PLAYING BEYOND PRECARIOUSNESS

THE POLITICAL DIMENSION OF BRAZILIAN MODDING IN PRO EVOLUTION SOCCER

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INTRODUCTION: PRECARIOUSNESS AND PLAY IN BRAZIL

Video games and other forms of entertainment reproduce the power and knowledge relationships characteristic of what Walter Mignolo¹ refers to as the Modern/Colonial World-System.² This concept, as developed by Mignolo, asserts that an entanglement with coloniality is a fundamental pillar of modernity. Arguing that modernity and coloniality are two sides of the same coin, the author also suggests that our body of knowledge is determined by the ways in which the colonial power structure formulates paradigms of knowledge. Thus, following Mignolo, this chapter aims to promote epistemic disobedience, a transition to new ways of thinking and perceiving that has originated in the countries of the global south, former colonies whose knowledge and modes of being have been profoundly distorted by the so-called "canonical knowledge" institutionalized by the (former) colonizers.

In this chapter, we aim to highlight the normative potential of video games, products of an industry that is highly influenced by canonical standards. More importantly, as can be seen in the film industry in general and in Hollywood in particular, these norms are often dictated by market interests. By examining the friction between large-scale commercial games and individually or collectively customized versions of these same games, this article aims to cast a light on the power-knowledge relations among hegemonic powers, as seen in the ways Brazilian player communities respond to massive multinational game corporations and global industry standards with their locally-based initiatives. Looking at this side of the spectrum, we see how interactive digital culture has enabled a variety of anti-hegemonic initiatives, among which video game *mods*—modifications of commercial games that have been altered by individuals or communities of software modifiers or *modders*—are an important example.

In this context, we intend to look into the political and affective implications of the customization of video games and game related content. It is not just modding itself that is of interests, but also the relationship between modding and broader aspects of the production and appropriation of global technologies for the development of regional initiatives. As a result of these configurations, new possibilities for exploring the mainstream gaming experience have emerged that have allowed individuals living below the imaginary line of the equator to insert their own imaginaries into gameplay and game design.

With this in mind, this chapter specifically focuses on the creation of Bomba Patch mods for the game *Pro-Evolution Soccer* (*PES*, Konami, 2001-), which constitute an unintentional but still-relevant

^{1.} Walter Mignolo, "Histórias locais/Projetos globais: Colonialidade, saberes subalternos e pensamento liminar," GEOgraphia 7.13 (2009).

^{2.} The term refers to the world-system theory developed by Wallerstein (1974) among others. See also *The Modern World-System: Capitalist Agriculture and the Origins of the European World-Economy in the 16th Century* (Academic Press, 1974), v. 1.

decolonial exercise in inventing new ways for the communities of the global south to explore mainstream video games. Bomba Patch in this hybrid Portuguese-English form means a patch—a small mod—and *bomba* is the word for "bomb," but it can also be a slang term that translates to "hype" or "hyped." Its origins can be traced back to 2005, when a local video game store commissioned a customized edition of *PES* for a tournament between clients. At the time, the game did not feature Brazilian football teams, so one of the clients created a version of the national championship including not only first but also second and third tier teams. Given the low commercial appeal of the Brazilian market and these globally unknown squads, this kind of hacker intervention was the only way to play the game in a manner that reflected these players' taste, culture and subjectivity. Therefore, these mods encourage the emergence of affective communities and the subversion of popular, stereotypical representations by inserting local cultural elements such as slang, values and player personalities into blockbuster "global" games like *PES*.

We believe these customization-related practices enable an affective reconfiguration of the world by establishing new existential/affective territories that pertain to a particular intersection of space and time. In order to better understand these spaces and temporalities, this chapter builds upon the premises developed by Doreen Massey,³ who defines space as a product of interactions, always under construction and marked by the coexistence of diversity.

In this sense, game mods developed by the communities of the global south gain a special relevance due to their capacity to merge world-class design tools with the interests of subaltern communities at particular intersections of space and time. Inspired by Mignolo's notion of epistemic disobedience, and focused on communities of gamers who challenge the spatial and temporal relations dictated by the global market, this chapter will show how hacking and software modification practices can contribute to the development of local—and decolonial—projects in precarious areas.

