CULTURAL CODE

Video Games and Latin America

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Experts in Latin American literature acknowledge that the Boom was the result of more than just the talent of its most well-known authors, and this recognition began when these novelists' works first hit the market. In his personal memoir of the period, Chilean novelist José Donoso emphasizes that the Boom was not only defined by a number of high-quality novels from throughout the region, but was also shaped by political events like the Cuban Revolution along with the influences of publishers, journal editors, literary prize juries, agents, and critics, and above all by the accusations of the Boom's detractors.[1] With the benefit of several decades of critical distance, Raymond Leslie Williams was able to clearly synthesize the strands contributing to the Boom, which he describes as "the result of the fortunate confluence of numerous individuals, institutions, and circumstances, among them the literary agent Carmen Balcells, the appearance of a brilliant translator (Gregory Rabassa), the Cuban Revolution, publishers Harper and Row in the United States and Seix Barral in Spain, the rise of international Latin Americanism as an academic discipline, and the publication of the literary magazine *Mundo Nuevo* in Paris."[2] For Jean Franco, the Boom represents all of this and also an exercise in exoticism, with its characteristic magical realism constituting "an appropriation of racial difference" and "an invigorating bath in Latin American originality" that made the movement so attractive to regional and international audiences alike.[3] Descriptions such as those of Donoso, Williams, and Franco highlight the extent to which the Latin American Boom consisted of strands of influence from many different sectors of society that came together to produce an explosive socioliterary phenomenon.

Today, a new confluence of conditions is setting the stage for another period of explosive growth, this time in game design. Again, this should not seem altogether surprising to those familiar with the subject. Several years ago, Aarseth predicted a global boom in "game auteurism" in the 2010s, anticipating games with unique visions "that emerge from strong, talented individuals as a conscious reaction to an industry where production costs, 'sequelitis' and licenses dominate the field."[4] In recent years, press and industry sources across Latin America have referred to rapid growth in the burgeoning game industry precisely as a "boom,"[5] and Argentina's Ministry of Economic Development cites the growth in the popularity of casual games as the basis for "the boom in the sector [of game design] over the past several years."[6] Like the Latin American Boom in literature, this explosive growth in game development and design is the result of a number of intertwining factors: a global consumer base, support from international organizations, enterprises, and individuals, widespread prominence in the news media and among communities of interest, translation and localization efforts to gain exposure in new markets, and a shared investment in the region's political and creative future. Though the contemporary context is of course different than the situation of Latin America's novelists a half century ago, knowledge of the multitude of factors that contribute to explosive growth in the field of cultural production helps illustrate the very real meaning of *potential* with regard to the future of Latin American game development.

Obstacles and Affordances to Latin American Game Design

The history of game development in Latin America is remarkably rich, especially when one takes into account the number of significant obstacles that the region's game designers have had to overcome in order to bring their work to light. Chief among these obstacles are: (1) lack of official support and governmental incentives for the game industry; (2) scarcity of education and training programs in software and game design; (3) widespread "digital poverty,"[7] especially in rural areas, and slow development of national and regional audiences; (4) a shortage of experienced game designers capable of providing guidance to younger startups; and (5) the demand to adapt local practices to global expectations. Unlike those working in game and software production centers like Silicon Valley or Montreal, Latin American game designers have historically produced their work in an atmosphere of relative isolation, with most early developers in the region working with small groups of friends, family, and associates and figuring out the process of putting games together from scratch.

And in spite of these obstacles, the region has produced the type of creative output that demonstrates the particular affordances pertaining to Latin American game design. Distance from the centers of the game industry may partially account for creative and outside-of-the-box game design such as the surreal gamescapes of *Zeno Clash* (2009) (figure 3.1) and *Rock of Ages* (2011) from Chile's ACE Team, or *Mr. Patch* (2014), a pioneering game by Paraguayan designer Gabriela Galilea that uses eye-tracking technology to provide sufferers of strabismus with ocular exercises that ultimately help correct their condition.[8] Breakthroughs like these provide a vision of what the Latin American game design industry can be, if we pay attention to focal points like those identified by Marisca in his analysis of the Peruvian game industry, including "building a critical mass of developers and studios, increasing the quality of their production and process and engaging international markets, and raising the industry's visibility and public profile in the local context."[9] Indeed, these tendencies will be of increasing importance to regional game development in the near future.

As Latin American game development has come into existence over the last several decades, it has been enabled by affordances including: (1) unique creative visions working both inside and outside of conventional cultural motifs; (2) the support of a community of like-minded game designers through events like game jams as well as more or less formally arranged creative collaborations; (3) the rise of casual games as a major focus in the global games industry along with an increasingly large local gaming audience; (4) a growing presence of industry

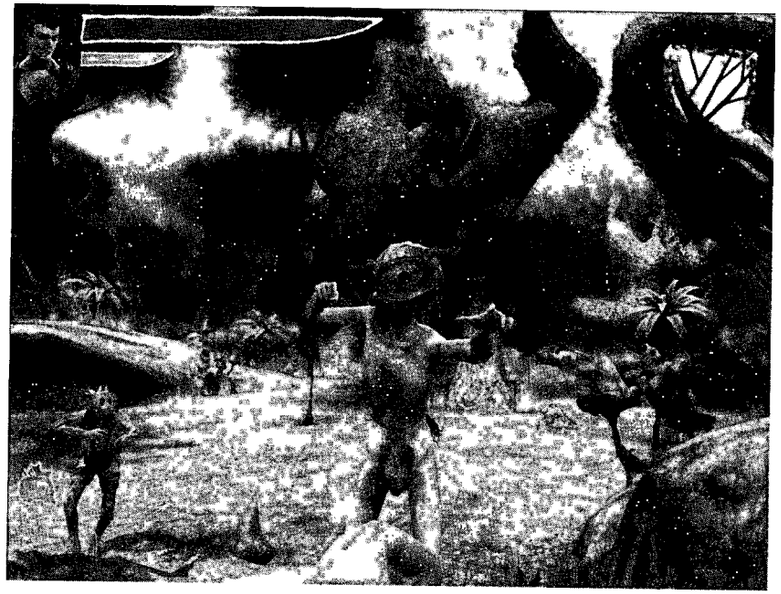

Figure 3.1
Zeno Clash (ACE Team 2009)

incubators and events designed to assist startup designers in getting on their feet; and (5) increasing efforts by policymakers to incentivize and promote the game design industry as an area of major economic potential. Together, these factors have contributed to the development of a vibrant and flourishing game industry that is operating in every single country in Latin America today, though taking full advantage of this potential will require considerable expanded efforts in the coming years.

