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Free, Social, and Inclusive: Appropriation and Resistance of New Media Technologies in Brazil

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This article analyzes how new media are being appropriated within the Brazilian society. Exploring a range of new media practices—from the use of social network sites, microblogging, gaming, music, video production, and digital photography to youth media programs, LAN houses, and online communities—this article examines changes in the production, consumption, and distribution of new media in Brazil. Specifically, it explores different orientations around new media technology as they emerge in relation to government policies, (new) media industries and ordinary citizens interested in social interaction, entertainment, and information-gathering through new media technologies. I further reveal how three key concepts dominate attitudes and values around new media technologies: free, inclusive, and social. Connecting these values to theories of appropriation in the Latin American region, I conclude by exploring how new media practices reflect, produce, and reproduce Brazilian cultural norms among Brazilians.

Introduction

Cala Boca Galvao. Created by http://twitter.com/Nandopax for http://twitter.com/NerdsKamikaze, June 2010.

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During the Korea vs. Brazil match at the 2010 World Cup in South Africa, a Brazilian tweeted the phrase "*Cala Boca Galvão*." Quickly becoming one of the top trending topics on Twitter (Dwyer, 2010; Zuckerman, 2010), the phrase inspired a video intended to "clarify" what the phrase "*Cala Boca Galvão*" meant to the non-Brazilian world. Featuring the *galvão*, a rare bird native to the Brazilian Amazon, the video highlights the various abuses of the *galvão*, from partygoers in Rio de Janeiro who don the feathers of the *galvão* during the annual carnival festivities to the magic-like qualities of the feather when used as a drug. Noting the killing of 300,000 *galvão* birds, the video is a call for viewers to retweet the phrase "*Cala Boca Galvão,*" with each tweet resulting in a donation of US$10 to the *Galvão* Birds Foundation. News of the video appeared in the mainstream media and was chronicled by *The New York Times*. As the producer of the video, Fernando Motolese recounts:

> At 2 a.m. on Saturday, a Brazilian wrote in English that it was a bird. (In fact, the Portuguese word for hawk, "*gavião*," is close to *Galvão*.) An online petition to save the bird was published; a flier was circulated promising 10-cent donations for each post. By dawn Saturday, Fernando Motolese, a comedian and audiovisual producer in São Paulo, Brazil, had started work on his one-minute video. He recruited a British actor, Stewart Clapp, to do the voice-over. "It took about 32 hours to make, without sleep," Mr. Motolese said. (Dwyer, 2010)

Although the tweet was soon revealed as a hoax and the true meaning of "*Cala Boca Galvão*" was revealed to stand for "Shut up, Galvão," Galvão referring to a sports announcer at *O Globo*, the *Cala Boca Galvão* tweet remained one of the top trending topics on Twitter globally for two weeks.

The *Cala Boca Galvão* incident on Twitter revealed the capacity of new media to circulate information and highlighted the broad-scale popularity of social media among Brazilians. From the 8.6 million Brazilians on Twitter in August 2010 (equaling more than 23% of the entire population of Brazil, the highest in the world) to the 36 million unique visitors on Orkut and nearly 9 million visitors to Facebook (comScore, 2010), Brazilians are clearly leaders in the use and innovation around social media. This review analyzes the ways new media are being appropriated within Brazilian society, with particular attention to changes around the processes of production, distribution, and consumption. Specifically, I argue that three broad themes capture the new media landscape in Brazil. These themes include digital inclusion, which seeks to increase access and consumption of new media among marginalized populations; free culture and the importance accorded to ownership of the processes of distribution and production; and networked sociality, practices that are largely accorded the status of consumption but, given the affordances of digital media, begin to blur the boundaries between consumption and production. In suggesting these three themes, I want to be clear that these are not the only practices and values that emerge through Brazilians' use of new media; nor do I wish to suggest that the value attributed to inclusion, openness, and sociality are uniquely Brazilian or do not occur in other countries and contexts. Rather, my aim is to demonstrate that Brazil, as a situated case study of new media production and consumption, enables a deeper understanding of how three key factors—national policy, opportunities for innovation, and sociocultural factors—shape everyday practices and orientations around new media. Given that most of the existing literature attends to policy, innovation, and sociocultural practices as separate or causal spheres (e.g., policy shapes practice or innovation shapes policy), the attention to the intersecting and, at times, overlapping factors represents a unique contribution to our understanding of appropriation

of new media technologies.

This article is part of a series of review articles on specific national contexts that explore new media practices (primarily) among youth. Concentrated on new media technology use outside North America and Europe (regions that are already well-represented in the literature), the focus on specific national contexts enables us to understand the different configurations of policy, industry, and practice as well as by extension, enables scholars and others to conceptualize the structural factors that shape new media appropriation outside of the global North. The review draws more extensively on blogs and popular accounts of these practices than might otherwise be expected in a scholarly article due to the rapid rate of change and the pace of the publishing cycle for academic articles. In addition, readers should not expect to see new empirical descriptions and/or firsthand accounts of the new media landscape in Brazil. In some instances, up-to-date accounts are privileged over scholarly peer-reviewed versions, and references are made to "gray" literature and videos focused on social and technological changes in Brazil. Finally, while I have also recruited Portuguese speakers to review and discuss material in Portuguese and have benefited from interviews, conversations, and reflections on contemporary practices with a range of Brazilian scholars, the article draws primarily from English publications around new media in Brazil.