Precariousness can be defined in different ways within the current world system. It is not merely a matter of socioeconomic scarcity, or actual poverty. Taken more broadly, precariousness relates to what Hardt and Negri have called the "common condition of poverty of the Multitude."⁴ It means precarious—or *conditioned*—access to infrastructure, education, culture, quality of life, mobility and so on: conditioned by market demands, geographical location, public perception and political interests. The richest person in Cuba cannot purchase a broadband connection as strong as the average South Korean's. Likewise, in many neoliberal capitalist societies like the U.S., access to knowledge is blocked by publishers' interests and the generalized privatization of higher education.

To discuss structural precariousness in the global south one must take in consideration the inner contradictions within each country. In this volume, Mukherjee underlines that an analysis of the digital divide in India must also regard the inequalities within the country such as the north/south division or class inequality consequent of the caste system. The Indian situation becomes relevant to illustrate the digital divide and, thereby, the precariousness in Brazil. Despite of not having multiple major languages or castes, Brazilian society is highly divided. The country's GDP is highly dependent on the southern regions, which tend to be home to the majority of technological and industrial development.

In order to better understand these issues' intertwined relationship with environmental scarcity and the socio-affective (ultimately political) appropriations of technical objects in zones of the global

^{4.} Antonio Negri and Michael Hardt, Multitude (Penguin Books, 2004).

south, this chapter adopts an ethnographic approach to the analysis of Brazilian networks of playereditors who customize the *PES* franchise, also known as *Winning Eleven* in the Japanese market, by using the Bomba Patch to create their own versions of the game.

Three *mods* were selected for this study: Bomba Patch GeoMatrix, Bomba Patch União PI/Gospel K and Bomba Patch Jacaré.⁵ We followed these mods' Facebook pages, tracing interactions between fans, and ultimately interviewed the modders behind them. Among our findings is that the PS2 console is experiencing a resurgence among Brazilian players, mainly due to the popularity of football/soccer simulations based on game series like *PES* and *FIFA* (EA Sports, 1993), along with other games like the *Guitar Hero* and *Grand Theft Auto* (GTA) franchises, which go beyond the scope of this analysis.

Modding football simulation games is a global trend, with players from around the world finding ways to circumvent licensing arrangements such as those between Konami, professional teams and national leagues, in order to create new names, kits (uniforms) and other copyrighted content. When game manufacturers fail to acquire some of those licenses, it falls to player communities to "fix" the game, hence the popularity of *patches* that contribute to this type of modding. In the cases analyzed in this chapter, a preference for the discontinued technology of the PS2 leads to particular strategies that harness social, improvisational and cognitive skills in order to shape modders' efforts and manifest their creativity. Moreover, these mods and communities are responsible for the creation of new spheres for socialization, and have developed a unique economy based on their own shared ethics, as we will see in the remainder of this chapter.

AFFECT, POWER AND EPISTEMIC DISOBEDIENCE

Hacking, modding and patching are part of the basic vocabulary for some within Brazil's gaming community. These groups of people participate in a network that involves the production (adaptation) of goods, their circulation and, as a consequence, the establishment of a micro-market that runs parallel to the official video game market. In so doing, these individuals create bonds that go beyond strictly commercial relationships and move toward the construction of spaces where affective, commercial and technological-aesthetic innovations arise.

Our usage of the term *space* here follows Massey, for whom space is "a product of interrelations" determined by interactions; heterogeneous, constituted by difference in relation; and always "under construction."⁶ Using this provocative alternate concept of space as a point of departure, we can think of the culture of video game modification in Brazil as a way of enabling the constitution of microspaces, or rather, the modification of affective spaces to attain a desired composition.

At this point, it is important to point out that this affective network of players/producers/consumers, with the same person occupying multiple positions in many cases, takes place in precarious environments. In the 2006 book *Convergence Culture*, Henry Jenkins adopted the term "prosumer" to refer to these fans, especially the Japanese animation and comic book (manga) aficionados that translated and distributed this content online before it was licensed by publishers, but also writers of fan fiction and creators of Machinima and other remixes and parodies of movies and games. In response to the game industry's incapacity to provide ideal products, players overcome

^{5.} As is further explained below, the names are a mix of Portuguese and English. GeoMatrix is the name of the local game store in the state of São Paulo that first "ordered" the mod. The second is a "joint venture" between two modding groups, one from the city of União (Union) in the state of Piaui, and the other Gospel K, a modder from Rio de Janeiro who added his evangelical beliefs and the first letter of his name to his group moniker. Finally, Bomba Patch Jacaré, which means alligator in Portuguese, is the modder's alias as a local DJ.