When it comes to global industries like game design, it is frequently assumed that the common culture of the industry defines its development more significantly than national or regional contexts. Martín-Barbero has suggested that the circulation of contemporary cultural products has created transnational "cultures without territorial memory, or where place takes second place."[10] And even while the practices of these deterritorialized subcultures—the global culture of the game industry being one example—can be considered placeless, they are nonetheless determined in other ways by national context. The nation remains a significant frame for looking at game design because of crucial factors determined at the national level: each country has independent taxation and trade policies, educational and industrial infrastructure, and economic impediments and incentives for software development. This means

that the way a given governing administration defines the country's posture toward the game industry can significantly impact the development of the creative industries at the national level, above and beyond the tendencies reflected in regional or global data.

An analysis of new media production in Latin America offers innumerable insights on the ways global cultural industries are developed at the local level. In his exploration of software development in the "wrong place" of Rio de Janeiro, Brazil, Takhteyev builds on Giddens's concept of *disembedding*, explaining that the cultural assumptions inherent in practices and knowledge produced at the dominant "centers" are simply expected to be incorporated into the development of those practices by "peripheral actors."[11] In Takhteyev's words, "central actors can 'disembed' their knowledge using the simplest strategy available, leaving others the hard work of reembedding it at the periphery."[12] Practices at the periphery, on the other hand, must be "actively disconnected" from the local context in order "to make reembedding at the center a trivial task," and therefore the needs of local users are subordinated to global norms.[13] Moreover, as Hjorth has explained, by "investigating a context outside the well-known and frequently cited locations such as the US," we can gain an appreciation of how each location within the global games industry incorporates particular practices specific to its own local technoculture.[14] Marisca also highlights the significance of national context in his exploration of how "[s]pecific national game industries have grown out of various entanglements with parallel or overlapping industries," juxtaposing the Peruvian industry's "informal and experimental origins" to the US industry's roots in computer science or the Japanese industry's roots in the local toy and animation industries.[15] These analyses allow us to perceive the impact of national and cultural factors on game development, showing how the seemingly "leveled" playing field of the globalized software industry is in fact quite asymmetrical.

Latin America's place within the geography of the global game industry is shifting rapidly, bringing about an expansion in the creative and economic potential of video games throughout the region. After winning the Nuovo Award for his simple yet innovative game *Storyteller* (2008 alpha, 2012 beta) at the Independent Game Festival in San Francisco in 2012, Argentine designer Daniel Benmergui offered a note of inspiration to his fellow Latin Americans in the game industry: "I'm sorry about this, English speakers," Benmergui explained, "but, quiero mandarle un saludo a todos los hermanos latinoamericanos e hispanoparlantes para que sepan que, digamos, estoy yo acá, entonces, acá puede estar cualquiera. ¡Incluso nosotros!" ("I'd like to send a shout-out to all my Latin American and Spanish-speaking brothers and sisters so that they know that, you know, I'm here, so anyone could make it here. Even us!")[16] Benmergui's speech was a nod to the substantial but often overlooked Latin American presence in the game industry, a recognition of the region's impact on the field of game design as a whole. He was awarded for the creative potential displayed in *Storyteller* and his other games (figure 3.2). These include *Today I Die* (2010), a Flash animation game that requires the player to rearrange

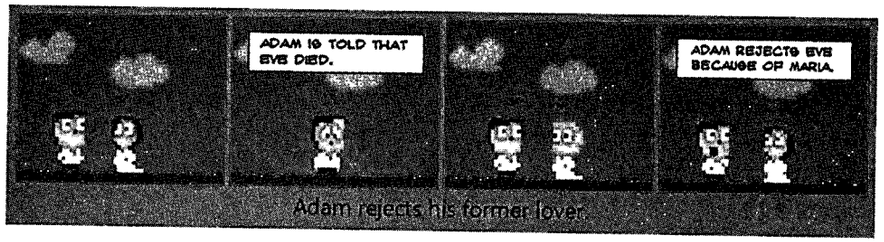

Figure 3.2
Storyteller (Daniel Benmergui 2012)

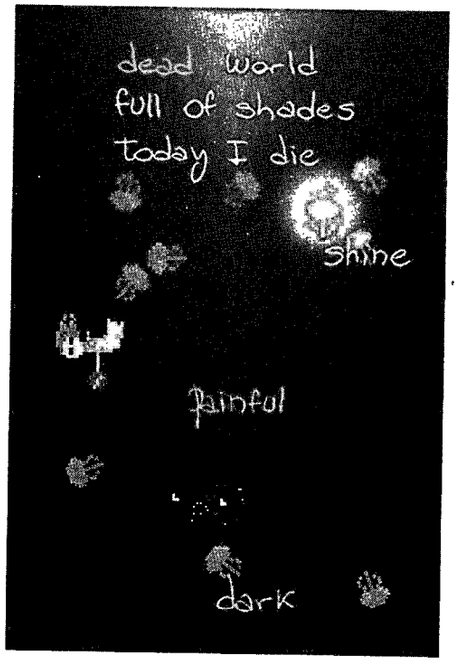

Figure 3.3
Today I Die (Daniel Benmergui 2010)

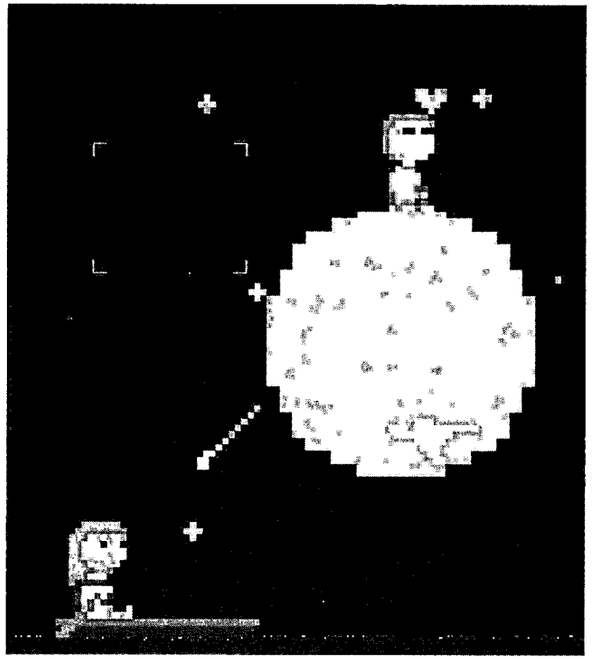

Figure 3.4
I Wish I Were the Moon (Daniel Benmergui 2008)

the words within a poem in order to change the game's tone and narrative from a dark and melancholy to bright and hopeful (figure 3.3), as well as *I Wish I Were the Moon* (2008), in which the player generates a series of simulated dramatic scenarios through manipulation of simple graphic *sprites*, or functional animated objects (figure 3.4). Benmergui's award-winning games demonstrate how an increasingly robust Latin American game industry is making its presence known on the global stage.

