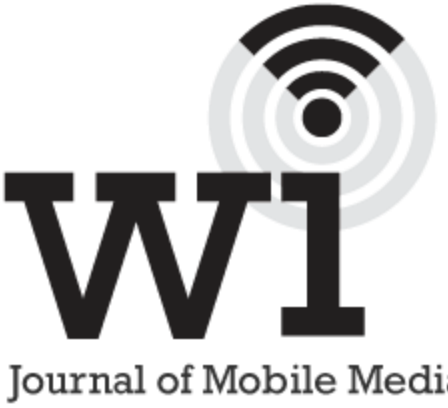

Mobile Communication: The Brazilian Paradox

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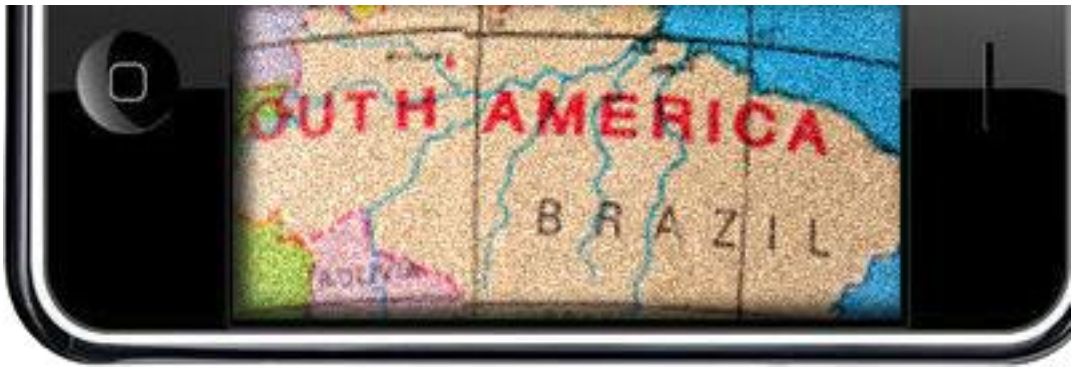

Cell phones are one of the icons of the post-modern age because they represent many possibilities converged in one single device. They connect people, and at the same time, they are used more generally to organize life through textual, audio and video platforms:

> ... as soon as the cellphone began hooking into the Internet or offering some of its features—books, newspapers, magazines, live and delayed conversation in text, telephone, videophone, radio, music recordings, photographs, television—the cellphone became a home away from home for communications, a mobile home or pocket hearth, a traveling medium of media. (Levinson, 2004, p.53).

The subject of mobile communications has been increasing in complexity since mobile technology's rapid penetration of different cultures and social classes. Countries like Brazil have felt a strong impact from mobile communication across many different social sectors. By increasing overall interactions, mobile devices have resulted in various opportunities and challenges for changing social habits and the division of public and personal spaces. The always-on voice and data connection has given rise to a new dimension of content distribution, co-presence and communications services. If the personal computer already served to empower individuals, mobile devices can be said to empower the "hyperpersonal" because they are typically used by one person, all the time. As these devices begin to offer increased functionality, they start to become more like computers; from this perspective, mobile technology has a huge impact due to its affordability and its status as ubiquitous computing.

It is not only the cell phone that represents this new mobile experience, but it is also many other forms of mobile PC—like UMPC (Ultra Mobile Personal Computer) and MID (Mobile Internet Device)—which are emerging and entering the market in a similar manner as the Smartphones and PDA (Personal Digital Assistant). Other regular household objects such as home stereos, TV, radios, and refrigerators are also becoming wireless-capable and giving rise to new communication possibilities. Moreover, computer technology itself has become more prevalent in Brazil: last year, notebook sales increased 108% from the previous year;[1] the total number was 3.2 million units.

If all these assumptions about the proliferation of mobile communications are applied to a country like Brazil, the phenomenon becomes even more interesting. A nation covering 3,287,597 square miles with a population of 189,987,291 inhabitants[2] comprises a challenging context for developing communications systems. As such, wireless services have been commonly used throughout Brazil´s history. The country was one of the first to adopt both radio and television; in fact, Father Roberto Landell de Moura transmitted a wireless signal around the same time that Guglielmo Marconi did.[3]

Brazil's extreme differences—with part of the population living in marginalized conditions, while the country offers one of the largest global markets for technology—make it a unique context for studying the adoption of digital culture. The nation is a leader in electronic voting, and in some rural areas, ballot data is transmitted by satellite phones. Also, the country is a pioneer in processing income tax returns on the Internet. The Brazilian population spends more time online than any other population in the world,[4] and is a major part of online communities like Google's Orkut. This social networking platform, popular with Brazilian teenagers and young adults, enables users to build profiles with personal information and to exchange messages (scraps). Also, it is interesting to note that the sales of personal computers outpaced those of TV sets for the first time in 2007,[5] while web advertising outpaced advertising on cable TV.