^{6.} Massey, Por um sentido global do lugar, 8-9.

precariousness by using inventive solutions that allow them to insert their own feelings and desires into the game. "Game" here has a double meaning: it refers to the very objects modified, but also to a chain of production and distribution which marches towards the standardization of time and taste. In this sense, such locally produced game mods are an attempt to reorganize the system from within. Without the ambition of creating a worldwide impact, competing with or challenging the game industry, Brazilian gamers are creating new ways of relating to their preferred games without relying on the help of game companies.

By connecting people through affective links, these groups create networks with their own particular traits, such as: a specific temporality, since the editions of the mods frequently disregard and/or challenge the market calendar established by official games; a particular sense of "realism," given that the modders impact characters' overall ratings within the games in favor of "more credible ones"; and more importantly, the sense of community, which is a consequence of the direct relationship between producers and gamers. This final characteristic seems to be a major aspect of nearly all such mods. Indeed, all the nodes of this network are connected in a horizontal manner, as opposed to the top-down distribution and consumption of the official versions. As a result, the cultural misrepresentations and impositions produced by hegemonic industry powers in response to market interests are being fractured and distorted, and a community is emerging in the global south.

MODDING PRO EVOLUTION SOCCER

Group formation is a core element in the analysis of customization as a process. Individuals are known to gather around a cultural product, idea, feeling/sensation, etc., and in the case of *Pro Evolution Soccer/Winning Eleven*, a degree of dissatisfaction with the franchise has been a constant factor motivating software modders, who are equipped with the ability to effectively act on their frustration with the help of digital tools.

Open-source software and user-produced content bring about the possibility of direct intervention in the object of the user's affection, which is different from writing a review, creating fan fiction or undertaking other creative endeavors enabled by the convergence of media. Although it can be a controversial subject in the industry, some game publishers insert editing features in their games in order to make them more modifiable, which extends their shelf life and appeal to diverse audiences. Though its publishers were resistant at first, this took place with *The Elder Scrolls V: Skyrim* (Bethesda, 2011), while it is an approach Konami adheres to more wittingly. The editing feature in *PES* allows players to customize the unlicensed content filling the gaps the company contractually cannot. Thus, in subjective terms, the mod does become "another game," since the act of modifying and later playing it represents a certain rupture/break with mainstream market agenda, reliant upon both affective and commercial bonds, even if it is still the same product from a practical point of view. Modding is more akin to having the possibility to re-record the end of a movie or rewrite or (re)score a song to make it more to your liking.

In the case of the particular network of player-editors we are examining in this chapter, the group came together as a result of their attachment to the PS2 and to the Bomba Patch "brand," in a deliberate rejection of the new generation of consoles. This retro movement is driven less by nostalgia than by a serious dissatisfaction or displeasure with current football games. Their most common complaints are both the inaccuracy of players' attributes or overall ratings—a constant criticism among Brazilian players—and changes to the latest generation of games in and of itself. The examples below reflect this general discontent.

It is no coincidence that the PS2, though familiar to many players, also represents the most restrictive generation of consoles in terms of user handling and control. It is harder to manipulate or intervene in this platform even if one is willing to hack, damage or sacrifice some features in response to the demands of the console hardware or the game software. In pursuit of commercial and legal protections and marketing deals, console manufactures like Sony, Microsoft or Nintendo (and game and software companies in general) have decided to focus on user-friendly technology that is ready to play/use and difficult to share or modify/configure.

Game publishers have tried to restrict user manipulation of game software in a number of ways. For example, Microsoft's decision to link Xbox One games to the user's online account on their Xbox Live online service, for instance, made news and generated a great deal of backlash from fans. This decision was later revoked, but it still shows how online connectivity has gone from being an additional feature to a standard requirement.⁷ There are innumerable other company policies intended to curb users' abilities to tinker or interfere with their intellectual property. Likewise, Lori Emerson has criticized Apple's platforms and business models for their strict controls on user-generated content:

If the iPad signals the future of computing and of ubicomp-related computers, then perhaps it also simultaneously signals a future generation of hackers who will be driven to find a way out of this flat notion of creativity that amounts to little more than consumption and manipulation as users are turned into audience members watching their devices perform magic tricks before their very eyes.⁸

This critique also applies to a broader business model based on licensing, rather than purchasing, of media. Video game developers are frequently left with no other option than to "license" their games to consumers through publishers and distributors, which can leave them with reduced access and curtailed copyright protections, accompanied by an increase in licensed digital sales over transferable hard copies. Again, Emerson hits the nail on the head—even if she is not talking about video games specifically, her comments pertain the situation of digital technology in the last 10 to 20 years: "what concerns me is that the user-friendly now takes the shape of keeping users steadfastly unaware and uninformed about how their computers, their reading/writing interfaces, work, let alone how they shape and determine their access to knowledge and their ability to produce knowledge."⁹ We consider this another form of market-imposed precariousness, this time one that is not restricted to communities of the global south.