There are those within the game industry who believe that such a thing as a "Latin point of view" exists, but few would express it in such a simplistic manner. Colombian journalist Nicolás Rueda argues that representing one's cultural perspective does not mean just making games about the drug trade or other well-worn national themes: "It's not about making games that portray a particular version of reality, just the opposite. It's about using everyday life in Latin America to infuse a game with its own style."[17] Rueda's argument will surely ring true with anyone who has read "The Argentine Writer and Tradition" by Jorge Luis Borges, which proclaims that "either being Argentine is an inescapable act of fate—and in that case we shall be so in all

events—or being Argentine is a mere affectation, a mask."[18] Borges's essay is a declaration of war on the literary nationalists who "pretend to venerate the capacities of the Argentine mind but want to limit the poetic exercise of that mind to a few impoverished local themes, as if we Argentines could only speak of *orillas* and *estancias* and not of the universe."[19] This struggle between national flavor and universal relevance is certainly nothing new, but it is taking on different dimensions in light of the particular demands faced by contemporary Latin American game designers.

Like Benmergui in his acceptance speech, some Latin American game designers produce their work at least in part to emphasize the growing potential for regional game design. This reflects a desire to support and build the region's game industry, as well as to declare a national presence on the global territory of game development. In such an environment, local and global concerns can compete for priority. For example, when developing *Breach* (2014), a multiplayer tower defense game for Android and iOS, Puerto Rican studio Space Rhino Games set out with a "100 percent Puerto Rican" development plan, but had to turn to assistance from New York in order to secure sufficient funding to complete the project—due in part to factors beyond their control, including investors' negative perceptions regarding industry talent in Puerto Rico.[20] Still other designers use national culture as the foundation for their games' content, like Peru's Pariwana Studios, whose designers explain that their aim is to produce games that travel "from Peru to the world" by "using Peruvian cultural heritage as our main asset."[21] So in spite of an enduring perception of the video game industry as a phenomenon of global homogenization, there are still many who maintain the importance of looking at their portion of the game design industry as particularly Puerto Rican, Peruvian, or Latin American.

Game designers, of course, must always work with forms of cultural representation that are abstracted from the realities to which they allude, and this invariably involves a process of simplification and reduction. But there are different ways of portraying culture in video games, depending on the decisions made by game designers according to their expectations of their products' audience. It is not the same to represent national culture in a game designed primarily for national consumption—say, the Argentine card game simulator *Truco* (Ariel and Enrique Arbiser 1982; to be discussed further), which is loaded with in-jokes and a vast array of cultural signifiers—as it is to represent national culture in a game designed primarily for international consumption, for example *Brasil Quest* (Embratur 2012), a casual game sponsored by the Brazilian Tourism Board that was developed to introduce a global gaming audience to the twelve host cities of the 2014 World Cup, reducing those cities to their most globally recognizable icons. Many of the games that most successfully represent traditional cultural motifs do so with an eye to their own national audience as at least part of the potential consumer base, compelling their designers to "keep it real" for the in crowd as well as outsiders. These games succeed where others have failed because they treat culture not as "something static

and clearly bound, with precise beginnings and ends" but as "messy and permanently under redesign, in constant collision and articulation with other cultures."[22] Examples include games like those highlighted in Marisca's study, *Inka Madness* (Magia Digital 2013) and *Guacamelee!* (Drinkbox 2013), as well as *Lucha Libre AAA: Héroes del Ring*.

But at the same time, there is a strong current of game design that eschews the local in favor of the universal, making games that are Latin American in spite of, rather than because of, their content. Examples abound, and include the aforementioned *Zeno Clash*, a surreal fantasy-world first-person fighting game for consoles and PCs, or *Kingdom Rush* (Ironhide 2011), a fantasy-themed castle-defense mobile game replete with tiny ogres, knights, and flying dragons (figure 3.5). The latter has proven an enormous commercial success for Uruguay's Ironhide Studios, which got its start with *Clash of the Olympians* (2010) (figure 3.6) and has since released the successful sequels *Kingdom Rush: Frontiers* (2013) and *Kingdom Rush: Origins* (2014) (figure 3.7). On their surface, games like these would seem to have little to do with Latin America—their designers, like Borges, see the universe as their workshop. This has both cultural and economic implications, as developers choose between universal appeal and local specificity for a number of reasons. Bolivian designer Carlos Olivera expressly sought to reach US and European

Figure 3.5
Kingdom Rush (Ironhide 2011)

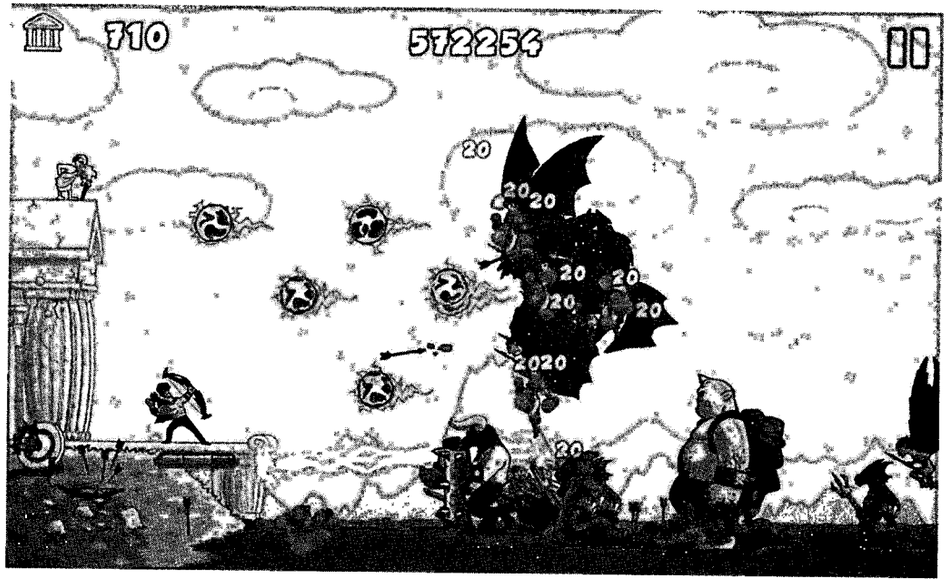

Figure 3.6
Clash of the Olympians (Ironhide 2010)