The aim of this article is to synthesize key themes that will, in turn, inspire future research in this ever-changing research area. I begin this article with an overview of Brazil in terms of traditional socioeconomic indicators and the technological infrastructure that shapes the possibilities of use for Brazilians across the socioeconomic spectrum. With this baseline infrastructure established, I then turn to digital inclusion efforts spearheaded by the Brazilian government as well as by others formally or informally involved with facilitating participation in the digital age. The next section explores the role of free culture in Brazil and looks at Creative Commons, music, the gaming industry, and the challenges that all these areas pose for traditional media industry production. After focusing on these two more formal and government-supported efforts, the third section examines everyday uses of new media, including social network sites and blogs, in supporting networked sociality. Throughout the article, I integrate theories of consumption and appropriation (Miller, 1995; Miller & Slater, 2000), particularly work by Bar, Pisani, and Weber (2007) on the forms of technology appropriation that are particular to Latin America: cannibalism, baroque, and creolization. As they define those concepts,

> At one extreme, we find *cannibalism*, a radical physical reaction later transformed in a cultural program. Cannibalism is appropriation through dismembering, absorption, and chemical transformation. It appears as a reference in a Brazil's Ministry of Culture program conceived to encourage multimedia creativity and open source tweaking. At the opposite end, *baroque* is a reaction of the mind. It is the appropriation of spaces through filling and layering, and generally does not imply direct confrontation. An infiltration strategy, it begins by occupying the edges, continuing to fill in the available spaces until it makes the center marginal. In between, *creolization* is appropriation through miscegenation, and detour (roundabout), through unpredictable mixing. A process, more than a condition, it does not need to be confrontational but generally leads to new power arrangements. (Bar, Pisani, & Weber, 2007, p. 15)

Looking at the intersection of creolization and cannibalism and values of openness, free culture, and sociality, I conclude by exploring how these three distinct, but intertwined values expressed in Brazilians' new media use enable scholars to think more broadly about the changing relationship between production and consumption and the cultural values that underpin these processes.

Brazil: Sociotechnical Considerations

> Information technology and Brazilians were a perfect marriage. Brazilians historically were interested in innovation, but they didn't have good schools or universities, so they depended on their own creativity. The Internet is all about this kind of grassroots creativity. (Marcelo D'Elia Branco, Projeto Software Livre Brasil, cited in Red Orbit, 2005)

Brazil is the first of four countries that Goldman Sachs termed in 2001 "BRIC" countries (Brazil, Russia, India and China), or "emerging economies" that have the potential to become economic powerhouses by 2050. In Brazil's case, the rich and varied natural resources present in the form of petrol and plants in the Amazon, as well as an established financial and service culture are viewed as part of the infrastructure for this growth. With an "official" literacy rate of 93.2% among youth (and 89% overall literacy; see World Bank, 2008),[1] Brazil also possesses one of the fastest-growing youth segments throughout the world. Since 1980, the youth population has grown by 22%, with 47% of Brazil's current population are now under the age of 25 (Geraci & Chen, 2007, using figures from the UN Department of Economic and Social Affairs Population division). Like other countries with a large youth demographic under the age of 25, unemployment remains a key issue. Of youth between the ages of 15 and 24, 18.1% are unemployed, and close to 23% of Brazilian women in this age group are unemployed (United Nations Millennium Development Indicators, 2008).

According to the Department for International Development (DfID), Brazil represents one of the most unequal countries in the world. About 10% of the population possess approximately 48% of Brazil's national income, and 20% of the poorest members of Brazilian society earn only 2.5% of the national income. In other words, more than 40 million Brazilians live on less than US$2 per day. (The DfID suggests that 20 of that 40 million are living on less than US$1 per day, see DfID's Development Challenge Document, DfID 2008). The contours of inequality in Brazil correspond with a complex configuration of race, gender, class, and geography. The vast majority of Brazilians are of mixed heritage. This mixture, or creolization, includes descendants of Portuguese colonialists, former African slaves, indigenous Amerindians, Italians, Japanese, and other immigrants. Whereas the southern and wealthiest regions of Brazil tend to be populated by individuals of European descent, the poorest regions in Brazil (e.g., the Northeast and Northwest) include Brazilians of African descent in the Northeast regions such as

[1] The gross primary, secondary, and tertiary school enrollment hovers between 88 to 90% (World Bank, 2008). However, many of the figures around literacy and functional literacy among Brazilians are highly contested.

Bahia, and Amerindians in the isolated Northwestern regions. In addition to ethnic and regional inequities, class plays an important role in the geography of poverty in Brazil.

According to the World Bank, there were 192 million people living in Brazil in 2006. Approximately 85% of this population lives in an urban center, with the two most populous being São Paulo and Rio de Janeiro. Other cities throughout Brazil, such as Salvador, Brasília, Fortaleza, and Belo Horizonte, all have populations between 2 and 3 million (Holston, 1989). Many of the nation's wealthiest citizens live in guarded compounds and high-rise apartment buildings in Rio de Janeiro and São Paulo, centers for finance, petrol, service, and culture. Yet a significant portion of the population also live in *favelas*, informal settlements or slums on the hills and outskirts of town that, while roughly proximate to the availability of work and other resources, are characterized by cramped, crowded living conditions, and are not formally recognized by the Brazilian state (de Souza e Silva, 2007; Holston & Caldiera, 2005: Holston, 2008). Without the income to access private schooling and other outlets, many occupants and their families live in *favelas* for generations. As will be discussed in the section on digital inclusion, many of the Brazilian government's social justice agendas are designed to enhance and support the infrastructure and training of its diverse and polarized population.

Technical Infrastructure

The number of households with Internet access via modem and landlines lingered at 14.5% in 2006 (Lopes, 2006); broadband Internet access remained even scarcer at 3.54% (ITU, 2008). In 2007, 20.54 inhabitants per 100 had fixed phone lines (ibid.). The price basket for mobile telephone service costs about US$26.20 per month, while it is about US$15.60 for a residential fixed line and US$10.10 for Internet services (Cellular News, 2008). According to the Brazilian Institute of Information on Science and Technology, general access to the Internet expanded by 39% in 2006, thanks to an increase in the number of digital inclusion points (DIPs). DIPs are public places, set up by institutions ranging from the Brazilian government to private companies or NGOs, where people can access computers and the Internet. In the São Paulo metropolitan area alone, more than 21 million inhabitants have access to 4,000 DIPs. In addition to increasing the accessibility to computers and DIPs, the country's top three fixed-line telephone companies, Telefónica of Spain, Tele Norte Leste Participações (Telemar), and Brasil Telecom, agreed to provide dial-up Internet connections to participants for 7.50 Reais, or less than US$3, a rate which, according to Benson (2005), could enable approximately 15 hours of surfing online. The provisioning of access to computers, technology, and information through telecenters, home computers, and discounted rates on Internet access represents an important route for digital inclusion and democratization.