Precariousness here takes on another meaning, one that has already been addressed by Mia Consalvo in her analysis of decoding chips, GameGenies, Code Breakers, Free Loaders and other popular tools for unlocking the content of consoles and cartridges in the U.S.¹⁰ These popular hacking tools were popular among consumers for playing Japanese games, running homebrew games, or using the console as a Linux machines on early game hardware. However, we must consider the socioeconomic factors behind the rejection of the latest generation of consoles, at least in parts of Brazil: consoles and games are extremely expensive, costing upwards of US\$600-700 (R\$2000) at the time of release, and remaining close to US\$350-400 (R\$1000-1200) for years. These are 2019 prices for the PS3 and Xbox 360, each launched more than a decade ago. This price inflation takes place because of the country's high import taxes and other fees, even when the consoles are manufactured in Brazil. In the end,

^{7.} Jon M. Chang, "Xbox 180: Microsoft Backpedals on 2 Controversial Xbox One Features," ABC News, 20 June 2013, http://abcnews.go.com/Technology/microsoftbackpedals-controversial-xbox-features/story?id=19449001.

^{8.} Lori Emerson, Reading Writing Interfaces: From the Digital to the Bookbound (University of Minnesota Press, 2014).

^{9.} Emerson, Reading Writing Interfaces, 49

^{10.} Mia Consalvo, Cheating: Gaining Advantage in Videogames (MIT Press, 2007).

the final retail price of 7th generation consoles ends up being at least 50% higher than the national minimum wage of R\$880/month (roughly US\$ 210 to 230/month).¹¹

THE BOMBA PATCH UPRISING

The Bomba Patch mod for the PS2 version of *PES* appeared in 2005, initially in connection to a single group on the social network Orkut. Later, as it became more and more popular, the name "Bomba Patch" turned into a synonym in Brazil for all PS2 football mods, and every group or individual interested in creating a *PES* mod for the console started using the term in their work.

Bomba Patch GeoMatrix was named after the video game store that "sponsored" its development. Its creators consider it the "official" Bomba Patch mod because it rose to fame in 2005, and they also claim to have created the name, as they were the first group to publish a Bomba Patch for *PES*.¹²

The GeoMatrix shop is located in the state of São Paulo, in the city of Mogi Mirim, considered small by Brazilian standards with its 90 thousand inhabitants. GeoMetrix's staff has explained that the person responsible for the mod was actually a client of the store, and that they first ordered the development of the mod for the local *PES* tournaments that they hosted there. According to GeoMatrix's spokesperson, editing was a requirement, because "the *PES* games came all wrong. There were no Brazilian teams and players overall ratings were all messed up."¹³

Since then, GeoMatrix has assumed the Bomba Patch "brand" and supports the creation of other mods for the PS2, which they sell in both their physical store and website. They also have their primary social media account as well as another for Bomba Patch releases—the latter's YouTube channel has more than six million views. When PS2 consoles and games for them were discontinued around 2012, the GeoMatrix team began specializing in launching versions of *GTA IV* (Rockstar 2008) and *GTA* V (Rockstar 2013) as well as recent *PES* games not available to the platform. Among other "store exclusives" are classic editions, with football legends from the past, Portuguese translations of ingame content and even commentary and broadcasting from different networks.

The "new" *GTA* releases are usually overhaul mods of *GTA San Andreas* (Rockstar, 2004), the last game in the series officially launched for the PS2 platform. The Portuguese subtitled or even dubbed versions of games like *GTA*, *PES* and more recently *God of War* (Sony, 2005) are available at GeoMatrix website along with the gameplay videos in their YouTube Channel.¹⁴ Using editing software, it is possible to translate the text from the menus and dialog boxes and add audio and video files of non-player characters' speeches or whole dubbed cutscenes. The same is done with television broadcast narration and commentary, where the recorded audio is inserted in specific matching situations such as passing the ball, making a kick, committing a foul and, most importantly, scoring goals. In this case, synchronization is not always perfect (actually far from it), thus the names of players and teams are often mixed up, and the narrator often says the wrong score.