audiences with *Hooligan Alone* (Island of the Moon 2014), in which the player sneaks around as a rival soccer fan avoiding trouble from opposing hooligans and officers of the law while traversing riots in the opposing team's home neighborhood. Olivera explains that his Bolivian design team focused on quality, design, and presentation in order to make it an appealing export, modifying game design according to the anticipated expectations of that external market.[23] In this way, to paraphrase Takhteyev's argument regarding software production at the periphery, game designers operating in Latin America are required to produce work disembedded from their cultural environment, while embedding into their practices the norms defined in the centers of the creative industries. Clearly, Latin American games like *Hooligan Alone* or *Kingdom Rush* do not need to show any "local color" or "Latin flavor" in order to be Latin American. Content notwithstanding, these are Latin American games due to the context of their design and the origins of their designers, and they are also demonstrations of how culture shapes game development at every turn.

Though innovative game design has existed in Latin America virtually since the onset of the video game medium, it has generally lacked visibility and critical mass. As recently as 2002, Jairo Lugo, Tony Sampson, and Merlyn Lossada argued that there was "little opportunity to create an indigenous games industry" in Latin America, concluding that it was "improbable

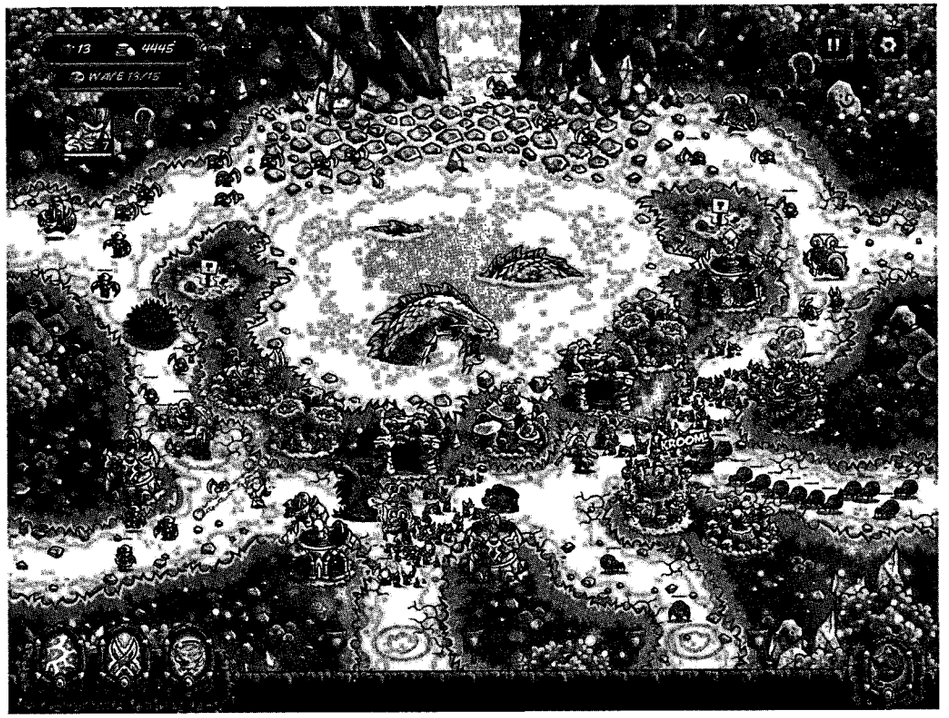

Figure 3.7
Kingdom Rush: Origins (Ironhide 2014)

that the region would have the opportunity to offer its own version of *Space Invaders*—as the television did with the *telenovelas*—because the market and the industry have already been colonized and the economic actors appear to be from another planet."[24] The passing of several years and a growing corpus of documentation on game design in Latin America show us that by the time of that article's publication, there were already a great many hackers, programmers, and game designers actively at work on these types of projects in the region. However, the authors' cautious conclusion is understandable from the standpoint of an economic environment characterized by 1990s neoliberal free trade agreements like NAFTA, which allowed the game industry and a vast array of other sectors of the business world to expand their manufacturing operations into Latin America, particularly in the US-Mexico border region. This is what Lugo et al. are referring to when they explain how companies like Microsoft and Nintendo have developed "a manufacturing-marketing model for video games in Latin America based on local assembly-lines, located in 'special' economic areas where the main components were

shipped from abroad with very little added value from the local industrial community," in a scheme "widely described in Latin America as the model of *Máquilas*,"[25] regional terminology for sweatshop manufacturing and assembly facilities aimed at increasing corporate bottom lines through outsourcing designed to exploit inexpensive foreign labor.

Over a decade later, the Latin American game industry is becoming less about máquilas and more about monetization. Estimated annual revenues for 2014 topped US$1 billion in Brazil and Mexico, respectively making them the eleventh and fourteenth highest-ranked nations in the globe for game revenues, in a region that produced over US$3 billion in total sales.[26] Official industry data from Mexico, one of the region's largest video game producers as well as consumers, reflect the scope of recent transformations: from 2004 to 2011, the Mexican national video game industry experienced average annual growth of 17.1 percent.[27] Phenomena like these are indicative of a sea change in the Latin American game industry over the past decade or so, making it necessary to reexamine the complex and varied terrain of regional game development, as Lugo himself would later suggest by calling for "a more nuanced analysis" that "attends to the specificities of Latin America's diverse media systems and their relation to global trends."[28] Indeed, since 2002 even foreign corporations like Microsoft, Sony, and Apple have begun to shift their operations in the region, increasing efforts to produce gaming consoles and consumer electronics for regional consumption rather than strictly for exportation to the United States and Europe. When Microsoft decided to start manufacturing 17,000 Xbox 360 consoles per week in Brazil in 2011, the company's primary focus was to make its products more attractive to local consumers: Xbox console prices dropped 40 percent in Brazil, subscription prices for Xbox LIVE were slashed, and the Xbox Kinect bundle brought the brand's motion-sensing technology to the Brazilian market for the first time.[29] This allowed the company to bring the price for an Xbox 360 down to R$799 (US$425), which in spite of being one of the console's highest price points worldwide, put Microsoft at a significant sales advantage over the PlayStation 3 and Wii, which were introduced at R$1,399 and R$999 (US$750 and US$535) respectively. These changes reflect a growing interest from the mainstream games industry in exploiting the potential sales base of Latin American console gamers, who now number nearly 200 million.[30]

