentro, and allow the users to engage more profoundly with the ICTs.

The general atmosphere in the Infocentro is friendly, relaxed and the women guarantee a healthy dose of humour. There is a discourse going on in this place. They give people a certain freedom in which they can decide what to do, and can choose how access to ICTs can be meaningful for them, as demonstrated by the girl who was downloading her music during

class. Jose mentioned that a certain freedom is necessary. "Every user is different, and not necessarily needs the same treatment. It is important that each Infocentro has its own characteristic, that they all differ a bit from one another". Jessica and Jose joke with the people and make them feel very comfortable. This is fundamental and makes the Infocentro a reference point in the neighbourhood.

6.1.2 Rogerio

A very special person I met at Casa Brasil is Rogerio. He has been teaching the basics of informatics and advanced informatics classes ever since Casa Brasil opened two years ago. He is one of the ex-puraquean@s for whom they found a job in the field, and has always stuck to the participatory methodology in his courses at Casa Brasil. He told me that, initially, they were free to adopt the Casa Brasil courses in a specific manner, though they have chosen to follow the puraquean@ methodology. This methodology in fact is based on, or has several similarities to the famous Brazilian educator Paulo Freire, who has been an influential theorist of critical pedagogy¹³⁴. And it has been a good choice, he explains, as people adapt very well to this methodology. The problem, however, is that many people quit Casa Brasil when they finish the basic course. Rogerio explains that of the students in his classes, usually just a few people continue studying and developing their skills. "I try to improve this number by motivating my students and inviting them to come volunteering after the first course. Thus, these people, usually kids or teenagers, remain frequenting the project and become involved in other activities. Because, in fact", he said, "the main objective of Puraqué is not to train these people in order to become ICT experts, or that they will work with digital inclusion eventually. The major goal of offering these people a voluntary job is to get them off the street, the violence, and the drugs. What is important is that we give them an occupation". Eventually, he said, some of these volunteers stay, though for others it does not work out. "Some expect something different, such as remuneration, or other benefits, and fail to recognise how knowledge actually is a very valuable exchange. That is a shame, but we have to strive for the best. Each person that will eventually stay is an achievement".

Rogerio and I discussed the fact that many of the participants of the basic courses throughout the region merely seem to be interested in obtaining an IT certificate. He said that he shares this concern with me, though he tends to have open and extensive conversations with the participants about that. "We talk a lot about the purpose to find a mere job. Unfortunately,

134"Paulo Freire". Retrieved from en.wikipedia.org/wiki/Paulo_Freire on 06/08/2010

making money seems to be the objective of most people, and a certificate that proves basic knowledge of ICTs is required. Because here in Santarém you simply need to have a course on the basics of informatics in order to find a job, any simple job! So, during the course I tend to convince them that a job, however, should not be the main objective. I always tell them that it *isn't* about getting a job, and making money. Because, at one point, a job will become scarce. *Work*, on the other hand, there will always be.” Thus, he encourages them to develop skills with which they can do several things, and maintain themselves. They have to develop their talents, instead of focusing on a certificate, as the latter will eventually lose its value.

Proudly he told me a success story about two guys that had once taken the course. Although they left, they seemed to have understood his message. “One day they returned to me and told me that they wanted to open their own cybercafé. The fact that they *believed* that they were able to do this, instead of accepting any simple job, made me really happy. Because I think these are results we strive for.”

Rogério's classes actually go *beyond* learning how to use software and access the Internet. For instance, the PCs they use during the course are really old, and students usually are irritated by the fact that they are really slow, and often freeze. “I always tend to have a conversation about this”, he explained. “For instance, when the PCs are used every day, in the morning, afternoon *and* evening, *each day* of the week, I explain the that they heat too much, and therefore freeze sometimes. Once they understand this, they seem to have more patience”. He also encourages to recognize and identify problems and to think of possible solutions. In the *metareciclagem* class, then, they can actually apply this knowledge in a practical manner. Furthermore, he invites those students that are really participatory for the monthly maintenance of the PCs in his classroom, where they help opening up the computers in order to clean them. Thus, he creates an understanding with his students, and triggers their curiosity to find solutions for these problems. Eventually, he hopes that this helps in convincing them to participate in other courses and develop their IT skills in the future.

I found it very special to see him in this position, as he told me that he originally comes from a rural area where there was not even a high school. Only when he was 22 years old, his family moved to Santarém and he started *ensino medio*¹³⁵. Simultaneously, he has always sought to develop his ICT skills, by way of participating in an IT course and, subsequently, at Puraqué. When reflecting on his years at Puraqué, he assures me that his life has completely changed. “I found out what I really like, and what is important and relevant in life. In fact”, he said, “Puraqué changed my mentality, my life philosophy.” Today, at Casa Brasil, he is enjoying his work very much, and actually tries to pass his knowledge and philosophy onto his students, hoping to have a similar impact on their lives as Puraqué has had on his.

¹³⁵Similar to high school in Brazil, usually from 15 to 17 years.

6.1.3 Monica and Nataleusa

Monica, the woman from Belterra that I mentioned in the third chapter, has also been in contact with Puraqué. Until a couple of months ago, she has been the coordinator of the Telecentro. After she had left her position in order to start her new job at the museum, another woman named Nataleusa has taken her place. At the time, Monica had set up several meetings with Puraqué in which they visited Belterra to give workshops of a couple of days in order to train the monitors and coordinators. For instance, some of the monitors learned metareciclagem and now apply these techniques in the basic courses. Furthermore, as in their Telecentro too is only space for the basics of informatics course, they invite the *puraquean@s* to give a couple of workshops on metareciclagem, advanced informatics or multi-media. They do this in order to encourage those that have finished the course to continue studying in the free access hours - assuming that they lack a PC at home - or to collaborate in the Telecentro as a volunteer.

The strong FLOSS philosophy and the idea of using ICTs a tool to increase critical knowledge have influenced them in such a way that they have developed specific content for the classes on Internet usage. Nataleusa told me that inside *their* Telecentro using Orkut and MSN is not allowed. Thus, they tend to encourage users to access information that is “useful”, and which increases their “knowledge” on specific topics. Subsequently, I talked to a boy named Gabriel, who, according to Nataleusa, had recently finished the course and had always been a very participative student. He said that what he most liked about the Internet was communicating with his relatives and friends who lived in Santarém. As Nataleusa just told me that they are not allowed to use Orkut, I asked how he communicated with these people. By email, he explained me. That struck me, as in Santarém most kids have forgotten email accounts, which they do not use¹³⁶.