It is worth noting that football simulation franchises generally do not attempt to remediate the feel of an actual football match, but rather its television broadcast. For this reason, sportscasters have been a part of these games since the beginning. The companies hire actual TV personalities for this

13. Ibid.

^{11.} Available at https://www.polygon.com/2013/10/21/4863954/ps4s-brazil-import-fees-taxes and https://www.polygon.com/2015/1/10/7524759/nintendo-brazil-wii-u-3ds-tariffs-taxes.

^{12.} Unidentified spokesperson, GeoMatrix store, personal communication, 15 October 2015.

^{14.} Available at http://geomatrixgames.com/loja/index.php?cPath=88_169 and https://www.youtube.com/ watch?v=_KOPgAQgIIY&list=PLNybNY_6F-9g0sGx5b65ok1rEoE9dyEOS.

job and they record game commentary, player's names, their distinctive catch phrases and so on. However, with Bomba Patch, the modders add "alternative commentary" by extracting audio from TV broadcasts. The recent Bomba Patch 75 from GeoMatrix, which features the 2017 squads, has 11 commentary options drawn from four major Brazilian free-to-air and cable channels. This very flawed and artisanal process takes place because *PES 6* (Konami, 2006), the base for most Bomba Patch mods, does not have official commentary in Portuguese, which was only added with *PES 2011* (Konami, 2010).

GeoMatrix sells the hard copies of its mods in their store and website for R\$10 to R\$25 (US\$3-8), a controversial practice that has been heavily criticized by other modders, as we will see. Geomatrix has explained:

charge for early/advanced copies of the game, but 30 days later it is available for free. Those who buy help with the costs of production. They are basically other stores [likely street vendors too] that would like to sell the modded game before it becomes free. Whether you liked it or not, Bomba Patch is a source of income for the [street] stalls that increase their sales in each new version, which helps folks support themselves.¹⁵

The games can indeed be downloaded for free on their website, though not usually within the first 30 days after release but rather upon the release of the next new mod. To date, they claim Konami has never contacted them regarding copyright infringement.

It is vital to note that these mods are not made from scratch, nor do they require any elaborate programming skills—there is no actual adaptation or transfer of files from PS3 or PS4 versions to the PS2 "format." Most modders use *Winning Eleven 10 (WE10)*, also known as *PES 6* (Konami 2006), as a base from which they alter the content and in-game text using a highly intuitive and easy-to-use graphic user interface. No line of code or script is rewritten. And indeed, there are good reasons for game publishers to permit this type of unofficial local development. As Geomatrix explains, "We never had problems with Konami because we use their own in-game editing tools. We do everything there and later apply it to the game. You just have a save file with your achievements and progress and then you sell it to your friends. The editing is similar to the one that *Dota* gave us, and now *Dota 2* is sold separately as a game too."¹⁶ The reference to known case of *Defense of the Ancients* (*DOTA*)—a mod of *Warcraft III* (Blizzard, 2002), that spawned a whole new genre called the Multiplayer Online Battle Arena (MOBA)—only strengthen the argument for a closer look at modding practices. Modding not only has educational and political significance, but can contribute to multibillion dollar industries with many examples of commercial success like the often-mentioned *Counter Strike* franchise (Valve, 2000) or the *Dota*-like game *League of Legends* (Riot Games, 2009).

The new groups that don the Bomba Patch name have a tense relationship with GeoMatrix, in part because of their pricing. A Facebook and blog post by the Bomba Patch União PI, dated November 2015, includes the following discouraging message: "A warning and announcement to GeoMatrix. Shame on you, create your own patch instead of stealing and redoing ours only changing the images in the j_text file. União PI and Gospel K appreciate the understanding."¹⁷ The União PI group thus publicly denounced Geomatrix as frauds. In another blog post, now in the release of Bomba Patch Gospel K – Classics, from November 2015, the modder warns originally in all caps: "GeoMatrix, we do not accept [online] visits from mercenaries that sell defective patches full of bugs. Shame on you do not come back here."¹⁸ It is worth noting that GeoMatrix has roughly 37,000 likes on their Facebook

^{15.} Unidentified spokesperson, GeoMatrix store, personal communication, 15 October 2015.

^{16.} Ibid.