Though each country's situation is distinct, the Argentine case is in many ways typical of the challenges and accomplishments of burgeoning national game industries in the region, illustrating the characteristic transformations that game design in Latin America has undergone over the past decade or so. Some seventy small- to medium-sized game design firms are currently operating in Argentina, creating 800 jobs and generating a combined US$90 million in annual revenues.[31] Between 2006 and 2008 alone, the proceeds of the Argentine national game industry increased by nearly 350 percent, while employment in the field rose more than 150 percent.[32] This meteoric growth has begun to stabilize but still indicates the development

of a strong national industry—from 2009 to 2010, proceeds and employment levels both grew an additional 40 percent.[33] As in other Latin American cases, game development is undertaken with an eye to the global market and the industry is heavily concentrated in the country's major urban center: three out of every four Argentine game design firms focus on foreign markets, and nearly nine out of ten are based in the capital city of Buenos Aires.[34] In 2010, some 70 percent of the games produced by Argentine designers were web games, with only about one in fifty titles produced for nonportable game consoles.[35] In terms of publication and distribution, many firms aspire to one day market their games directly to consumers, using the typical monetization strategies of free-to-play apps, which rely on in-game purchases and upgrades. However the prohibitively high amount of capital necessary to market a game directly to consumers means that most Argentine game designers (nearly four out of every five) make games that will either be sold to advertising agencies or second-party publishers.[36] Likewise, only one fifth of the games produced in Argentina are their authors' own intellectual property, and nearly 90 percent of the national industry's proceeds come from third-party services offered to foreign game publishers and advertising firms.[37]

On the whole, the Argentine national industry is growing steadily in the twenty-first century, but it faces significant challenges, which by and large are typical of other regional cases. Argentine game designers face a scant internal market that is deeply impacted by a high incidence of software piracy, a resultant high level of dependency on foreign markets, and elevated turnover and mortality rates for small firms—40 percent of companies surveyed in 2006 had ceased to exist by 2009—as well as scarcity of financing and capital for foreign travel and project development.[38] More than half of the country's design firms were established within the five years prior to data collection, and many of them stress the need to increase sustainability in the national industry in the years to come.[39] However even in the face of these challenges, the Argentine game industry's level of growth has been remarkable. While most Argentine industries have declined in earnings over the past several years, video games have enjoyed sustained growth that has also increased job offerings in peripheral industries like music production, design, animation, and software engineering.[40] The advent of casual games and online gaming is a boon to the national industry as well, with access to touch-screen mobile devices and social media increasing significantly nationwide.[41] Government policy has also encouraged the industry by offering game designers legal protection for their intellectual property, reducing income taxes, offering business financing, and eliminating fiscal barriers to exportation.[42]

The transformations to Argentina's national game industry, as well as its challenges and successes, are mirrored in cases across Latin America, with notable variations and exceptions. The typical national game industry in the region today is largely concentrated in the nation's capital, shows increasing signs of health and sometimes surprising rates of growth, but remains

dependent upon foreign markets and outsourcing rather than direct sales of unique intellectual property. Governmental policy and corporate support are increasing the Latin American game industry's sustainability, but it still faces high rates of turnover. Casual games are booming and audiences are expanding and diversifying as a result, but fighting piracy and building a sustainable national audience remain major concerns for national game industries. These factors provide a basic snapshot of the Latin American game industry today, but they do not reveal the historical roots of that industry. In order to fully understand the current state of affairs, we must go back to the origins of Latin American video game development.

Software Modification and Independent Game Development

As noted previously, the early history of game design in Latin America is sparsely documented and requires considerable effort to reconstruct, even partially. Various countries in the region have undergone successive waves of video game design starting by the early 1980s; but few enduring design firms were able to stand the test of time until the first decade of the twenty-first century. The early examples of Latin American game design that can be identified offer insights into the ways the region's up-and-coming software engineers and game designers were adding their own cultural perspectives into their games. A quintessential example is the 1982 game *Truco* by the Argentine nephew-and-uncle design team of Ariel and Enrique Arbiser (figure 3.8). A digital version of a popular traditional card game, *Truco* has been identified by the Argentine Video Game Association (ADVA) and other sources as the first commercial video game ever created in Argentina, and possibly in all of Latin America.[43]

In addition to using a card game beloved by the national audience, *Truco* appealed to Argentine players through the incorporation of local language and wordplay—it was perhaps most beloved by its audience for the way it incorporated the poetic national version of "trash talk" into gameplay, including taunts such as, "Si no me convidas con Cerveza, por lo menos ofreceme un Envido." ("If you're not going to get me a Beer, at least give me a Bluff") and fragments of the popular rhymes used by players of Truco, including, "Pa' pintar una pared/ Tuve que usar mameluco,/ y pa' ganarle a Usted/ tengo que hacerle algún truco" ("To paint a room/ it was the coveralls I picked/ and to beat you/ I'm going to have to pull a trick"), "Tengo apuro por ganar y no quiero padecer, Truco te voy a cantar para poderte vencer" ("I don't want to suffer and I'm in a rush to win, So I'll just call out 'Trick' and thus I'll do you in"), and "Un gaucho bajó del cielo/ en un plato volador,/ al pasar junto a una vaca,/ Real Envido le gritó" ("A gaucho on a flying saucer/ came down from the sky/ when he passed by a cow/ Royal Bluff he cried"). Best of all, when the player wins, the game's readout announces, in an ironic play on the human–machine interface, "Yo perdí ... es cierto/ pero puse calor humano ... / y vos

Figure 3.8
Truco (Ariel and Enrique Arbiser 1982)

parecías una fría máquina" ("I lost ... it's true/ but I gave human warmth ... / and you were as cold as a machine").

The Arbisers were pioneers in Argentine game design, going on to publish a number of other games from the early 1980s on in spite of the many limitations they faced. These not only included technical specs such as the limited RAM for memory and execution of design elements—they could only use three colors in addition to the background color at the time they wrote the program for *Truco*, for example—but also the difficulties presented by widespread unauthorized circulation of their work in the form of multiple pirated versions of *Truco* that were published and distributed at different points in the game's history.[44] Though their trajectory is singular and shows the way that each game corresponds to the particularities of its national context, similar pioneering cases were popping up in other countries throughout Latin America over the course of the 1980s into the early 1990s.