Monica and Nataleusa have adopted *and* very intensively replicated the *puraquean@* ideology, though they use a very strict and perhaps at some points paternalistic methodology. As opposed to, for instance, Jessica and Jose who let them use Orkut, MSN in order to discover the possibilities that these social networking sites might provide, these women teach the users to use the Internet to increase knowledge about certain topics, or for their school assignments.

Due to this policy Orkut is relatively unpopular, or rather, unknown, in Belterra. However, for some the course remains a catalyst to further develop their ICT skills. What is the main obstacle here is that most people lack a computer at home, and thus depend on the free access hour. This is of course very limited; fifteen computers available only one hour per day, being the only space for free Internet usage in a city of nearly 10,000 habitants.

¹³⁶See chapter 5. At Casa Brasil students were supposed to create an email, which they, subsequently, do not use as they communicate using Orkut and MSN.

6.1.4 Puraqué goes rural

Puraqué goes beyond the urban areas, supporting many communities and small municipalities throughout the Amazonian region with workshops and courses on ICTs. When a community contacts them to start a partnership, they usually go there to install the desired project in exchange for food and accommodation. A precondition for a partnership is a proposal by the other party; they never implement a project without the community's demand. This ensures a strong motivation and organisation by the community members.

One of the communities Puraqué has attended is Juruti-Velho, which I introduced in the previous chapter for their active social movement. Their strong and independent organisational structure has been important for the demand of a Telecentro in their community. In 2009 they installed an antenna in collaboration with GESAC, a project by the federal government that provides distant communities with Internet via satellite. Then, through a partnership with a private company they received twelve computers and a printer, and the Telecentro could initiate its activities. In order to capacitate people to teach courses and monitor the Telecentro, they got in contact with Puraqué. The latter organised several exchanges, whereby a number of community members participated in several intensive courses on the basics of informatics and advanced informatics at Puraqué's base in Santarém, and equipped their machines with FLOSS. Thus, they would be able to teach the same courses according to the same methodology back home in their village.



Fig 10. The metareciclagem workshop in Juruti-Velho. From left to right 1. woman making notes 2. boy taking apart the pieces 3. young man holding the power supply.

Elen, a 20 year old woman who lives in Juruti Velho, is responsible for the advanced informatics courses, including graphic design using Inkscape and Gimp. Her classes are very similar to those that are taught by other *puraquean@s*. During one of the classes in which I participated, these students too had to design a flyer about a socio-political topic, in this case about the local activist movement and their fight against the mining company. Students had to search the Internet for information and images, and subsequently design the flyer. Here, however, I realized that Elen herself lacked extensive knowledge of the software. While in Santarém people usually have much more experience, Elen had only been trained for a couple of weeks. I saw, for instance, that the students searched for images on the Internet and imported them in Inkscape. They made the size fit through rescaling them, though they forgot to hold “ctrl” in order to retain the width to height ratio. She failed to explain a couple of these basic techniques and I wondered whether she herself was working on her own skills while teaching the course.

Instead of using the Internet to indicate problems and find solutions, for any trouble or questions they usually get back to Puraqué. Every once in a while they call them to visit their community and organise a couple of workshops. These workshops can be either workshops to update their knowledge or workshops on other topics such as multi-media or metareciclagem, in order to stimulate people's curiosity and give them insight into the many possibilities of ICTs. I visited Juruti Velho accompanying Dennie, one of the technical guys of Puraqué, as he was asked to install an antenna that would transmit the Internet signal throughout the village. To benefit from his visit, they asked him to give a metareciclagem workshop for the new students of the basic of informatics course. Thus, through these regular visits they remain updated, gain new input for their courses and activities and benefit from technical support. On the one hand this is important, as they feel a strong dependence on their help, though simultaneously this feeling of dependence prevents them from finding their own solutions for their problems. Simone, who works at the secretary of the community association, told me how she thinks the Internet can help them in the organisation of their activities and as a tool for information and communication. For instance, when you query “Juruti Velho” in Google, the first hit is the website of the mining company Alcoa. Instead, she stresses, *they* should be the first hit. They want to *exist*. Thus, she said, they are yet starting a community blog which will allow them to tell their story to the world outside. However, she continues, they are not really sure how to create this blog, or how to maintain it. In fact, they are still waiting for a workshop on blogging, assuming that they would lack the capacity to create one themselves. In this case, their feeling of dependency impedes them from going after information about how they can do it themselves.

The above demonstrates that the further their methodology spreads throughout the region, the weaker the “effect” seems. In the Infocentros the monitors have to operate in a certain framework, a fixed pattern. They have a certain liberty that is limited by a certain structure in which their activities have to fit. That means that there is less space for discussions and extra activities and less freedom to decide what to do with technology. While Jessica and Jose try to implement and add certain elements besides the course that is developed by Navegapará, the main activities in the Infocentro remain those that are predetermined by the course. Also, the Navegapará program deliberately occupies the major part of the day with the course, so that there is little space for free Internet usage. They want to prevent visitors from using Orkut, MSN and video games and instead occupy them with “more useful” activities¹³⁷. Thus, users have significantly less choice regarding personal appropriation of ICTs. Furthermore, as the major time is occupied with the classes, users will lack sufficient space to develop their skills to a higher level. While this course teaches people basic knowledge about ICTs, and offers them a handle on open source technology and the advantages and possibilities, the Infocentro fails to provide those that grasp this idea the chance to further develop it.

In fact, the president of the neighbourhood association that is responsible for the Infocentro in the neighbourhood of Maracanã told me that the aim of their Infocentro is to elevate the employment rate among the dwellers. This is actually reflected by the mentality of most of the users. After completion of the course, people receive a certificate. For most of the people the main objective of taking the course is this certificate, as it increases their chance to enter the job market. Because basic knowledge of ICTs is increasingly becoming a prerequisite for finding a job. After obtaining the certificate people will no longer frequent the Infocentro. Some in fact do return for basic activities such as checking their Orkut profile, paying a bill or to subscribe for a course, but they no longer develop the kind of critical and technical knowledge Puraqué aims at.