^{17.} Available in Portuguese at http://bombapatchgospel-k.blogspot.com/2015/10/bomba-patch-uniao-pi-2016.html.

page, while União PI and Gospel K have around 1,800 and 2,300 likes respectively. In these public denunciations of Geomatrix, clearly the issue is not only the money, but also the higher visibility of GeoMatrix's Bomba Patch.

COLLABORATION AND INNOVATION THROUGH MODDING

Rivalries are not the only relationships that have been sparked within the Bomb Patch modding community—it has brought forth collaboration as well. Bomba Patch Gospel K derives its name from the main contributor, Kelfany, who lives in city of São Gonçalo, in Rio de Janeiro state. Kelfany states in his social media profiles that his protestant Christian beliefs led to the name of the mod.¹⁹ Kelfany is the main contributor, but not the only one, as there are several online nicknames listed in the group blog. There are also video tutorials dealing with the customization of each individual aspect of the game: shoes, balls, players' faces and hairstyles, commentary, stadiums, etc.

Bomba Patch Gospel K even includes a "map" of the game, a digital spreadsheet containing the main "customizable" elements like teams, leagues, stadiums and their "position" within the game file, indexed with an identification number. The pedagogical aspect of Bomba Patch Gospel K's social media is so evident that Kelfany once posted a 53-minute video class, recorded on Google Hangout, in which he commented on the kit (home team and away team jerseys) made by one of the page's followers, by that individual's request. In the video, he opens the files sent by this follower on Photoshop and shows the mistakes and how to correct them in order to improve customization. This kind of commitment to open-source software sharing and inter-generational mentorship definitely sheds some light on Kelfany's criticism of GeoMatrix's policies.

On the other hand, the Bomba Patch União PI comes from the homonymous city in state of Piauí, commonly abbreviated "PI." Three friends—Leonardo, 22, Wyllame, 24 and Diego, 26—are behind the patch, and the youngest jokingly boasts about their trajectory via Facebook Messenger:

[...] we have always liked Bomba Patch and the football games for PS3, like PES and FIFA, never pleased us [...] we were going to create one just for ourselves, because we hated the [other Bomba Patches from street vendors] we bought, with messed up graphics. Everything was poorly done and lagged. Then, we started doing ours and we saw it was getting really good, so we decided to share it with the rest of country. And from that first one we already became a sensation.²⁰

There are similar stories being told across the web and social media as a sort of Bomba Patch movement seems to be growing. Hubs like the YouTube channel, blog and Facebook profile for The Ruivo (meaning "redhead" in English), which has 4,000 likes and a little over one million views, promote retro gaming in general and PS2 mods specifically. Ruivo encourages these hacker-players to send their creations and later records gameplay videos critically evaluating them. The community converges around these spaces, playing and producing new patches and eventually collaborating, as was the case with União PI and Gospel K. Leonardo says: "Gospel [Kelfany] creates the jerseys. That is his specialty, he makes the best ones. We update the squads [current players and overall ratings]."²¹ This type of collaboration is a key aspect of modding communities in the global south, as it offers mentorship and competence development opportunities that are often otherwise lacking. Inspired by the games they like, people from different parts of the country, and most importantly different

- Apperley's chapter "Eurocentric Values at Play: Modding the Colonial from the Indigenous Perspective," in this volume.
- 20. Leonardo from Bomba Patch União PI, personal communication, 19 January 2016.
- 21. Ibid.

^{18.} Available in Portuguese at http://bombapatchmineirao.blogspot.com/2015/11/bomba-patch-gospel-k-especial-classicos.html.

^{19.} Kelfany, Blogspot personal profile, https://www.blogger.com/profile/14217809495392374004; for another perspective on this topic, see Rhett Loban and Thomas

infrastructural challenges, are able work together, like the historically poorer Northeastern city of União, in inner Piaui, and São Gonçalo, in the metropolitan area of Rio de Janeiro.

Finally, beyond these structured groups, there are some individual tinkerers and hackers that take on modding as a pastime or hobby, since it can be as fun and challenging as actually playing. Game scholars like Ian Bogost,²² Stuart Moulthrop,²³ Alexander R. Galloway²⁴ and others have analyzed the configurative or action-oriented nature of games. Eric Zimmerman take this one step further with the concept of gaming literacy, a skill set that promotes cognitive capabilities and influences behavior.²⁵ This helps us see configuring and tinkering with games as not just a nontrivial effort in media, but something that is applicable to other areas of life.²⁶ Zimmerman explains: "Gaming a system, means finding hidden shortcuts and cheats, and bending and modifying rules in order to move through the system more efficiently— perhaps to misbehave, but perhaps to change that system for the better."²⁷ By stating that a "tinkering logic" embedded in modding practices transcends the realm of video games and entertainment, this chapter focus on the immediate educational potential of technological appropriation and on a broader spectrum the political implications of self-definition and representation, access to information and culture and so on.