Like many early game developers, Brazilian electronics firm Tectoy (founded in 1987) made its business in part by adapting imported games like *Phantasy Star* (Sega 1991) and *Street Fighter II* for the national market. *Mônica no Castelo do Dragão* (*Monica in the Dragon's Castle*, 1991) was a modification of *Wonder Boy in Monster Land* (Sega 1988), in which "a neutral Wonder Boy

was replaced by Mônica, a very popular and charismatic Brazilian comic character."[45] In addition to adapting and localizing games, Tectoy was also the contractual manufacturer and distributor of Sega hardware in Brazil, giving the Japanese game company an official foothold in South America and allowing it to control 75 percent of the official Brazilian video game market by 1995,[46] far ahead of the international leader Nintendo, whose initial entry to Brazil had not come until 1993.[47] Tectoy was successful enough that they not only produced games for the national consumption but also exported localized versions of games to other growing South American markets. One example is the 1989 game *Chapolim x Dracula. Um Duelo Assustador* (*Chapulín vs. Dracula: A Frightening Duel*), a port of the game *Ghost House* (Sega 1986) that Tectoy had localized by replacing the protagonist with the famous Mexican television character Chapulín Colorado, also wildly popular in Brazil.[48] This sort of localization was an early outlet for the creative potential of game programmers in Brazil and elsewhere in Latin America, paving the way for the major cultural localization efforts of the global game market today.[49]

The case of Peru, like other national examples, parallels these Argentine and Brazilian models in significant ways. Marisca traces the roots of Peru's game industry to an early venture in *advergaming*, the 1987 game *Aventuras D'Onofrio*, developed by a local software firm for a promotion that allowed players to acquire the game by collecting and trading in ice cream wrappers.[50] But it is a collective known as the Twin Eagles Group, or TEG, that both Marisca and Luis Wong cite as the founding fathers of Peruvian game design in their respective academic and journalistic work on the subject. TEG, which was active between 1989 and 2013, started when sixteen-year-old Lobsang Alvites returned to Peru after a stint studying in Italy, where he had been impressed with the way an indie development scene had arisen "by creating demos and intros and distributing modified software done by hackers," leading him to wonder, "Why not do the same in Peru?"[51] TEG was a grassroots effort built from the ground up, with group members learning to "crack" and copy imported games by reverse-engineering software in order to manipulate its source code: "They observed how the software functioned on the level of memory in order to deduce how the changes they made to the running software altered the results on the screen, and then they assembled modifications like these until they got the desired result."[52] Eventually, Marisca notes, "[t]heir *cracking* started to get creative."[53] One example of this creative initiative is *Fútbol Excitante* (*Exciting Soccer*, 1997), a modification of the Super Nintendo game *International Superstar Soccer* (Konami 1995). *Fútbol Excitante* "was modified to include the teams and players of the local soccer league, which was of course well beyond the range of Konami's interest, but which made the game much more interesting for the local market than the nonmodified alternatives"[54] (figure 3.9). Thus *Fútbol Excitante* is an example of the ways the culturally rooted preferences of local designers and gamers have long affected regional video game development practices.

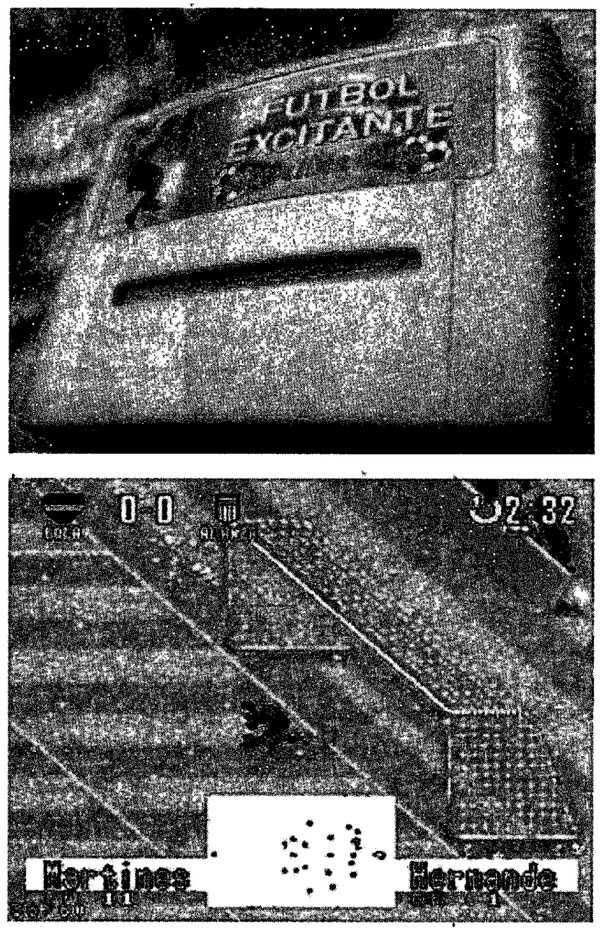

Figure 3.9
Fútbol Excitante (TEG 1997)

TEG also produced a number of other modified versions of existing games, including the first Peruvian game ever published and released to the European and US markets, *Gunbee F-99* (APC & TCP 1998), a vertical shooting game to which the TEG team had added a level full of references to Peru's geography and history.[55] They also produced an erotically themed Tetris mod called *Samba de Oruga* (*Caterpillar Samba*, 2003), which they self-published and circulated as a unique version of pay-as-you-wish shareware they called *pollada-ware*, or *chicken party-ware*, in reference to a Peruvian type of potluck dinner[56] (figure 3.10). The latter was made in an