At Casa Brasil, on the other hand, exist a variety of other courses, and the activities more strongly articulated to Puraqué. Many of the most participatory visitors of Casa Brasil eventually or simultaneously frequent Puraqué in order to improve their technical skills. Also, for example, core group *puraquean@* Dennie teaches the *metareciclagem* class at Casa Brasil. In fact, the majority of Casa Brasil's management team are *puraquean@s*, though they are not all involved in the daily activities. Thus, at Casa Brasil not only is the *puraquean@* methodology more strongly present than at the Infocentros, their structure also allows users and visitors to continue their activities and the development of particular skills.

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Finally, the distant communities demonstrate how they have embraced the puraquean@ ideology, but how their insecurity to further develop these skills increases their dependence on Puraqué. Furthermore, the lack of access to ICTs outside of the Telecentro impedes people from developing their technical skills, as usually the entire population of a community or village depends on only one Telecentro.

6.2 Digital inclusion

It is important to rethink what it means to be digitally included. Digital inclusion is not a dichotomous distinction between having and not having access to ICTs. Instead, amongst those that have access there exists a certain hierarchy of digital inclusion, which varies from simply *having access* to ICTs to *meaningful digital inclusion* as a state of being that socially enhances the particular user¹³⁸. I would like to question here what *meaningful* means, and to whom this applies.

The basic courses in the Infocentros *digitally include* the users. The user gets an idea of the structure of Ubuntu, learns how to use Openoffice (word processor, spread sheets, slide shows) and the Internet. At best, the user understands the difference between proprietary software and FLOSS. It benefits the particular user as it enhances his self-esteem. It provides knowledge of the usage of ICTs (especially Linux), and it increases his chances on the job market. Furthermore, free usage of ICTs certainly changes something for a user. When free access to the Internet is permitted, most computers are occupied and users check their Orkut profiles, view photos and leave *scraps* (short messages on each other's profile). Another very common activity is watching (tecnobrega) videos on Youtube and playing games, activities that in a way enforce the cultural bonds that hold them together as a people¹³⁹.

However, the above revolves around the question *who benefits from digital inclusion?* To what extent are these people actually encouraged to develop and use their creativity? How much space do they have to decide what they want to do with ICTs? While Navegapará says it aims at community “empowerment”, this course simply trains people in order to fulfil a passive and non-critical role as an employee or consumer. While “empowerment” connotes a form of emancipation, an enhanced self-esteem, or autonomy, most of the people enrolled in the courses are really shy and insecure. They fail to show faith in themselves as individuals and in society. When I tried to talk with them during the courses in order to ask them about their experiences, their objectives, and what they like most, they hardly answer my questions. Even less do they look at me when they briefly respond, pretending that they are busy with their assignment. They seem too shy to speak to me, or afraid that the monitor will give them an

138 See: Selwyn, 341

139 See: Weiss, 2008, and Vasconcelos, 2006. Popular cultural expression enforces cultural bonds and the perception of their place in the world.

earful. When they obtain the certificate and find a job, who exactly benefits from digital inclusion in this way? What will a job bring them besides a salary that is usually very low? In other words, in *what* actually are these users included? Arguably, the formation of these people functions in the service of the government and the market, aiming at quick (economical) development throughout the region. Digital inclusion, then, becomes economical rather than social or political.

6.3 Appropriating Technology

Although the methodology tends to go *beyond* digital inclusion, many fail to grasp the idea of using ICTs as a tool to achieve social enhancement and autonomy. The basics of informatics course fails to go beyond *digital inclusion* and in fact digitally includes many users in a short period and on a very large scale. Although there is some input from the bottom, the major structure of the program is top-down. What is done is (1) bringing the computer to the people and (2) providing access to the Internet. However, a rather intensive involvement with ICTs could lead *beyond* digital inclusion, which allows the *appropriation of technology* in order to produce and disseminate culture (3) and thus/or to achieve social transformation. Pointing at Puraqué, the principal aim there is not to *digitally include* people, but to encourage people to use the technology as a *tool* for *social* inclusion. Instead of “being forced to” learn how to write an application letter using a word processor, a particular user can choose take part in the multi-media course and thus might realize that he *is* able to go after his dream to become, say, a movie producer. Through the discourse *around* ICTs, which includes several social, political and environmental issues, the participants will increase their knowledge about these issues. In fact, when aiming at empowerment, digital inclusion is a complicated term. Whether considered “meaningful” or not, the term already indicates a *passive* subject that is *included* by an dominant force while the appropriation of technology departs from an *active subject who is free to appropriate technology in a manner that benefits him*.

Each community and each neighbourhood, or in fact, each user, has other objectives in relation to ICTs. Whereas some aim at inclusion in the job market, others want to get a voice or facilitate community life. Finally, there are the ones who just want to use ICTs in order to communicate with friends and family, that is, for social networking. In Juruti Velho, the Internet plays an important role in community articulation and the organisation of their social movement throughout the region. Thus, predetermined activities and courses might hamper the appropriation of ICTs for such specific ends.

I have seen several people undergoing a social transformation, by way of appropriating technology in a personal manner, as many of them actually become critical citizens that are politically and socially engaged. Monica, for instance, has recognised the potential of ICTs as a

tool for socio-political activism, using the Internet to obtain information on extensive topics, and to communicate about their social reality. And Jessica and Jose realized that they can do all kinds of fun things with ICTs, something which they had always considered only available for the rich. In fact, they have undergone not only a social transformation, but a *professional* transformation as well, as they have developed extensive knowledge about several technological and social topics, such as programming, technical support and maintenance, open source and collaborative technology and e-waste. Today the women use their knowledge in order to achieve interesting jobs in their field, to study at the state university and, as Jose has recently shown, to start their own businesses. These women were stimulated to pursue their *dreams* and to do something they really wanted, instead of accepting any job that would ensure them an income or marrying, having kids and taking care of the family. Perhaps it was not as much the ICTs in itself, or the ICTs as a tool for socio-political enhancement, but instead a playful manner for increasing knowledge. This playful way to develop a certain discourse about their social reality and things that matter to them might have triggered their sense of being *someone*, their courage to dream, and the confidence that they can realize these dreams.