In the mobile phone context, Brazil has 140 million active users and 81% of this figure represents pre-paid plans.[6] This modality of payment is one of the greatest factors for the popularity of wireless communications in the country. It is a more expensive service in terms of minutes and data units in comparison with post-paid plans, but it gives users the flexibility to pay on demand under certain conditions. Another key characteristic of this plan is that it allows the owner of the phone to receive calls even if there are no credits remaining. This allows people to be in touch even when they cannot pay for the service.

In this context, the use of mobile communication has transformed many daily social and economic activities. Street vendors, such as hot dog kiosks, can sell their product by phone and provide home delivery. Freelancers across many different occupations can stay on the road during the day, rather than waiting for a client's call. Some jobs were near impossible to conduct without this mobile potential. And, in Brazil especially, informal jobs are a relevant part of the economy; nearly 45% of all jobs in the country are in this category.[7] These kinds of workers are typically part of commercial and services areas, and yet they don't pay taxes and don't have any formal business with corporations.

Other aspects of this digital inclusion do not directly result from mobility, but are allowed by it. A majority of the population did not even have landline telephones in their houses before the advent of cell phones. One of the reasons for this is the difficulty of

access in some high-density areas where houses cannot be easily or affordably connected by the telephone company network. Mobile phones sidestep this problem because the only infrastructure needed for an entire region is a wireless station. These resolve the last mile problem,[8] which usually stems from the prohibitive cost of an infrastructure project. Normally, it is not difficult to send a cable to a determined region, but distributing this network to a large number of residents requires tremendous effort. This is one of the major benefits of the wireless model, for not only does it create mobility, but it also makes any network expandable and flexible. While this situation is mainly related to the countryside, many big cities still have problems with area coverage.

With this capability in mind, the city of Porto Alegre uses Wi-Fi in some poor areas to allow the population to use the Internet free of charge. This enables schools, small businesses and residences to be connected at all times, empowering the population to be included into the same access bracket as the country's upper social classes. This model has also been adopted in many other cities across the nation. In Rio de Janeiro, the city is using Wi-Fi in many spots to improve tourist connections and relations. In Amazon, the WiMax[9] technology has been tested to provide Internet access in remote locations, helping communications in "physically" distant places.

The third generation (3G) of wireless communications had a massive launch in Brazil in 2008; the introduction of 3G is extremely important because it delivers wireless

broadband connectivity. All service providers in major cities of the country now have the technology and, according to an agreement with the governmental agency (ANATEL), the 3G technology will cover the entire country within a 5-year period. This could also contribute to digital inclusion in many places that still do not have broadband connections. In the largest cities of the country, the 3G network already offers an alternative mode of accessing the Internet in regions that are not economically viable enough for companies to establish traditional broadband connections. For instance, in the first six months of the traditional broadband service, the companies would not have enough USB modems (which allow laptops to be connected) in stock.

The virtual space of communication that flows through the Internet's architecture is an environment that cannot be measured and understood with the same symbols that are used to represent actual spaces:

> Wherever I currently happen to find myself, I can now discover many of the same channels on a nearby television. I can access the same bank account, and I can chat with the same people on my cell phone. I can download my email and send replies almost completely independently of location. And my online world, which once consisted of ephemeral and disconnected fragments, has become increasingly persistent, interconnected, and unified… (Mitchell, 2003, p. 17).

But people are already interconnecting with the help of mobile phones and other portable devices that take advantage of many different wireless networks covering small and large areas. The massive use of these devices is transforming persons into cyborgs and cities into information territories (Mitchell, 2003).

Brazil's case is unique because it shares some of the characteristics of African regions that did not have landline telephones and jumped directly to wireless systems; but at the same time, in most of Brazil's urban areas, there is a level of technological development similar to that of wealthier countries. The 140 million Brazilian users are rapidly transitioning from simple social uses for the technology to complex services like mobile Internet surfing. Of course, this virtuality mirrors actual space (Lévy, 1996), with technological empowerment giving rise to new dimensions of crime and privacy abuses. But this path of social development proves to be shaping its own way towards maturation in the digital era. In the past, radio and television had a leading role in integrating a nation with continental variability like Brazil. However, mobile communications have the potential to establish themselves as even more relevant in terms of social impact.

Notes

1. IDC: www1.folha.uol.com.br/folha/informatica/ult124u544054.shtml

2. www.ibge.gov.br/english/

3.. http://en.wikipedia.org/wiki/Roberto_Landell_de_Moura

4. IBOPE/NetRatings

5. Sales figures show that around 10 million PCs were sold, versus 9 million TV units. Abinee: www.abinee.org.br/ing/

6. www.anatel.gov.br

7. www.ipea.gov.br

8. The "last mile" is the final leg of delivering connectivity from a communications provider to a customer. Usually referred to by the telecommunications and cable television industries. (source Wikipedia)

9. Worldwide Interoperability for Microwave Access – www.wimaxforum.org

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Biography

Eduardo Campos Pellanda, PhD is professor and researcher at Pontifícia Universidade Católica do Rio Grande do Sul (PUCRS) in Brazil. He was also Visiting Scholar at MIT, Mobile Experience Lab in 2008.