Brazilians have also adopted mobile phones with enthusiasm. Brazil possesses the largest mobile phone industry in the Latin American region, and it is the sixth largest mobile phone market in the world (Barrantes & Halperin, 2008; Castells, Fernandez-Ardevol, Qiu, & Sey, 2006; Tigre, 2003). In September of 2010, the International Telecommunications Union announced that Brazil now has the highest penetration rate of mobile broadband users (15 million connections) in Latin America. There are more than 140 million mobile phone subscribers spread among nine operators who receive licenses on a national and regional basis, the most popular being Vivo, a company owned by Telefónica and Portugal Telecom, with 45 million subscribers. Some 86.6% of subscribers use GSM. As of September 2008, 90.6% of the

population was covered by mobile signal, and the mobile phone penetration rate was 73.2%, which translates into 140.79 mobile phone subscribers. ITU numbers suggest that, as early as 2003, there were more mobile phones in Brazil than landlines (see also Castells, Fernandez-Ardevol, Qiu, & Sey, 2006, pp. 16–17). Penetration rates in Brazil have historically been lower than other countries in Latin America—in 2004, penetration rates were around 36% compared with a 62% penetration rate in the smaller nation of Chile (ibid., p. 10). In September 2008, however, the mobile phone penetration rate was 73.2%, a number that signals significant growth in a four- to five-year time span. Of the entire mobile phone market, 81.1% is prepaid. Within this context, the youth market represents an important and potentially powerful segment of the current subscribers. According to De Chiara (2004), 40% of new mobile phone subscribers were under the age of 25, and given the relatively youthful age of Brazil's population, this number is expected to grow. According to Osava:

> Nearly 81 percent of cell phones in Brazil use the prepaid calls systems, and a large proportion are used only to receive incoming calls, because their owners never, or hardly ever, purchase phone cards. Therefore the cost of these cell phones was limited to the initial outlay when they were bought. (2009)

Market researchers Frost and Sullivan (2006) estimate that prepaid subscribers talk four times less than postpaid subscribers, and many Brazilians use the phone to make a call, but then drop the connection in a practice akin to what Donner (2007) has described as "flashing" or "beeping" in Ghana, Uganda, and other contexts. Often, when low-income Brazilians receive a call, they look at the recorded number and use a public phone to return the call in order to avoid the cost of purchasing a new phone card (Frost & Sullivan, 2006; Silva, 2008). In some cases, sharing phones has also been noted (de Souza e Silva, 2007). While it is unlikely that the most disenfranchised Brazilians have gained full access to the expensive phones and plans associated with mobile Internet, mobile phones have become both transformational devices in facilitating connectivity and avenues for employment for the poor—many of whom reside in *favelas* and other more isolated areas where, before the arrival of the mobile phone, people lived without access to permanent or reliable forms of communication. Yet, unlike the digital inclusion efforts I discuss in the following section, the drive for change and new infrastructure begins with the mobile phone companies motivated by the creation of a new market.

Digital Inclusion

Figure 1. *Inclusão digital, SAO PAULO -SP - 11.01.2008 - INFORMATICA - Nitro LAN House, localizada no Grajaú. Nas palavras do dono, "aqui abre mais lan house que boteco." [Digital Inclusion, SAO PAULO-SP - 11.01.2008 - INFORMATICA - Nitro Internet Cafe, located in Grajaú. In the words of the owner, "here there are more open LAN houses than pubs."] By Folha de S. Paulo. Published under a Creative Commons License by Paulo Fehlauer.*

Over the past decade, we have seen a broad shift from the necessity of facilitating access to information and communication technologies (ICTs) to developing an understanding of the broader social, cultural, economic, political, and organizational contexts which shape access to and use of ICTs in everyday life (e.g., Warschauer, 2003). The shift of focus from the digital divide to digital inclusion resulted in a range of efforts to bolster learning, entrepreneurism, capacity building, and other social support to facilitate inclusion. The Brazilian government's support of culture, education, new media, and technology reflects the broader concern with social justice and the potential of new media and technology to bridge the social and digital divides prevalent throughout Brazilian society. Indeed, one of the unique features of the Brazilian Internet is the central importance of social engagement and activism, an orientation that can be attributed in part to AlterNex, one of Brazil's first Internet providers. Created by an NGO and one of the key centers for research on contemporary social and political issues in Brazil, AlterNex began exploring ways to link NGOs in Brazil with their international counterparts. To this end, AlterNex also played a fundamental role in hosting the proceedings and networking of local and transnational activists involved in the 1992 Earth Summit in Rio de Janeiro, the 1993 Human Rights Conference in Vienna, a 1994 Population and Development Conference hosted in Cairo, and other key events (Albernaz, 2002; McCann, 2008). A subset of AlterNex members (including Carlos Afonso) created the Network of Information for the Third Sector, or Rede de Informacoes para o Terceiro Setor (RITS), to expand its work to the Web in the late 1990s (McCann, 2008; Venn, 1999). As McCann notes, "many of the NGOs participating in RITS offered Web access to residents of poor communities before 'digital inclusion' was a term of political currency" (2008, p. 136).