This is different than arguing that access to the Internet simply “empowers” individuals and allows them to engage in political (or any other kind of) activism. The courses at Puraqué are not directly aiming at the usage of ICTs for contestation or protest but instead use ICTs to wake these people up through a shock of knowledge. They encourage people to look at what is going on in *their* region, instead of focusing on some kind of world, or reality, that is “sold” to them by the media. Instead of *directly fighting* inequality, Puraqué tends to encourage sustainable development by way of returning to the people's cultural roots: gambiarra. Not trying to *enter* a consumer society, neither trying to *oppose it*, or *to fight against it*, but instead to use your inventiveness and creativity in order to find your own autonomous place *inside* it.

6.4 Centrality versus Network

The above demonstrates the tension between quantity and quality; between the reach and the intensity of the puraquean@ methodology. The more people will be participating in the courses, the less support, time and space for them to appropriate technology for personal and social ends. However, also bigger is the chance to recruit new people that believe in the puraquean@ ideology. The majority will be *digitally included*, while only a handful actually appropriate ICTs in order to socially transform, to enhance their autonomy and disseminate culture. For example, the puraquean@s assured me that they have already trained over three thousand people over the last eight years. However, until a little while ago “only” fifty people have joined the project for a significant period in which they actually adopted the ideology and methodology of the project. In fact, the dissemination of their methodology serves as a “recruitment process” in order to “obtain” new activists. Once the basic course has triggered their curiosity, Puraqué takes care of the rest, *inside* the physical boundaries of the project.

However, I observed how their structure in a way hampers the dissemination of their methodology. Although many monitors who work in areas related to digital culture have joined Puraqué and are contaminated with the Puraquean@ ideology, they are not connected through an online network, neither in the form of a collaborative platform nor through an email list. Usually, the ex-puraquean@s or those that have been trained by them maintain contact with the core group of Puraqué, or between one another, but they lack collectively shared and produced information about their activities in, for instance, the Infocentros. Instead of sharing their problems and solutions and collaboratively working towards a better methodology that applies to their community, they rather approach the core group of Puraqué for advice or technical support. In this way, Puraqué remains rather centralized instead of existing as a collaborative and distributed network. This is problematic, because they usually are very occupied with dozens of activities. Thus, people usually have to wait weeks in order to be attended, and often times part of the activities seizes as a result of that. More importantly, however, in this way monitors and other people involved in the Infocentros' activities remain dependent on their help instead of enhancing their own capacity to resolve problems and develop ideas, which results in a feeling of responsibility by Puraqué.

6.5 Beyond gambiarra... It's about policy making

Although they aim at liberating people from dominant power structures that encourage them to be ignorant and passive, their effort in achieving this is hampered at several points. Their methodology uses several tactics and gambiarras (low-tech recycled technology, installing an antenna on the church), but their structure is rather strategic. They aim at a long learning process in which a user uses ICTs in order to increase his knowledge. This will lead to a sustainable form of personal development, though not so much to tactical use of ICTs in order to protest, contest or oppose power structures. Also, while their ideology strives to improve social equality and social cohesion, searching for the best to those that are marginalized, they remain in a way top-down and centralized. Through the courses they impose their ideology onto the participants. Although their structure is rather horizontal, the information flow at Puraqué remains rather oneway instead of a space for *knowledge exchange*.

Puraqué revolves around legality and tactics. They search for “legal projects” in order to hack, instead of, for instance hacking the immensely popular tecnobrega scene. By this I mean using multi-media or audio courses or workshops in order to produce tecnobrega songs with texts that apply to their ideas, and disseminate these. However, for them, sustainability is a very important element. It is, in fact, their foundation. They are activists that instead of opposing dominant power structures (authorities, the private sector) tend to collaborate, negotiate, and influence these actors' stakes in digital inclusion. In this manner they become increasingly

involved in policy making. Thus, the project has gained significant recognition throughout the region, and they have managed to sustain, and grow, over the last eight years.

7 Conclusion

The appropriation of technology allows a particular user to pursue its particular objectives, though digital inclusion projects are still mostly top-down and centrally implemented. In this manner these projects will fail to recognise the cultural characteristics and specific objectives that pertain to a certain community or region, preventing the community to use the technology in a manner that benefits the people. Although both the top-down programs and the bottom-up projects seem to need each other in order to make digital inclusion work, certain requirements from above seem to clash with the ideologies pursued by the *puraquean@s*. In many cases this hampers the process to move *beyond* digital inclusion.

7.1 Digital inclusion: What's in it for the several actors?

The WSIS outcome that should bridge the digital divide suggested a multi-stakeholder approach involving the public and private sector and ascribed a significant role to civil society. In the previous chapters I described the several actors that are involved in digital inclusion practices throughout the North of Brazil, and how they relate to one another.

The Brazilian government has shifted its main aim from simply providing access to PCs and the Internet, to the emancipation of users by appropriating technology in order to diffuse culture among the people. Its stake is the socio-cultural emancipation of marginalised groups. However, particularly in Pará, the government still focuses on providing access to ICTs, justifying this aim by arguing that access to information will socially, politically and economically enhance the user. However, the problem is that the Infocentros are implemented in a centralized manner, which impresses a certain methodology onto a region consisting of a plurality of cultural and infrastructural characteristics, ignoring that the different people might not have the same objectives in relation to technology. However, the “advantage” of their course is the *certification* of between 500 and 1000 people per year, which is a measurable amount, instead of a lower quantity of people that would frequent the Infocentro on a regular basis during a much longer period. As these projects depend on public subsidies, they have to administrate such data, and high numbers are required by the funding body. Quantity here seems of more importance than quality. In fact, the government rather seems to aim at quick and broad (economical) development throughout the region.

Other public projects, such as the Pontos de Cultura, do stimulate users to appropriate technology to the local culture and social reality, but in fact too remain predetermined projects in which the local people remain dependent on subsidies and support from above. In these projects the bigger and better organised initiatives (NGOs, larger projects articulated to other

—private, public, or third sector—parties) are usually privileged over the smaller and informal groups. Arguably, these organised initiatives do not necessarily correspond to the local reality of those they pretend to represent, as their legitimacy is based on the moral strength of *their* argument rather than on a mandate from the people it represents¹⁴⁰. In this manner, the most marginalised and isolated communities are disadvantaged. Especially in Pará, due to a very limited infrastructure, they lack the circumstances and means to articulate to, for instance, the private sector or larger NGOs. Subsequently, they gain less attention and support while they have most difficulty in survival.