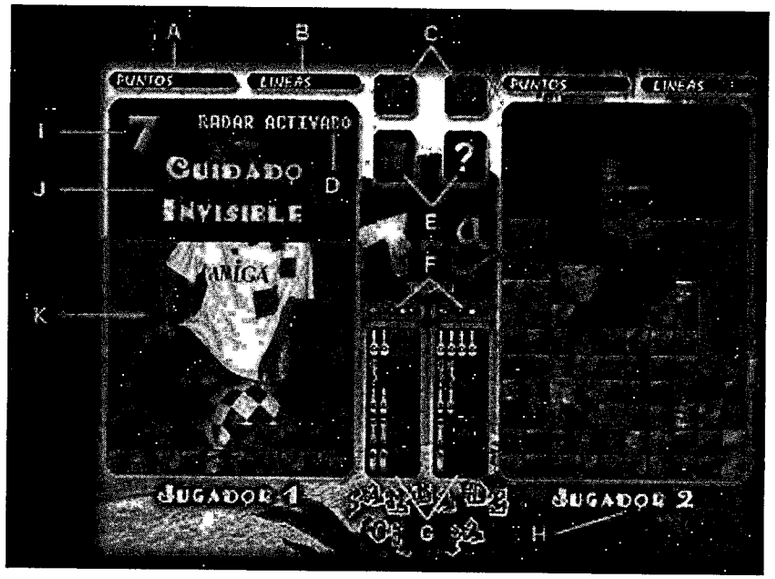

Figure 3.10
Samba de Oruga (TEG 2003)

attempt to pay legal fees incurred in a dispute over the political parody *The King of Peru 2* (2001), a fighting game in which the player chooses from a selection of characters including presidential candidates Alejandro Toledo, Alan García, and Alberto Fujimori. TEG had partnered with a local publisher, but that publisher was also deeply involved in local game piracy and turned to selling pirated copies of *King of Peru 2* without TEG's permission, ultimately contributing to the group's dissolution.[57]

Like Brazil's Tectoy as well as many independent game designers, TEG got their start in Peru through the practice of software modification, pointing to the need for a more nuanced critical understanding of this phenomenon, whose complexity exceeds the limiting label of piracy. The concept of software modification, or *modding*, refers not only to software piracy but also "to various ways of extending and altering officially released computer games, their graphics, sounds and characters, with custom-produced content," which "can also mean creating new game mechanics and new gameplay levels (maps) to the point where the original game transforms into a completely new title."[58] Commercial piracy is just one way that the practice of software modification has impacted the history of regional game development, and an often-misunderstood one at that. Piracy implies economic opportunism on the part of the pirating entrepreneur, but it has arisen historically from a lack of viable commercial

opportunities as major game manufacturers either ignored Latin America as a potential market, or saw their products' prices rise to prohibitively high levels due to high importation taxes. And in countries without the kind of established software development industry that might allow competent programmers a viable outlet for their craft, the environment was ripe for the development of creative products using the tools at hand, even if those tools consisted of software published by another party.

Should we be surprised, then, by the way Latin American game designers frequently used products created by others as a basis for their own production? No and yes. Jenkins sees modding as an example of "grassroots convergence" in which modders "build on code and design tools created for commercial games as a foundation for amateur game production," arguing that on the one hand "it should be no surprise that much of what the public creates models itself after, exists in dialogue with, reacts to or against, and/or otherwise repurposes materials drawn from commercial culture."[59] But on the other hand, and particularly in the Latin American context, we should be surprised that *any* type of software development was possible at this early stage given the obstacles in its way. The presence of significant pockets of modders throughout Latin America "gave the local community important opportunities while faced with the absence of formal circuits and consolidated industries."[60] In this way, modding has provided an education in software engineering through hands-on experience as well as access to a community with shared interests and knowledge.

In fact, rather than simple theft of intellectual property, I would argue that software modification is more accurately characterized as an act of "counterconsumption," to use Alberto Moreiras's term for "a particular mode of relation to consumption from within consumption" that involves "the preservation of a sort of residual subject sovereignty or local singularity."[61] Though software modification is fundamentally linked to practices of consumption, its relationship to those practices operates beyond the traditional norms of commercial exchange. Indeed many mods, such as those circulated by TEG in Peru, were made without concern for financial gain: true to their roots in Lima's community of Commodore 64 programmers, "TEG states that they did not receive any profit whatsoever (although on occasions they charged in order to compensate for the effort invested) and they incentivized the distribution of their software through the then-novel Bulletin Board Systems (BBS) and 'copy parties' organized by the group itself, where visitors could bring their own 5" floppy disks and take away copies of the latest software *cracked* by the group."[62] Similarly but in a different context, when Ecuadorian game designer Estefano Palacios recalls his start in game design at age fourteen, he remembers focusing not on the potential for profit but on the support of a community that fed upon a mutual interest in the inner workings of computer software and hardware: "We were just hacking our way, machete-style, through our own code ... trying to get cool experiences with the simplest tools."[63] These types of counterconsumptive practices show a greater concern for the

nurturing of the software development community, a stand-in for absent national game-design infrastructure, than for profiting personally or as a business. It has been noted that modding is a social activity in more than one sense, one in which the modder can exercise agency by authoring a new artifact, as well as contributing to a collaborative effort by a network of enthusiasts with shared interests.[64] In this sense, the "modding scene" itself, along with the software development community it nurtured, can be seen as the most significant products of the history of software modification practices prevalent in Latin America.

Both licensed mods like *Chapolim x Dracula* and unlicensed mods like *Samba de Oruga* or *Fútbol Excitante* represent an effort to culturally recontextualize games in order to increase their appeal for a specific consumer base. Nowadays, the game industry overall has come to embrace this type of modding, recognizing it as beneficial rather than harmful to its commercial interests and therefore opening up to ways of blurring the boundary between player and creator by encouraging the development of user-produced content.[65] As Jenkins has explained, "the modding process may prolong the shelf life of the product, with the modding community keeping alive the public interest in a property that is no longer necessarily state-of-the-art technologically."[66] In this way, modding benefits the game's publishers by providing a continual stream of content that keeps interest in their product alive, with little to no additional effort on their part.

Within the Latin American context, the phenomenon known as *MVP Caribe* (2007) offers a clear example of how modding can create this "prolonged shelf life" effect. The game is a modification of *MVP Baseball 2005* (EA 2005), which was publisher EA Sports' final entry in the baseball simulator series prior to the transfer of licensing for Major League Baseball video games to 2K Sports, after which *MVP Baseball 2005* seemed destined to fade into the repetitive history of sports game sequels. But then something unforeseen occurred: it was picked up by a community of mostly Venezuelan modders (with some help from Mexico and the Dominican Republic) who set to creating a "full conversion mod" of the game, one in which the entire content of the game is transformed in order to create a new overall experience for players.[67] In the case of *MVP Caribe*, this meant programming in a great deal of culturally and regionally specific content: "28 national baseball teams—the 16 participants of WBC [World Baseball Classic] 13 with their accurate uniforms, plus 12 teams that played in the tournament's qualifying round,"[68] as well as thirty real-life stadiums from Mexico, Puerto Rico, the Dominican Republic, Venezuela, and Cuba, each one introduced by renowned professional baseball announcer Oscar Soria, who agreed to do the voiceover work for free based on the mod's positive reputation in the world of Mexican professional sports.[69] Since it was first released in October 2007, *MVP Caribe* has been updated continually through collaborative volunteer efforts by the modding community that puts it together, with painstaking detail going into the accuracy of rosters and uniforms. The game has become popular enough to be considered the "unofficial national baseball video game in countries like the Dominican Republic, Venezuela, and Mexico," and has even earned official endorsements from the Venezuelan Professional Baseball League (LVBP) and the Mexican Pacific League (LMP).[70] In this way, *MVP Caribe* is representative of the massive potential for growth in Latin American game development.