New Media Production Programs for Youth: Schools, Telecenters, and LAN Houses

Schools, NGOs, and other organizations have prioritized new media programs focused on issues of access and equity for youth, particularly marginalized youth throughout urban and rural Brazil. In October 2007, the Ministry of Education executed a bid for the acquisition of 90,000 computers with Debian GNU/Linux 4 preinstalled, along with wireless cards, wireless routers, and laser printers to be installed at 9,000 schools, at least 3,000 of them in rural areas. Much of the academic literature, in fact, focuses on the impact of the introduction and use of computers in schools (Braga, 2007a; Castro & Alves, 2007; de Fatima D'Assumpcao, Sorj, & Remold, 2005), as well as on how to create effective learning environments (Blikstein & Cavallo, 2003; Franco & Deus Lopez, 2005), with attention to how these contribute to the overall aim of creating a Brazilian information society (Jorente, 2008). A dominant education portal is EduKBR, which was conceived as a virtual Internet community to enhance the quality of education through access to online information, activities, cooperative projects, and communication/interaction tools in Portuguese. The site is set up for use by schools, youth and their parents, and education professionals (Lucena, 2002, 2001). Similarly, the School of the Future is an interdisciplinary, self-sustaining research laboratory of the University of São Paulo, which has developed a series of research and development projects to explore the potentials of new information technologies to advance learning (Litto, 2006). The projects include a focus on virtual learning communities for primary and secondary schools; the creation of multimedia digital libraries on the Web principally for humanistic learning; and the production of learning objects, and their appropriate repositories, for science education at all levels of study. In addition, the School of the Future explores the creation and development of public-access telecasters in low-income neighborhoods featuring Web-based mini-courses; the furnishing of useful information on interfacing with government agencies to a sector of the population normally inexperienced with citizen's rights; and weekly online surveys to determine the information needs, practices, and opinions in general of this heretofore "excluded" segment. Finally, they have also been involved in the development of a community of chief information officers of Brazilian and Latin American institutions of higher learning intended to foster the exchange of experiences and the formation of regional partnerships. In these efforts, the general concern is with creating digital media literacy (Braga, 2007b; Fantin & Girardello, 2008) that will help students become global citizens (Lima & Brown, 2007) and provide a safe environment in which to experiment.

Alongside providing access and new environments for learning in schools, initiatives work to create a space for youth, often from marginalized areas, to engage with digital media technologies. These initiatives have several objectives: providing a safe space to keep children off the streets and out of gangs, providing them with access to technology and thereby bridging the digital divide, and giving them ICT skills that might ultimately lead to better employment prospects. The best-known initiative is the Committee for Democracy in Information Technology (CDI) a nongovernmental, nonprofit organization with the broader mission of promoting the social inclusion of low-income communities by using information and communication technologies as tools for building and exercising citizens rights. In the program, students learn how to use computers and software while discussing issues of particular interest to their community, such as human rights, environment, sexual education, health, and nonviolence. It is also aimed at filling a vacuum in public education. Another initiative is the Kidlink House (KHouse) Internet centers, which serve students at local schools, street kids, youth in a local community, and indigenous kids. KHouse goals include keeping kids off the street, motivating street kids to return to school,

promoting literacy, supporting kids through difficult times, and giving youth more control over their lives. The first KHouse was opened in March 1996, in the RioData Centro of PUC-RJ, Rio de Janeiro, Brazil (kidlink.org, 2009). Many scholars and practitioners continue to debate the extent to which these programs contribute to the goals of digital inclusion due to their targeting of particular segments of the population and issues over many programs' broader sustainability over time (Madon et al., 2009, p. 103).

Alongside sustainability and funding, broader issues over the control of youths' activities while at a telecenter also remain a concern. Many telecenters make it a point to ban gaming and other activities, such as accessing Orkut (the most popular social network site in Brazil), downloading music, and playing video games. These are often viewed as "unproductive" or "a waste of time" and antithetical to the educational and civic missions of the centers. The attitudes toward gaming and other forms of social engagement have resulted in two broad changes in computer use over the past three to five years. In the first instance, computer usage has moved into the home. In 2006, the Brazilian government instigated a national computer-for-all program designed to make available minimum-configuration desktop and notebook models with free/open source software. Many of Brazil's working poor were enticed by this relatively affordable program for a computer that could be paid for in 24 installments of 50 to 60 Reais, or less than US$20 per month. In 2005, only 16% of Brazil's population owned a computer (ITU, 2008), and according to the Second Survey on the Use of Information Technology and Communications in Brazil conducted by the Center for Information and Management of Ponto BR, close to 20% of the population own a computer at home (Lopes, 2006). The numbers suggest increases in ownership by middle and lower class Brazilians.

The second shift involved the use of LAN houses. LAN houses in Brazil are places where people can pay to use computers, the Internet, and a local network. Based upon the PC bang LAN houses in South Korea (see Ok, 2011 in this Special Section), LAN houses have become incredibly popular throughout Brazil. According to the Brazilian Internet Steering Committee (2008), there are more than 90,000 LAN houses in Brazil. Originally a phenomenon based in wealthier areas, the national computer program-for-all enabled entrepreneurial individuals in *favelas* and elsewhere to purchase computers with broadband. LAN houses charge rates varying between US$0.40 to $1.50 for each hour accessing the Internet or playing games online.

Unlike telecenters, which tend to restrict such activities, LAN houses have become a central site for playing games,[2] updating and checking Orkut pages, and socializing, and this has transformed these spaces into a hotbed of activity for youth and others (Pereira, 2007; Silva & Gushiken, 2010). Like the sociality fostered in the PC Bangs in Korea (Ok, this Special Section), Lemos and Martini (2009) observe that "LAN-houses are places of intense sociability, and have been occupying an important place in the life of the *favelas*" (see also ronaldoweread, 2008; Lemos, 2007). This face-to-face socialization surrounding new media use, coupled with the sociotechnical support provided by many of the LAN house owners and

[2] According to Lugo, et al. (2002), "at the turn of the century, Latin America represented a marginal segment of world sales . . . only 2% of the world consumption of software and hardware related to video games."

workers, has led many to characterize the social and digital inclusion provided in these spaces as "The LAN Revolution." Studies of LAN houses, which have quickly become a cultural institution, are beginning to emerge in the work of Brazilian scholars and others (e.g., Silva & Gushiken, 2010).

Through these digital inclusion efforts, we see two shifts in the relationship between production and consumption shaped by policy and sociocultural context. In the first instance, we see a broad-scale commitment to increasing access to new media technologies through the national computer-for-all program and the development of telecenters, places viewed as particularly central for Brazil's marginalized youth. Yet, it is also clear that many of these programs incorporate ideologies about the value of productive or instrumental use of new media and technology. When given the opportunity and choice, many youth have turned away from more structured programs, preferring to pay money to use new media technologies in a dynamic sociotechnical context for engaging in what many define as entertainment. While this has meant that LAN houses definitely are a draw for youth, many of the LAN houses emerged precisely because they enabled entrepreneurs to gain greater access to computers and related technology afforded by the government's intervention. In other words, the Brazilian government's policy framework, while not necessarily following its original intention, continues to play a key role in shaping young people's consumption of new media.