7.2 The puraquean@ ideology and the ordinary user

Considerably, Puraqué is a rather organised group of activists which has predetermined a *problem* and a *solution*, the former being “digital exclusion” and the latter the increase of critical knowledge through ICTs as a basis for sustainable socio-cultural development. However, while they tend to digitally *and socially* include the users, the latter in many cases aim at mere *digital* inclusion. These people simply want a certificate to enter the job market, or access to the Internet in order to keep up with their friends and relatives. The latter in particular should not be underestimated as social networking, whether digital or not, is a fundamental Brazilian characteristic. Pereira demonstrates this very clearly by showing the thorough intertwining of the online and offline social networks of the teenagers that visit the Cybercafé X-play. The title of her thesis very clearly reflects what is essential “Because playing by yourself isn't fun”¹⁴¹. Thus, Puraqué in a way defines a solution for the excluded, which does not necessarily respond to his or her needs. In fact, they have a certain ideology and their stake in digital inclusion is to obtain “new activists” who will share their ideas.

How does this relate to the stake of the excluded? Do they actually want to undergo an emancipatory transformation? Are they concerned with inequality throughout the region? Or do they just want to use the Internet in order to communicate, or to have access to the same things other people have? The incredible magnitude of the (popular) tecnobrega industry in a way explains the popularity of Orkut and Youtube amongst the users. Whereas they always “needed” to create alternatives to models of consumption by the elite (the *camilôs*, the tecnobrega industry), online they can communicate with each other, similarly to any class of the population. Yet online social networking does not very likely transcend or blur the boundaries between the societal classes and thus becomes a reflection of their offline social reality. In a way, I saw the passionate (and chauvinist) tecnobrega culture reflected in their usage of Orkut, as girls post excessive amounts of sexy and seductive photos on their Orkuts in order to show their beauty. Also, everywhere I saw men and women watching tecnobrega videoclips, on their cellphones or online in the Telecentros. In fact, spending the afternoon in

140 See: Sorj, 2006

141 See: Pereira, V., 2008

order to make-up, dress-up and take photos for their Orkuts, or imitating the bands and making amateur videos are very common activities among girls. Subsequently, I have spoken to several people who told me that *through* these social networking sites, they even arrange (sex) partners, choosing them, among others, on the basis of these photos.

Whilst Puraqué does not directly advocate this rather informal usage of ICTs, those who *do not* embrace the puraquean@ ideas still have the chance to obtain what they want (a certificate, knowing how to create and access an Orkut account). Not every person is a potential activist, and the puraquean@s accept that ICTs might benefit a user in an alternative manner than the one *they* propose. For some, such as Rogerio, the ideology has caused his stake in digital inclusion to change along the path of his puraquean@ experience. Initially he wanted to increase his chances on the job market, though eventually his participation in the activities at Puraqué have led to an increasing knowledge of ICTs and an actual transformation of his mentality. Thus, those who *do* believe in the puraquean@ ideology have the chance to further engage with it.

What characterizes Puraqué is its structure. They have moved *beyond* gambiarras and loose activist activities into a rather “activist strategy”, aiming at sustainable development through increased knowledge throughout the region. ICTs are not so much an *end*, nor a *direct tool* for socio-political enhancement, subversion or contestation. Instead, Puraqué uses them as a trigger, as a starting point for a discourse that corresponds to their local socio-cultural reality, and thus as a vehicle to increase collective knowledge in a playful manner.

This “activist strategy”, what I would rather call the puraquean@ methodology, has its pros and cons. They manage to spread their methodology throughout the region by articulating to top-down projects, without losing their “free and open” characteristic. Yet, simultaneously, they lose some of their “effectiveness” the further they disseminate. That is, to what point does increased sustainability through articulation to top-down projects compensates limiting a particular user to pursue its own goals? In fact, top-down digital inclusion initiatives maintain a very open attitude towards articulation and collaboration with grassroots initiatives. Puraqué is significantly spreading their methodology through effectively hacking Navegapará. The latter has approached them in order to train the monitors of the project throughout the *entire* region, including the capital Belém (that is, even beyond the areas in which they operate). But how far can these grassroots initiatives work their way up in digital inclusion policy making? And where will the grassroots initiative lose its local character? More importantly, at which point will a project fail to allow users to freely appropriate technology when it becomes more and more entangled in centralized and top-down structures?

In Santarém, the people have shown the several manners in which they embed ICTs in their local culture, and how they are capable of ascribing a significant role to ICTs in their day-to-day lives. What is an important dimension in Puraqué's activities is their attempt to enhance people's self-esteem through a profound and intensive process of learning how to use open

source technologies and to obtain extensive knowledge about them. Whether this will eventually transform their region into a reference for the development open source technologies is a question I will leave unanswered. However, I can say that this knowledge has a transformational impact on people's lives. And knowledge is something that cannot be taken away.

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9 Appendix

#1 Santarém, Pará



Fig 1. *Pará*. The second largest state of Brazil.



Fig 2. Santarém.

#2 Rogerio

Rogerio is an ex-puraquean@ who works sinds two years at Casa Brasil in Santarém as the basics of informatics and the advanced informatics teacher. Before, he participated in Puraqué's activities for several years.

How did you find Projeto Puraqué?

I'll tell you the complete story ok? I got to know Puraqué in 2005.

How old were you then?

I was about 22 years old. At the time I was still studying at high school. I came from a small city, called Belterra, where there wasn't a high school yet, so only when we moved to the city I entered *ensino medio*. As I was only studying, I wanted to do something beside school. At the

time, the UBRA, the university here in Santarém, offered an IT course. So, I subscribed to the course. Actually, as I found out later, this course was in collaboration with Puraqué, as they had a computer lab inside the university. At the end of the course they used to invite a couple of students to participate in the project. So I was about to finish the course, they invited me to come help at their project as a volunteer. Although I wasn't gonna earn anything, I really liked their activities, so I said yes. The first two courses I helped at their lab at the university, though after that Jader invited me to come volunteer at their official base in *Mapiri*.

Was it a FLOSS course?