Straight out of the tiny town of São Miguel do Guaporé in the state of Rondônia, DJ Jacaré (meaning "alligator"), the moniker of Hemersom Rodrigo, started out modding very "casually." He was just 21 years old when we talked, and had begun modding four years earlier, as a high school freshman: "I just watched a bunch of videos on YouTube. And I had my PS2, however continuing to buy games was too expensive. Then, I had internet installed at home, watched the videos and acquired a taste for modding," Hemerson recollects.²⁸

Again, the precariousness of infrastructure faced by many Brazilian modders deserves attention—it was only in 2013 that Hemerson gained internet access at home, and while it was far from an ideal connection, it still made significant difference in his life. There is a point to be made here about games as entry points to broader digital literacy, which is nourished by the cognitive skills and technological mediation provided through direct contact with video games as digital objects and the creation of spaces of affinity using the tools provided by this medium.²⁹

Gaming and digital literacy often go hand in hand, relying on the non-written languages of the audiovisual spectrum. This can be seen by the extensive use and production of video classes and tutorials by the Brazilian player-hackers examined here. This visual performativity of the image combined with intervention and configuration skills are in high demand in these customizations. There is an aesthetic quality or mediation to learning methodologies employed in digital platforms that is manifested in a number of ways.

Given the procedural nature of these manifestations, games' algorithmic functions³⁰ converge with the computer to result, according to James Paul Gee and Elisabeth R. Haynes, in a greater degree of

^{22.} Ian Bogost, Unit Operations: An Approach to Videogame Criticism (MIT Press, 2006).

^{23.} Stuart Moulthrop, "From Work to Play: Molecular Culture in the Time of Deadly Games," in *First Person: New Media as Story, Performance and Game*, eds. Noah Wardrip-Fruin and Pat Harrigan (MIT Press, 2004).

^{24.} Alexander R. Galloway, Gaming: Essays on Algorithmic Culture (University of Minnesota Press, 2006).

^{25.} Eric Zimmerman, "Gaming Literacy: Game Design as a Model for Literacy in the Twenty-First Century," in *The Video Game Theory Reader 2*, eds. Bernard Perron and Mark J. P. Wolf (Routledge, 2009).

^{26.} Espen J. Aarseth, Cybertext: Perspectives on Ergodic Literature (John Hopkins University Press, 1997).

^{27.} Zimmerman, "Gaming Literacy," 25.

^{28.} Hemerson Rodrigo, personal communication, 19 January 2016.

^{29.} James Paul Gee, Literacy And Education (Routledge, 2015).

^{30.} Lev Manovich, The Language of New Media (MIT Press, 2002).

problem-solving aptitude.³¹ Needless to say, this is a skill that can be very useful when dealing with defective infrastructure. Having launched eight Bomba Patch releases so far and by now established his own network, Hemerson jests:

Dude, people say I am a wizard [laughs] My PC has 2GB RAM. My internet connection is 512 kbps. If I run too much software it crashes, but it's never happened with games. The crashes are more frequent with these two programs, Game graphic studio [an editing application] and PCSX2 [a PS2 emulator]. They are a handful, I can't run anything else.³²

The informality of online lingo aside, Hemerson shows a particularly poor written register in the conversations on Facebook Messenger—he exhibits deep deficiencies in his usage of Portuguese, in sharp contrast to his natural aptitude in other areas. In a conversation that took place in 2016, he praised his own skill, boasting, "I quickly learned the skills to mod games. I started doing my own versions after watching only three videos. I downloaded the necessary software and I am now on my third year making mods."³³ These learn-on-demand methods certainly do not replace formal training and education, but based on the principles of convergence of media and a booming contemporary visual culture, they need to be better understood. Self-tutoring by video has become an increasing trend especially among the youth and these practices can inform us, among other things, about the attention span of these audiences, their multitasking skills, information gathering and organization in audiovisual and text-based media.