Despite the relatively low numbers associated with official video game consumption, popular discussions of gaming and video games suggest that there continues to be a widespread adoption of, and passion for, video games. For instance, when Video Games Live came to Brazil for a performance to celebrate video game culture and art in September of 2007, the show was sold out (see a video promo of Video Games Live in Brazil in Brasilia on September 30, 2007.) Between 2005 and 2006, media giant *O Globo* integrated kids playing a virtual reality game Conquista de Titã (Titan's Conquest) into their daily *TV Xuxa* program

Free Culture: Alternative Models of Production and Distribution

Figure 2. *Piratão, Boit Tatá, [Pirates in Boit Tatá] Carnaval 2009, Rio. Published under a Creative Commons License by URBefotos.*

Closely intertwined with the government's desire to address the nation's vast inequities through digital inclusion efforts, the Brazilian government has also demonstrated a strong commitment to reasserting control over the means of production and distribution of technology and the cultural resources created by Brazilians. For this reason, Brazil has been at the forefront of debates surrounding copyright and intellectual property in realms ranging from the production of music and pharmaceuticals to the continued high taxation on imported goods and proprietary software (McCann, 2008). Brazil is thus a heavy user and promoter of open source software, predominantly Linux, which is used by governments, universities, telecenters, and even supermarkets. Under the leadership of former Presidents Fernando Henrique Cardoso (1995–2003) and Luiz Inácio Lula da Silva (2003–2010), Brazil was the first country in the world to require open source products from the research institutes and organizations that receive government funding for the purposes of software development (Benson, 2005; McCann, 2008; Pinheiro & Cukierman, 2009; Takhteyev, 2009a, 2009b). As Câmara and Fonseca (2007) suggest, "Open source software may help developing countries master the technology of software development and support applications that leverage local knowledge" to both support and develop talent for a local industry, a pragmatic act of resistance to global forces characteristic of Brazil's role on the global stage.

A large part of Brazil's interest in free culture and reworking the global production and consumption dynamics revolves around the emergence of Creative Commons Brazil. Almost immediately after being appointed as the Minister of Culture in 2003, Gilberto Gil established a relationship with Creative Commons and began working toward making music available for free in digital formats.[3] Under the leadership of Gil, the Ministry of Culture used its DPIs to create a network of free software multimedia studios to support free cultural transmission (Ferraro, Bria, & Persico, n.d.; Kenny, 2005). One of the original foci of the Pontos de Cultura [Points of Culture] involved the creation of an archive of Brazilian music stored in digital form and governed by a license inspired by free software's GPL. Ronaldo Lemos da Silva, a law professor and lead for Creative Commons Brazil, has also been working with the government to develop a starter collection of public-domain titles for digitization. Many of these recordings are from previous eras, but Lemos and others are developing a platform, Canto Livre, that might stand as an alternative compensation system for online music, particularly nonmainstream Brazilian music. Music is shared through a peer-to-peer system wherein artists who upload music must identify themselves and identify their license for use, but those who download music can do so without identifying themselves. This alternative system is envisaged as a way to provide musicians, DJs, and others more autonomy over the distribution of their own music. It also represents a way to circumvent the need to pay royalties to global music conglomerates, thus allowing artists to maintain control over the remixing, sharing, and use of their (cultural) productions. Lemos (2007) notes that models of such systems have occurred for years in parts

[3] Gilberto Gil, Brazil's Minister of Culture from 2003 to 2008, made great strides with respect to policy and galvanizing broader public support for remix culture. Originally from Salvador in the Northeastern region of Brazil, Gilberto Gil rose to prominence in the 1960s for his politically inspired songs and activism which led to his exile in London for three years (1969–1972) during the reign of Brazil's military regime. After returning to Brazil, Gil continued to create and perform music (he is often credited with introducing reggae to Brazil), and to promote Afro-Brazilian cultural forms in carnival (the Afro-Brazilian afoxé tradition). In the late 1980s, Gil was elected into government in the state of Bahia, and in 2003 President Luiz Inácio Lula da Silva appointed Gil as Brazil's new Minister of Culture.

of Brazil through "tecno-brega" (cheesy techno) parties, wherein musicians give participants at a party the ability to purchase a CD of the party's music. In essence, the aspiration is to create a site and platform that reconfigures the distribution process and the relationship individual artists have in this process (Fisher, 2004).

The Gaming Movement

While, as discussed in the previous section, the Brazilian government has taken the lead in reconceptualizing the role of production and distribution of music, a similar battle for free culture and local production has been waged in Brazil's gaming industry.[4] Brazil's entrée into gaming coincided with the release of the Odyssey in 1981 and the Atari system in the late 1980s. High importation fees enforced by the Brazilian government made the systems difficult to acquire, and ardent gamers began looking for alternative ways to expand their game play. Starting with Atari consoles, a full-scale industry around cloned console systems emerged (Lstr, 2000; Spanner, 2005). Around 1990, the Brazilian company Gradiente released the Phantom System, a Nintendo Entertainment System (NES) clone that effectively transformed the NES into the dominant platform in Brazil, despite the fact that Nintendo did not formally release its console in South America (TSR, 2000.). By the mid-1990s, Brazilians had customized various consoles so that they could accept Nintendo games that came from Japan and the United States (Nintendo's two largest markets). This continued with the release of the Playstation. According to Spanner (2005),

> This completely turned the tables on the way Brazilians perceived their game playing experience as compared with the rest of the world. The software was already there, available in vast and diverse quantities, and would play in almost any console bought, so the buyer's quandary came in the form of deciding exactly which NES or Atari compatible clone offered the features they wanted. Software wasn't a concern; it was the hardware that mattered.