Yes, but at the university it was really basic, just word processor, Internet, spread sheets, you know. When I joined Puraqué I really got to understand Linux better. I became really experienced as a teacher, as I gave class in the morning, afternoon *and* evening. Just imagine, I taught *a lot* of people!

So you basically were a teacher at Puraqué?

In 2006/07 they established a partnership with the public schools here in Santarém, in order to capacitate all the teachers and implement Telecentros in all schools. At the time I was invited to teach and monitor the Telecentro at public school Maria Amalia in Mapiri. I gave about three courses over there, each of about three months. It was funny, and interesting, because it was the first school where they started these activities. It was a pilot, actually. However, at the same time I didn't abandon Puraqué. At Maria Amalia I taught in the evenings, and during the day I still went to Puraqué every day.

What kind of course did you teach at the school?

It was a *informatica basica* course for the community members, it wasn't directly attached to the school. However, after teaching three courses there, they opened Casa Brasil here in Santarém, and they needed a coordinator for the Telecentro. So, Jader indicated me as a suitable person. I got the job, and I went working there. So, I went from the university, to Puraqué, to Maria Amalia, to Puraqué again, or still, and now, since two years, here at Casa Brasil.

It was a great experience, all these different places, and the different courses. You see so many different kids and adolescents. As I was chosen as a volunteer at the time, I try to call people to be a volunteer too. In that manner they get a 'free' course, or capacitation. They learn a lot! Some people keep this knowledge for themselves and leave after a while. But others not. They

stay, and they collaborate. At Puraqué there are no obligations; anyone can decide what to do. If a kid wants something, he has the chance, but if not, they don't insist.

Interruption, Biene, one of the collaborators at Casa Brasil, comes in, telling she had a short night of sleep, because she had to bring someone to the hospital.

So, where were we??

I wanted you to ask what you think of the *Informatica Basica* course and the methodology.

Hm.. Actually, all courses are based on the Puraqué methodology, in fact, a freiriano, based on Paulo Freire, methodology that they have adopted. Here at Casa Brasil, we have adopted the Puraqué methodology, though we didn't have to. We could have adopted our courses in a manner we wanted, but we choose this methodology. And it is good, people usually adapt very well to this methodology. But it is important that people continue studying, that's why we invite volunteers. Some of these volunteers actually participate and stay, but for others it doesn't work out. For instance, as it turns out to be something different than they were expecting, or searching, and then they leave. In fact, the main objective of Puraqué is not to learn these people to become ICT experts, or that they will work with digital inclusion eventually. The major goal of offering these people a voluntary job is to get them from the street, the violence, the drugs. What is important is to give them an occupation.

For instance, Mapirí, at the time was considered the most violent neighborhood in the city. Many adolescents were involved in gangs, violence, and drugs. What happened, is that they really changed the history of the neighborhood. They took a lot of adolescents from the street and got them to work, voluntarily, in the project. Strikingly these guys, even when from other gangs, really respected each other *inside* the project. Whereas they would kill each other outside the building, inside they collaborated. Puraqué really wanted to offer an alternative space for these kids, as they usually don't really have anywhere to go. Unfortunately, still a number of people died after they participated. For instance, the drugs gang leaders, because they couldn't make it forward, but others... To have an idea, when I taught the course at Maria Amalia, there were students from two different gangs. And they were in the *same* classroom, you know, *in the same classroom*. And when at the first day of the course, I entered the classroom to teach them the first class, they said: "where's the teacher, *rapaz*¹⁴²?" I said: "I am the teacher". They'd imagined a person that would at least be older than they were. And then I entered the classroom, and I was more or less as old as they were. Although I was a bit

¹⁴²Rapaz means "boy", or "young man", not demonstrating much respect.

insecure, I firmly said “I am gonna teach you guys” and when they perceived that I had experience, and that I knew a lot about computers and stuff, we had some really nice conversations. In the beginning there was this rejection, they didn't listen to what I said, they didn't want to do what I asked them to do, etc. But I always tried to maintain respect, and treat them equally. I knew of their situations, as I could see it by the clothes they wore. I could recognize their 'types' by the tattoos they had, the kind of haircut, but I never judged them. I was really careful not to discriminate, because then they I could screw it up. Then they would lose their trust in me, and then they would leave, and quit the course. And they would go even more to the *wrong side*. So, whatever clothes, or style, or attitude, within the classroom they were all the *same*. Because I imagined, they are here because they *want something*, they have a certain goal. And that is already a very important signal. So I really tried to socialize within the classroom. I made them talk with each other, and collaborate. So, while *within* the classroom they would hold each others hand, *outside* they would kill each other!

Many actually found a way out of these lives. Some of them, for instance, left the city for a job. The other week I got a message from one of them who is now living in Manaus, and is doing well, has a job, a family, and so on. So the idea of these courses really is to give an alternative to these people, to get them off the street, and to provide them a way out of the misery. In fact, Puraqué consists of two things: first we digitally include people, something that is important today, and second, we offer an alternative space to the violent street.

During the courses at the Pontão de Cultura de Tapajós, at Casa Brasil, and the Infocentros I have been asking people a lot about their objectives. Why do they take the course? Usually, people say that they merely aim at entering the job market, as an IT certificate is demanded by the job market. Though this is not the aim of the courses, right?

No, you're right. We tend to have a really open conversation with them about that. About getting a job being the main goal of taking the course. Today, making money seems to be the objective of most people. A certificate that proves basic knowledge of ICTs is required; without having taken a course on informatics you won't find a job. But then I try to talk with them, that this, however, should not be the main objective. It *isn't* about getting a job, and making money. I always say to them: “At one point, a job will finish. *Work*, on the other hand, there will always be”. So in other words, people to develop skills with which they can do several things, and maintain themselves. They have to develop their talents, instead of focusing on a certificate, which eventually is going to lose its value.

Do you think many people believe in your argument? Do many actually continue studying and go beyond their first objective?

To be honest, when looking over the past four years, actually few people have this thing, you know, of not doing it only for themselves, for the money. But, for instance, of the first course at Casa Brasil, two guys finished the course and left. One year later they returned to me and asked if I could help them to set up their own Cybercafe. I said, "ah, I would, but I don't have much time!" Then I asked someone else who could help them. I never got to know if they actually managed to open their own business. I can find that out for you, if you want. But the fact that they *believed* that they could, instead of accepting any simple job, makes me happy. I think that is a result we strive for.