The accessibility of digital interfaces makes learning easier by better "translating" or adapting content to an interactive, visual interface. This platform may not make a good fit every kind of discourse, such as a complex lecture with deep and abstract philosophical concepts, but an interactive format and aesthetic presentation are a logical fit with this mode of learning-on-demand. Nonetheless, as it is not our intention to romanticize poverty, it is important to recall that these initiatives are so deeply scarred by precariousness. Hemerson reports several problems due to his infrastructure situation, "4 GB RAM would solve most of my problems. Video and music editing software like sound forge and sony vegas give the hardest time. I already lost track of how many projects crashed when they were almost done."³⁴

In this environment, users come up with other initiatives like the "personal patch," and lessexperienced players ask veterans for custom-made mods, since most of them are willing to pay for them rather than having to go to the trouble of learning how to do it themselves. Even in his brief "career," Hemerson was approached by other players with such requests:

I posted my first release in my blog, I didn't even know how a blog worked [...] it had only 200 downloads. After that I stopped doing it. I took a six-month break and only updated the mod for myself. Then I met this guy, a year or so ago. He owns a website with games and programs and stuff. He asked me for a personal patch with the page URL inside the mod. It got more than 1,000 downloads! I kept perfecting my skills. Fixed the blog. I started doing really cool image effects and then I was in this "market." I got to charge a guy R\$40 (US\$13) once and about four others bought my mods as well.³⁵

Again, strategies for the circumvention of precariousness bring about novel initiatives and a degree of technological aptitude and methods in less-than-ideal socio-political and economic circumstances.

- 32. Hemerson Rodrigo, personal communication, 19 January 2016.
- 33. Ibid.
- 34. Ibid.
- 35. Ibid.

^{31.} James Paul Gee and Elisabeth R. Hayes, Women and Gaming: The Sims and 21st Century Learning (Palgrave Macmillan, 2010).

When asked once more if people were really inclined to pay for a personal patch, since he uploads Bomba Patch Jacaré online for free, the DJ listed the several elements that can be modified and thus weigh on the decision to have an exclusive mod:

I charge up to R\$10 (US\$3.20) for a personal patch if there's not much to be done. With more, the price goes up. You see, there's these opening images, cutscenes, they look like advertisements. So, I change that. The background image too. It's usually a famous player like CR7 [Cristiano Ronaldo], Neymar or Messi. I switch this for the picture of a place, a store [...] or just a name, like a LAN house [cybercafé] or the buyer's name. Picture this: a person calls his friends to play at his house, the game starts and the person's name is there on the screen. I only had one order from a website owner, it's usually for playing at home.³⁶

Mods of football games were selected precisely for this factor of inclusivity and personalization. In Brazil, *PES* attracts a wide range of players, from police officers to delivery personnel, college graduates to high school dropouts. In the context of the global south, this personalization also indicates an inclusion of such "subaltern" voices to the larger discourse of mainstream video games. Similarly to the 12-year-old Palestinian girl playing *Special Force* (Hezbollah 2003) mentioned in the Introduction of this anthology, Brazilian players used the technology to feel closer to and better represented in globally distributed games.

Therefore, when examined closely, seemingly trivial entertainment practices evidence innovative intricacies as well as, we would argue, a strong political bias, even if at first glance they do not present themselves as intellectually or educationally significant.

CONCLUSION: THE POLITICAL DIMENSION OF PES MODDING IN BRAZIL

Through an analysis of this community of player-creators' bonds created around the *PES* franchise, we have aimed to portray the place of entertainment practices in the rearranging of space and power relations.

These stories of appropriation often go against industry mandates of standardization and quality that determine what is considered outdated or out of fashion, enjoyable or passé. Thus, the demands of the market and one's infrastructural background define what knowledge is and what being knowledgeable means, and therefore what can or cannot be done. Increasing digital literacy means increasing one's participation in contemporary culture and global networks of communication and commerce, in spite of the many challenges faced, for example, by software modders in the global south. This is how modding becomes epistemic disobedience.

In a precarious environment, where scarcity calls for innovation and the grassroots development of computational/media literacy, networks of collaboration and mentorship can emerge. These are less-than-optimal solutions to the deeply embedded social and economic problems of Brazil, and certainly, video games are not going to bring about the political and educational changes the country needs. However, tracing the untold history of this type of digital-savvy tinkering is key to unfolding video games' influence and potential in these areas. As an invitation to mobilization, the Bomba Patch mods and similar initiatives have, at the very least, allowed for the blossoming of a politically-oriented call for participation through affective technological innovation.

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