Brazil's gaming culture is also noted throughout the gaming blogosphere for the proliferation of different games and gaming consoles (e.g., Spanner, 2005), particularly NES games (Lstr, 2000). Abragames (Associação Brasileira das Desenvolvedoras de Jogos Eletrônicos), Brazil's primary gaming association, began working with the Ministry of Culture to promote and enhance the local gaming industry by emphasizing the value of Brazilian programmers and game designers, as well as the possibility of a nationalized industry. However, Lugo et al. (2002) note that Brazil has been fairly conservative in this respect. According to TexPine (2008), the situation can be described as follows:

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[4] According to Lugo et al. (2002), at the turn of the 21st century, Latin America represented:

> a marginal segment of world sales: only 2 percent of the world consumption of software and hardware related to video games. Despite the relatively low numbers associated with official video game consumption, popular discussions of gaming and video games suggest that there continues to be a widespread adoption of, and passion for, video games.

> Game piracy is endemic: 94% of PC retail games and nearly 100% of console games are pirated. Not even the richest youth of the country bothers to buy original console games, which cost US$98. Like everyone else they can easily spot illegal street vendors selling pirated games for US$8 or less. On online-distributed games, even low-cost Brazilian titles in Portuguese like Brasfoot (US$7) and CaveDays (US$14.50) are hacked by piracy-dedicated blogs, forums and Torrent sites.

While gamers appreciate the proliferation of alternative games and cloned platforms available, the perception of piracy has discouraged companies, such as Sony, from selling games in Brazil. As Rapoza (2005) notes, Brazilian game developers cannot create games for the PlayStation2, and consoles such as the Xbox and Nintendo systems are not sold. Because the pirated video game market is so rich and varied, "A game that might sell a million original copies in Wal-Mart in the United States will sell fewer than 10,000 in the Wal-Marts of Brazil" (ibid.). One of the more interesting responses to this climate is the increasing support of online games by software companies who charge subscriptions for use on a monthly basis. This enables companies to check the licensing of software and establishes online distribution channels that are often free. Games that follow this model include *Ernia* and *FutSim* (Wharton School of Business, 2004). Although a recent, and somewhat public, confiscation of a cloning operation might suggest a shifting attitude by the Brazilian officials who want to encourage the development of the local gaming industry, it remains clear that the large scale production of video game hardware and software by Brazilians continues.

This section on free culture, and the distinctive approaches to free culture in the domain of music and gaming, highlights some of the tensions between government and industry-driven initiatives, as well as their respective visions of Brazilian culture and nation. We see two different strategies of cannibalism by the Brazilian government and industry. Whereas the first example includes the coalescing of a government minister and the Creative Commons movement in the 1990s, the second example of the gaming industry illustrates the subversion of expensive foreign gaming consoles and the high tariffs placed on them by the Brazilian government. The two examples revolve around a general frustration with proprietary software and hardware, and both are concerned with the attendant effort to work around these constraints through customization. We also see that the Brazilian government evaluates the cultural significance of the music and gaming industries differently. Whereas music appears to be viewed as a culturally authentic sphere supported by a variety of key individuals and institutions, the video game industry has largely been left to fend for itself because it is viewed as a foreign importation by the Brazilian government. By contrast, the gaming industry view pirated consoles and games as a challenge to the global order and the Brazilian government's high importation fees, and strives to provide options for Brazilian consumers and employ Brazilian programmers and developers. While tactics may differ, the government and industry do share an intense commitment to Brazilian nationalism in a fashion that mirrors the nationalistic appropriation of new media technologies that Miller and Slater (2000) observed in Trinidad a decade ago.

Networked Sociality

Figure 3. *Boit Tatá, Carnaval 2009, Rio Orkut Rio de Janeiro. Photo by URBefotos. http://www.flickr.com/photos/urbefotos/3303037834/*

Sociality has always been a key dimension of Brazil's engagement with the Internet and new media. In this section, I use the term "networked sociality" to refer to the centrality of a variety of forms of technology use in the mediation and structures of relationships. These relationships may be between individuals, groups, communities, corporations, societies, and other social configurations; they may also be mediated by or structured within a variety of platforms, ranging from online or "virtual" worlds, social network sites, chat programs, and e-mails to text messaging and voice calls. The concept builds upon Wittel's work analyzing the new media industries in London, which defines network sociality as follows:

> The term network sociality can be understood in contrast to "community." Community entails stability, coherence, embeddedness, and belonging. It involves strong and long-lasting ties, proximity and a common history or narrative of the collective . . . . Network sociality consists of fleeting and transient, yet iterative social relations; of ephemeral but intense encounters. Both communities and organisations are social systems with clear boundaries, with a highly defined inside and outside. Networks however are open social systems. (2001, p. 51)

In this section, I explore the development of networked sociality among Brazilians through their (increasing) engagement with social network sites. Specifically, I focus on how the original commitment to digital inclusion and resistance to the broader normative order of global capitalism discussed in previous sections has converged in the use of social network sites, blogging, and other forms of networked sociality.

Social Media

Google's social networking platform Orkut (http://www.orkut.com/) is often seen as synonymous with social network site use in Brazil. With more than 50 million Brazilian account holders on the site (Fragoso, 2006; McCann, 2008), recent estimates suggest that more than three-quarters of those who use Orkut list Brazil as their country of residence; Portuguese is also the dominant language on the site. Indeed, when the Brazilian government threatened to initiate a legal suit against the company to grant the government access to monitor some of the less desirable community activities (e.g., sex tourism), Google resisted, but eventually came to an agreement in 2006 with the Brazilian authorities in an effort to stay embedded within the Brazilian market. While Google did not give the government access to its offsite servers, the company promised to enhance their efforts to monitor and control Orkut's content (McCann, 2008). In August of 2008, California-based Google established an office in Belo Horizonte, Brazil, solely devoted to the management of Orkut.