And there are all the volunteers here at Casa Brasil, right? People who really want to continue here...

Yes, true. Mariane, who was a student. Eliane, who had done some courses, and got the vibe. Biene, of course! And many others..

The difference between the monitors in the Infocentros is really big, don't you think?

Yes, well, actually, I don't have much proximity to them. Many of them I don't know very well. I just know that they work there. A few of them I know, because they have past through Puraqué at the time. They were students there and now work in the infocentros because Puraqué found them a job there, just like they have done with me.

What impact has Puraqué had on your life?

Ah, it changed my life a lot, really a lot. Because, you know, before Puraqué, I also had this same thought, focusing on a job, making money. I would search for a course in order to find work. But when I finished the course, I left with another mentality. I realized that a job doesn't give you any security. Jobs become scarce, you know. And work will always be there. Luckily, my parents were very supportive even as I wasn't looking for a job after I finished the course. They even helped me sometimes. When I didn't have the money to take a bus to the project, they gave me money, even though they knew I wasn't earning any money. I mean, *money*, right, because I did get *knowledge* in return. It didn't feel like working for nothing. So, I can say that Puraqué really changed my life, my way of thinking. I have another mentality, other knowledge. I have another life philosophy! For instance, I didn't know anything about electronic devices, computers, and all that kind of stuff. I have learned much more than I thought I would learn. And I don't want to stop yet! I don't want to take another direction, change course. I want to continue learning, developing myself personally. Not necessarily just about ICTs, because I think any knowledge, on any area, you acquire, is valuable!

And you are studying at the university now, right?

Yes, I am studying Arts. I tried to pass at the federal university for the course on Informational Systems, but I didn't pass. I have been trying several times already, but it is really difficult. So now I am doing Arts now at a private university. But I pretend to continue trying to pass for the federal university, because it's better, and I really want to do that course!

You are teaching the courses basics of informatics and advanced informatics. Do you know how to program, do you know well the programming languages, etc.?

Yes, well, just a little bit. I have done metareciclagem as well. So i have a good basis of metareciclagem. I know how to fix most basic things on a machine, these I can identify and resolve. I am not a technician, yet hahaha, but I can handle the basic things. But I always try to learn more about metareciclagem. Always when there is a broken computer I try to fix it, I mess with it, and try to learn the things myself. At the time when I was doing the course at the UBRA, the computers had so many problems. I always was very curious to find out what was wrong with these computers. Even when I didn't have any notion of what was wrong with this computers, I always read a lot, and tried to find out myself. That's a curiosity of mine. I can do any other thing, but metareciclagem I will always be doing and developing more. It something very cool, and i like it a lot.

When at the UBRA, during the course, the computers were not working well, didn't that irritate the users?

Yes, it irritated them a lot. There were always these people that complained. But in the end you have to deal with these people, as you are the teacher. When people see one for the first time, they expect it to function, and think that that is normal. They have to understand that computers are machines, and that they sometimes break. They will face similar problems in any other place. So they have to learn how to deal with the problems and to find a solution. So I try to explain them, that when used for a course, the computer is constantly functioning, and computers sometimes fail. They don't know that when it is used a lot, it heats too much, and freezes. Neither do they have any idea that a lot of dust causes damage too. Normally, they learn how to mess with the applications, but don't have any notion of what is inside. So it really depends on the teacher. It's his job to explain that the computers can't function for so many hours. They have to create understanding by the students, and trigger their curiosity to find solutions for these problems, and have more patience with the machines.

And what about the fact that e-waste is (still) very scarce here in the North? For instance, in São Paulo you already find used computers of only two years old. Here, the computers sometimes consists of pieces that are over ten years old! Of course they have (more) trouble functioning. But as a consequence, while they have this recycling ideology, they receive donations of new computers, which increase the production of e-waste!

Yes.. That is a problem. But also, the idea is to extend the life of hardware as long as possible. And for instance, when we get new computers donated, we do not throw these other, old, computers away. We will find an new occupation for them. We use them for activities that don't need so much memory, or space, something less heavy. You know, these are machines, of which their second life is already four years of courses in the morning, afternoon AND evening. And in fact, they were originally meant to use in the *informatica basica* class, using only relatively light applications and the Internet. But now we are using them for the advanced course as well, with much heavier applications such as Inkscape, Gimp, etc. So it is logical that we could use new machines, and we would use these older machines for simpler things.

And how do you maintain these old computers in a good condition?

Regular maintenance really improves the quality of the computers, and helps extending their lives. We do some collective maintainable every once in a while. In the beginning, that was only once in every three months. We opened up every computer, took out all the pieces and cleaned them. As there is a lot of dust, this is necessary. Today, this has become a monthly activity. And also, every Friday we clean all the computers, not entirely opening them up, but cleaning them from the outside. And when a machine is having trouble, becoming really slow or something, we open it up and clean it imediatly. And the most participatory students, especially the volunteers, usually help us. So they get an extra 'metareciclagem' class.

What does the market demand, is that still mostly Windows or is Linux getting bigger here in Santarém?

Windows. Unfortunately, it is windows. In the public sector, it is increasingly Linux. However, it is changing. Since a year or two, the private coursers on informatics started to offer courses on Linux. But that is only since two years. Earlier it was just windows, just windows, just windows. Then, when Puraqué started to disseminate linux throughout the region, they realized that linux is growing, and that they can't avoid or ignore it.

So, now they are offering these courses too, and charging a lot for it! And they don't even have people that know much about Linux, because all these people know much about Windows. They are still learning Linux. But, you know, it is inevitable. Linux is going to take over. Linux is

the future. It is safer, there are less viruses, it is cheaper, and lighter; it runs on old computers as well. And then there is the problem with piracy. Many of these computers they sell that run Windows, are pirate versions! That is because it is just too expensive. For instance, the state university in Belém was accused for having pirate versions of Windows on all its computers, and was fined millions of Reais!

And what about the municipality in Belterra. I heard they use Windows too. Isn't that strange, as in the public sector they usually use Linux? Would the municipality of such a small village have the money to purchase proprietary software?