Modding has had a major impact on Latin American game design, with projects like those described giving way more recently to local versions of globally popular casual games like *Flappy Quetzal* (Carlos Villagrán 2014) and *NicaBird* (Ninfusds Estudio 2014), two recent mods from Guatemalan and Nicaraguan designers, respectively, of the simple but addictive independent hit *Flappy Bird* (Dong Nguyen 2013) (figure 3.11). Notably, the makers of *Flappy Quetzal* and *NicaBird* distributed their work for free, highlighting a desire to contribute to a growing sense of potential in their national game industries, whether by "showing Guatemalans that programming is easy and that, if you want to do it, you can,"[71] or by demonstrating "that if we put our heads together, we Nicaraguans can do great things."[72] In the absence of sustained national game industries and the nurturing community of experienced designers, modding has provided a practical outlet for Latin American game developers as well as building the necessary networks of experience and collaboration for the eventual establishment of independent game

Figure 3.11
Flappy Quetzal (Carlos Villagrán 2014)

development companies. Software modification has historically been, and remains today, a significant starting point for a game industry that has contributed to an increasing body of collective professional experience and thus enhanced the industry's sustainability in the region.

Nurturing the Creative Ecosystem of the Latin American Game Industry

Given the creative potential that can be observed in the tradition of Latin American software modification, it is understandable that one of the longstanding goals of the region's developers has been the establishment of a sustainable professional community in game design and publishing. While most countries in the region are still in the process of nurturing the type of "technology, entrepreneurship and innovation ecosystems"[73] necessary for sustaining an enduring game design industry, interest in professionalization efforts is increasing among industry insiders and has even been expressed by high-ranking politicians. After having served two terms as president of the Dominican Republic, Leonel Fernández now concentrates in part on defining the country's "digital agenda," including the creation of incentives for the video game industry, emphasizing the need for games and simulations with "national content."[74] Martín-Barbero highlights the role of public policy in fostering the creative and economic potential of cultural production in the global economy, explaining that "cultural identity will continue to be narrated and constructed in new media and audiovisual forms, but only if the communications industry is held accountable to cultural policies capable of accounting for what the mass media take from, and do with, the everyday culture of the people."[75] Across Latin America today, legislators are taking positive steps toward the development of policies designed to foster growth and stability in the region's game industry, while game designers are putting the medium to use for an expanding array of purposes.

And indeed, governmental support—in the form of cultural policy designed to promote and protect the region's game producers—is an integral part of the formula for the consolidation of a sustainable and robust game industry in Latin America. Other factors include the establishment of a "game design culture" through a number of institutions of varying levels of formality—for example, game jams and design competitions offer young designers a chance to develop and showcase their skills, while state-run and private incubator and accelerator programs help bring out the full potential of fledgling startups. From Mexico to the Southern Cone, the number and quality of academic programs dedicated to software and game design has begun to increase in recent years as well, which along with official promotion of the industry through policy, publicity, and support for development will help to further establish the region's potential for game development.

Glimmers of a twenty-first-century boom in Latin American game design began to appear in the late 1990s and early 2000s, when the region's developers gained sufficient footing to achieve sustainability. As in other phases of development, these included, on the one hand, companies that focused on exportation and the global audience by adopting universally familiar cultural themes in games such as *Druids, the Epic* (2002), designed by Costa Rican game studio Teleport Media for Irish publisher CPoint Entertainment, or the internationally popular *Regnum* series, a massive multiplayer online role-playing game (MMORPG) from Buenos Aires-based NGD Studios. NGD established a presence relatively early on in Argentina, its founders now having produced a twenty-year body of work that includes *Regnum* (1995), *Regnum 2* (1996), and *Pentagon* (1998), as well as their first entry into the MMORPG genre, *Argentum Online* (2001), and their breakthrough worldwide hit *Regnum Online* (2007). On the other hand, there were studios producing games explicitly set in contexts particular to their national cultures such as the Argentine titles *Fútbol Deluxe* (Evoluxion 2004), a soccer management simulation that parlayed the nation's fervor for *fútbol* into one of Argentina's first major commercial successes, and *Malvinas 2032* (Sabarasa 1999), a turn-based strategy game in which the player commands future Argentine forces in an effort to take back the Falkland Islands from the British. *Malvinas 2032* was Sabarasa's first entry into the video game market, and the firm has since gone on to work on a broad range of projects including the Wii singing game *Atrévete a soñar* (*Dare to Dream*, Televisa 2011), the Nintendo DS title *SpongeBob Skate & Surf Roadtrip* (THQ 2011), and the iOS, Android and DSiWare game *Save the Turtles* (Sabarasa 2012) (figure 3.12). Studios such as these demonstrated that regional game design held serious potential for success on a global level.

The Brazilian developer Devworks Game Technology, founded in 1999, is another pioneering firm that has stood the test of time. Devworks also offers a clear snapshot of the transforming dynamics and recent changes in focus for the region's game industry. Having begun with console games that were published by Tectoy for the Sega Master System and Sega Mega Drive such as *A Ponte* (*The Bridge*, 2003) and the turbo elephant racing game *Corrida da pesada* (*Heavy Racing*, 2003), Devworks designers were working simultaneously on the development of the dozens of online and casual games that now dominate the company's attention. These included Devworks's own version of the card game *Truco* (2003), in this case one that "uses the Truco rules from Brazil," and which also set the record for most-downloaded game in Brazil when the company began freely distributing it for compatible mobile phones.[76] Today, Devworks produces dozens of online games as well as mobile games for the four most popular cellular platforms in Brazil, demonstrating the shifting dynamics of the game industry that can be observed across the region.

Another important trend contributing to the professionalization of the Latin American game industry is a growing number of gaming-related events, which are drawing ever-larger crowds throughout the region. These include major showcases like Argentina's EVA