Launched in 2004 by Google (the name of the site comes from its creator, Turkish developer Orkut Büyükkökten), Orkut encourages members to post pictures of themselves, to link to other users or Web sites, and to trade photos, audio, and video files in their "scrapbook." While Orkut's initial uptake can be attributed to its early arrival in Brazil (Facebook and MySpace arrived later), part of Orkut's appeal is its strong community facility, which structures interaction and conversation (the site is organized into five categories: "Home," "Profile," "Scrapbook," "Friends," and "Communities") (Recuero, 2005b). Communities on Orkut range from local neighborhood groups' football teams; fan communities around football, music, films, and notable people; as well as more esoteric topics. Recuero's (2005) analysis of social capital in Orkut suggests that the way Brazilians use the site to become popular and develop reputation typically undermines traditional hierarchies and methods of evaluation. Bryan McCann (2008) similarly contends that part of the success of Orkut revolves around Brazilians' penchant for the creation of communities and networks that enable extensive discussions which often challenge the existing social and cultural structure of Brazilian society. In her study of the site, Fragoso (2006) suggests that Orkut has become an intercultural contact zone where Brazilians, Americans, and other nationalities engage in extensive debate about current events and other topics. Through her exploration of the ways in which Portuguese and English are selectively used in interactions on the site, Fragoso makes the case that the ways in which Brazilians use Orkut reflects a particularly Brazilian disposition to sociality on the Internet (see also Nafus et al., 2007). This dynamic may be changing, as more Brazilians are beginning to use Facebook and a range of other social network sites (see Table 1).

Table 1. Top Social Networking Sites in Brazil by Unique Visitors

Total Brazil Internet Audience,* Age 15+ | Home & Work Locations (August 2010)				
	Total Unique Visitors (000)	**Average Minutes per Visitor**	**Average Pages per Visitor**	**Average Visits per Visitor**
Total Internet Persons: 15+	**37,527**	**1,561.0**	**2,109**	**58.0**
Social Networking	**36,059**	**252.6**	**585**	**32.4**
Orkut	29,411	275.8	657	35.8
Windows Live Profile	12,529	5.5	12	3.7
Facebook.com	8,887	29.3	55	6.6
Twitter.com	8,621	31.8	44	7.5
Formspring.me	3,638	34.8	57	9.0
Sonico.com	1,711	10.0	15	2.9
Ning.com	1,570	6.4	10	2.4
LinkedIn.com	1,471	10.7	26	2.6
Multiply.com	1,349	3.6	5	1.6
Vostu.com	1,130	2.2	2	1.7

** Excludes traffic from public computers such as Internet cafes or access from mobile phones or PDAs.*
Source: comScore Media Metrix.

While Brazilians' affinity for Orkut often dominates discussions of Internet use in Brazil, blogging is also popular. Data from a December 2007 ComScore report show that Blogger.com alone was accessed by more than 6 million unique Brazilian visitors, and Recuero (2008a) notes that, as of September 2007, over 9 million users (many of whom are youth) access and read blogs. This represents 46% of active Internet users in Brazil. Like the communities on Orkut, blogs are varied in topic and scope, although the dominant focus of the Brazilian blogosphere often revolves around political and popular culture, blurring the line between social connection and information sharing. For example, *O Globo*, a newspaper in Brazil, developed a place where residents could anonymously report crimes, both those petty and larger in scope. The site was so successful that the paper created a related crime map that enabled residents and officials to identify problem areas (McCann, 2008). Citizen journalists are also incorporated in *O Globo's* Eu-Reporter site http://oglobo.globo.com/participe/, where images and brief summaries of pollution and other trouble areas are featured (SIG-III, 2007). Similarly, Overmundo, a site founded in 2006 to enable the circulation of information about Brazilian culture, also has become an important space for Brazilians, due to its unique system of review and ranking, its desire to subvert existing practices of dissemination (e.g., press relations and advertising agencies), and its encouragement of culture (and popular culture) outside of the traditional centers of cultural production, Rio de Janeiro and São Paulo. Notably, Overmundo uses a Creative Commons license.

Whereas Overmundo and *O Globo's* sites are more closely structured by an organization, more flexible open-ended sites are also being adapted. For example, Recuero's (2005, 2008b) study of the appropriation of Fotolog, a photo-blogging site where people can upload and comment on digital photos to share with friends and others, looks at the intersection of information and communication in Brazilians' engagement with a variety of Internet practices. Based on two years of research, Recuero emphasizes the creation of carefully crafted digital identity, which includes a photo-shopped image and a unique nickname, as well as the creation of groups for conversation. She further notes that, for many Brazilians, the purpose of participation revolves around the sociality that posting photos enables. By contrast, Recuero and Zago's (2009) study of the Twitter sphere and microblogging suggests "that Twitter is most used as an informational tool in Brazil, where values such as reputation, visibility, popularity, knowledge and information access are more important for users than social values such as social support." In other words, whereas Brazilians subsume the informational dimensions of sharing (such as to inform others about crimes and social injustices) on sites such as Fotolog in the name of reinforcing social connections, participation on sites like Twitter (and even Overmundo) are driven by a desire to exchange information and the expansion of social networks (Recuero, 2008a).

The Internet in Brazil, particularly sites such as Orkut, Twitter, Overmundo, and Fotolog, has clearly been transformative. It has expanded the way social capital is understood and practiced (Recuero, 2008a), as well as how Brazilians establish and maintain relationships. Bryan McCann (2008) makes the case in his recent book that Brazilians' use of the Internet has resulted in the formation of the "Orkut Rule," wherein Brazilians develop "subcultural niches and crosscultural networks in ways that defy traditional hierarchies and the existing social canon" (McCann, 2008, p. 131). McCann further notes that transformative effects of the Orkut Rule and the subversion of traditional flows of information and communication are often mitigated by the ways in which the Brazilian government utilizes key stakeholders known for their ability to shape public opinion rather than fund people directly ("The Petrobras Rule"), as well as by the viral practice of making references wherein the people who become stars or famous become so via the "viral" recommendations of family and friends ("Virtual Pistolão Rule"). McCann bases his Petrobras rule concept on the dominance of Petrobras Holding in determining what is culturally valuable through its large investments in cultural programs. In 2006, Petrobras invested US$100 million in cultural programs, and sites like Overmundo were initiated through an initial grant from Petrobras. For McCann, the Internet and the emergence of the Orkut Rule have helped to flatten social hierarchies and, in turn, the ways in which culture is produced and reproduced in Brazil.

While these characteristics are clearly evident in the structure of sites like Overmundo and the use of social network sites like Orkut, it is also clear that we are only beginning to understand the everyday dimensions of Internet usage in Brazil. As outlined in the introduction, there have been many efforts at the top-down level of the government, as well as those at the grassroots level, to facilitate digital inclusion. Yet it remains unclear whose Internet we may be talking about, as well as the extent to which such participation has truly transformed the well-entrenched hierarchies and inequalities in Brazil. Indeed, in their experimental class ethnography of Second Life in Brazil, Fragoso et al. (2008) note that the connection speed and other issues associated with access negatively impacts many Brazilians' ability to participate in such immersive environments and, in turn, to participate in networked sociality.