That is suspicious, yes! I don't know that for sure, but I wouldn't be surprised if they use pirate versions. They would have to pay so much in order to equip all the PCs with legitimate versions of Windows. But of course, they would never admit that. And also, many people don't know that a version is pirate. You give them a cd and a key, and when you say that it is legitimate, they simply believe it!

That is the problem with the private sector, you know, they try very hard to fight against Linux. For instance, to respond to the increasing demand of Linux by consumers, some companies already sell computers with Linux. But unfortunately, the version of Linux that is installed usually doesn't come with all the applications necessary to work properly, or isn't very user-friendly. So, for instance, the cd-drive doesn't work yet, and some programming yet needs to be done. That is to get people frustrated about Linux, showing them that it doesn't work properly. So then they return to the store and want Windows again.

I really believe in the expansion of linux in the region. However, throughout the city still exists the idea that Linux doesn't work, and that Windows, as it is sold more, is superior and of better quality. And this is enforced as they have these negative experiences with Linux created by the private sector. Because *they* have a stake in selling windows.

I have this other example of a friend of mine at university. She has a notebook running Windows, and it was having some problems with connecting to the Internet. She couldn't sign in at MSN messenger, couldn't send emails, etc. And then, the guy who sold her the notebook said that there was a virus on it. So, he sold her an anti-virus, charging 50 Reais. When it didn't work, she returned to him and he installed another antivirus, the best there is. Of course he charged her again, though even that best anti-virus program didn't solve the problem. So I told her to bring the notebook to class. I started Windows up, tried to sign in at MSN and I just worked all fine! I could send an email normally. I didn't find any problem in the computer! And she wasn't using the computer because there supposedly was a virus on it!

But how could you use the Internet while she couldn't?

Well, she was using Internet via telephone. So the guy blocked that. He changed the configurations! So I changed them back, and I gave her another option to connect to the Internet, and she could use the notebook without any problems. And she had been paying so much! I said "hey, there isn't anything wrong with your notebook! He is just after your money!" The guy was just after her money, benefitting from her ignorance, as they didn't know anything about computers. She and her boyfriend wanted me to pay, as I 'fixed' their computer. But I said "No of course not! I didn't do *anything*! There wasn't any problem, so you are gonna pay me for what?" But that is what people are used to. They are dependent on technicians, and that costs money. Even if they don't do anything! People just think that is normal. So what is our role, here, working with digital inclusion, is to learn people these kind of things. Digital inclusion is not only *using* a computer, or accessing it. It is a person *understanding* a computer, knowing how it works.

My mother has that same problem! She is also spending so much money. Though what if people here don't have that money. I guess the computer remains unused?

Many people that have trouble with their computers and don't know how to fix it. When it breaks, the computer remains unused in their homes! They don't have money to purchase a new one, or to let someone come to fix it. One girl at Puraqué one day came and wanted to donate her computer for the metareciclagem class, because it didn't work anymore. But in fact the problem was very simple! So she would have 'lost' her computer (it would be worse if she had simply thrown it away), while it was still in a good condition!

And family too asked me to come over to fix their computer. The kids had entered a cd, but then it freezed and didn't open anymore. I took a look, and saw that their Windows version had expired! That was it! But they didn't know that this happens, neither did they know what to do about it.

It's a shame that people don't have the curiosity to find out how to solve problems themselves. Usually, they are very passive. Sometimes it seems that people are only obsessed with the material side of ICTs. They all want to have a pc at home. As it is something for the rich, they just want to have one in their living room, showing that they have enough money to purchase one. That is the negative side of it, of today's society, of consumerism and individualism. But we have to focus on the benefits, on the possibilities of ICTs. What can ict mean for people? How can they use it in a way that benefits them, not only being a passive consumer?

A final question, about your future. Do you pretend to stay here at Casa Brasil, in the near future?

Actually, yes. I do want to stay here for another while. I still want to grow, in a sense. I really

like it here, I learn a lot, I like to work with people, I work within my area of interest. I really can develop myself here. In fact, I am the only that hasn't left yet. I don't say that when something else appears, I wouldn't do that. Of course, when it is something really interesting, something I like, I might consider. But for now... An offer must be *really* good to take me away from Casa Brasil.

#3 Nucleo de Informatica Educativa (Educational Informatics Network)

Searching for sustainability and the dissemination of their methodology throughout the region, Puraqué subscribed a fundamental role to public schools. They established a partnership with the Secretary of Education of the municipality (SEMED) to implement informatics labs with (recycled) computers that run FLOSS, inside all public schools, and to train the teachers with the Puraquean@ learning methodology.

The idea is that the informatics teachers that take part in this network – often times Puraquean@s themselves – are familiar with the ideology and methodology, disseminate this knowledge among the other teachers. For example, at the Maria Amalia public school in the neighbourhood of Mapirí there are no informatics classes, but each teacher is supposed and encouraged to implement ICTs in his classes. Thus, the mathematics teacher uses computer games, and the Portuguese teacher can use a word processor or the Internet. They argue that an informatics course, in which a teacher follows a series of patterns and guidelines, passing his knowledge onto his students, does not fit the methodology, as it would fail to encourage the students to discover the technology in a personal way. Children are really curious and eager to learn, and often find out these things with more facility than their teachers. Therefore, implementing ICTs within their regular classes the students would be encouraged to individually develop their skills.

The methodology includes participation and interaction, and most important, production. Instead of a traditional model of teaching in which the teacher passes his knowledge onto the students, the latter are supposed to produce content as well, in the form of material, such as, for example, a school journal, but also in discussions.

However, many teachers reject such a methodology, due to ignorance, or because they are insecure to use these new technologies and thus to lose their authority. That is, the majority lacks knowledge of ICTs, which, as the teacher symbolizes knowledge, they consider a weakness, and second, this alternative methodology encourages students to *produce*, instead of fulfilling a passive and obedient role of the student. Also, as kids usually learn much faster than adults, in some cases they end up knowing more than their teachers. The latter have to accept that and consider it as something positive, which they often find very difficult. Furthermore, lack of understanding of ICTs complicates the implementation of ICT in their classes. For instance, many teachers want their students to query Google on a certain topic, and subsequently, instead of encouraging them to practice using a word processor, they want them to overwrite these texts manually in order to avoid copy-pasting. In both cases, teachers get extra attention and supervision in order to make them more familiar with this teaching methodology.