Conclusion: Understanding Production and Consumption in Brazil

Throughout this article, I have demonstrated that the new media landscape in Brazil is shaped by three core values: inclusion, free culture, and sociality. These values have been expressed through digital inclusion initiatives sponsored by the Brazilian government; the support of open source culture, Creative Commons, and localization movements; and the recent immersion in social media and other forms of networked culture. Moreover, my aim has been to reveal how Brazilians' appropriation(s) of new media technologies involve transformations in the processes of production, distribution, and consumption. As noted throughout the article, Bar, Pisani, and Weber's (2007) framework is particularly useful in thinking through the changes in production and consumption that have come about through new media technology policy and use in Brazil. For example, the Brazilian government's approach to new media technology policy reflects a combination of cannibalism in response to local baroque practices. The direct support of open source platforms throughout the government institutions was structured as an explicit route to counteracting the hegemony of global corporate actors such as Microsoft and, in turn, to saving money which could be used in other areas of need in Brazil. The forms of free culture valued in Creative Commons Brazil's reconfiguration of intellectual property, along with the modes of distribution through efforts such as Canto Livre, draw upon existing practices on the edge—what Bar, Pisani, and Weber characterize as baroque—occurring in sound system parties in parts of Brazil. While less confrontational than the free culture movement, digital inclusion could also be viewed as cannibalistic, as it reworks structures of support and infrastructure for youth, particularly for marginalized youth throughout Brazil. However, the emergence of LAN houses, both a byproduct of and reaction to the formal government policies and the everyday practices in telecenters, represents a creolization of the original intention of the government and the demand by users to work in areas where sociality can be achieved in physical and network form.

At the other end of the spectrum is the role of commerce and corporations in shaping Brazil's new media landscape. While Brazil's government clearly supported the engagement with computers, Internet connections, and software, both for the preservation of Brazilian culture, and in the name of digital inclusion, other forms of appropriation appear to be less valued. For example, the customization and cloning of gaming software and hardware—what Sony and others view as piracy (Rapoza, 2005)—represent a clear act of cannibalism by local game designers and hackers. Although this has resulted in a reasonably well-developed local gaming industry, the foreign origins of video games continue to result in their being viewed as a lesser cultural form, even when certain games have been customized to the local context or build upon Brazilian games. Google-owned Orkut, however, represents an interesting counter example. Similar to video games, users drove the growth of Orkut. However, rather than being antagonistic in nature, the appropriation of Orkut reflected a process of creolization whereby users utilized Orkut's platform for existing Brazilian practices around sociality and connection. Yet, and as illustrated in the development of the Orkut Rule, many of the systems of recommendations undermine long-standing reputation and referral practices. Google's physical relocation in Brazil and, in turn, the commitment to local Brazilian culture, further enhanced this creolization process.

Drawing upon recent scholarship on new media in Brazil, this article demonstrates that Brazilians' appropriations of new media technologies reflect a commitment to the value of free culture, sociality, and inclusivity, and it displays a related consideration of changing practices around production, distribution,

and consumption. Examples of this ethos include the Brazilian government's receptivity to the integration of open source software use in the nation's telecenters, the relatively laissez-faire attitude of the state toward the video game industry, and the rerouting of traditional centers for the circulation and redistribution of new media in blogs and social network sites such as Orkut and Overmundo. From telecenters and LAN houses to the increasing popularity of Orkut (sparked, in the first instance, by the blogosphere), I also reveal how such appropriations are dynamic and change over time. There is much about the Brazilian case that reflects innovative, if not forward-looking, policies. For example, the Brazilian government's support of open source and Creative Commons is quite distinct from the Indian government's recent attempt to copyright traditional yoga poses. Indeed, many of these practices involved outright resistance to the global order and traditional patterns of production and ownership with the aim of providing social, cultural, and financial inclusion for all Brazilian citizens. Yet, not all appropriations have resulted in transformative social change and inclusion. The research on Orkut, for example, suggests participation is as much about the display of status and popularity as it is about sociality; upper class Brazilians rarely interact in a meaningful way with residents living in *favelas,* even when they join in the same activity. In other words, new media practices—even of the same media—are diverse, and people's modes of engagement in different social and economic locations throughout Brazil often reflect existing inequalities and dispositions.

The prospects for future research on new media technologies, appropriation, and resistance in Brazil are rich and varied. There are definite "gaps" in existing knowledge of new media practices, such as about the informal economy that has emerged around software, video games, music, mobile phones, and new media production. It overlaps some with the work on piracy and LAN houses, but it will also offer additional opportunities to understand the socioeconomic use of mobile phones. New mobile and Internet services continue to proliferate, and they will change our understanding of people's participation in Orkut, blogs, LAN houses, and other online milieu. In addition, the transnational connections between the open source movement and Creative Commons Brazil will also provide a significant opportunity to understand the relationship between national and international NGOs and the policy environment. In future research, the challenge will be to understand these emergent practices within the particular social and historical conditions of Brazil, as well as the broader context of the Global South.

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List of Figures

Figure 1: Inclusão digital, SAO PAULO -SP - 11.01.2008 - INFORMATICA - Nitro LAN House, localizada no Grajaú. Nas palavras do dono, “aqui abre mais lan house que boteco”. By Folha de S. Paulo. Published under a Creative Commons License by Paulo Fehlauer

Figure 2: Piratão, Boit Tatá, *Carnaval* 2009, Rio, Published under a Creative Commons License by URBefotos.

Figure 3: Boit Tatá, *Carnaval* 2009, Rio Orkut Rio de Janeiro. Photo by URBefotos. http://www.flickr.com/photos/urbefotos/3303037834/

Table 1: Top Social Networking Sites in Brazil by Unique Visitors, August 2010. (Total Brazil Internet Audience*, Age 15+ - Home & Work Locations), Source: comScore Media Metrix