



Videopresentación

Replicación y extensçao: The missing Latin American experience in global games scholarship

Replicación y extensçao: La faltante experiencia latinoamericana en el estudio de los videojuegos

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ABSTRACT

From their development in the early 1960s to their global prominence today, video games are an increasingly ubiquitous feature of entertainment culture. Likewise, video games and their supposed and actual effects on players feature prominently in public discourse and academic research. However, international scholarly outlets have largely omitted the Latin American experience with video games, despite the region's sustained and growing gaming culture—in some cases, with gameplay rates that outpace regions that are more commonly featured in scholarship (such as the United States). This essay presents as a broad call for scholarship that directly engages with Latin American gamers and gaming culture, as part of larger efforts to move media communication research towards authentic and meaningful global engagement.

Keywords: video games, media psychology, moral panic, functional media, WEIRD data



RESUMEN

Desde su desarrollo a principios de la década de 1960 hasta su prominencia mundial actual, los videojuegos son una característica cada vez más omnipresente de la cultura del entretenimiento. Asimismo, los videojuegos y sus efectos supuestos y reales en los jugadores ocupan un lugar destacado en el discurso público y la investigación académica. Sin embargo, los medios académicos internacionales han omitido en gran medida la experiencia latinoamericana con los videojuegos, a pesar de la cultura de juego sostenida y creciente de la región, en algunos casos, con tasas de juego que superan a las regiones que se presentan con mayor frecuencia en los estudios (como Estados Unidos). Este ensayo se presenta como una amplia convocatoria de becas que se relaciona directamente con los jugadores latinoamericanos y la cultura del juego, como parte de esfuerzos más amplios para llevar la investigación de la comunicación de los medios hacia un compromiso global auténtico y significativo.

Palabras clave: videojuegos, psicología de los medios, pánico moral, medios funcionales, datos WEIRD

y the start of the 21st century, video games had already become a global phenomenon—outpacing dominant forms of entertainment such as film and music. By 2020, global gaming revenues hit nearly \$180 billion USD (Witkowski, 2021) which was nearly double the \$100 billion USD estimated global revenues reported by the Motion Picture Association in 2020 (the first time the film industry had broke that ceiling, Rubin, 2020). Even in the face of the global COVID-19 pandemic, the video game industry shows no signs of slowing. As of this writing, the November 2022 release of the latest games in the Pokémon series (Scarlet and Violent) sold nearly 10 million copies in just three days (despite flaws and technical bugs in the game's initial release resulting in players rating the game with some of the lowest user rating scores in the history of the website Metacritic; Kimber, 2022). Video games transcend even generational boundaries, as seen in nostalgia-based gaming experiences (Bowman & Wulf, in press) and research into the social dynamics of gaming broadly, which often include family (Musick et al., 2021).

Such numbers could have hardly been predicted by the earliest innovators of the medium, including a group of electrical engineers working with a newly installed PDP-1 mainframe at the Massachusetts Institute of Technology. Their goal was quite simple: to push the limits of this new computing technology by creating a program that could (a) tax the computational resources of their machine, (b) create a unique experience each time it was used, and (c) engage users and onlookers in a fun and engaging way (Gratz, 1981). The result of their tinkering was a video game called SpaceWar! and the game was shared with other universities with similar facilities, inventing both the video game as well as the first shareware version of the same. Later developments include the creation of smaller gaming consoles compatible with home television sets (the work of Ralph Baer; see Mullins, 2014) and following, consoles capable of receiving different cartridges for playing a variety of games on the same device (the work of Jerry Lawson, see Joyner, 2019). Following an industry crash in the early 1980s, the Nintendo Entertainment System emerged as a global market leader, bringing with it the indelible cultural icon of Mario (created by Shigeru Mivamoto; Haubursin & Posner, 2017).

The growth of gaming has not gone unnoticed by players, parents, and policy-makers—each debating the relative cost and benefits of video games. Korucek (2012) details one of the earliest video game controversies in the 1975 release of *Death Race*—a video game in which players earned points for running over "gremlins" with a digital racecar, controlled with an authentic steering wheel and gas pedal system. This so-called "murder simulator" (a quote attributed to Gerald Driessen, a psychiatrist with the US National Security Council; see Bowman, 2015) fomented concerns that the interactivity of video games could serve as a direct causal agent in antisocial and dangerous behaviors. A few years later, articles in the 1980s took concern with the amount of time and money that teenagers were spending in public arcades, referring to them as "junk-time junkies" (Soper & Miller, 1983) based on anecdotal evidence. Unsurprisingly, we see similar debates in Latin America, with video games on occasion still targeted. Two prominent examples that made international headlines included the video game Bully (which presented as a satire on the social dynamics of secondary school), banned in Brazil (AP, 2008) precisely because "everything in the game takes place inside a school" and the resulting reply from developer Rockstar Games was overall dismissive of the ban, suggesting that it "would not have a material impact on the sales of this popular title." A few years later, officials in Mexican state of Chihuahua and the US border city of El Paso expressed grave concerns over the sale of Call of Juarez: The Cartel for featuring gun violence set in the modern era-concerns that the game was too closely aligned with ongoing gun violence in those regions, concerned that "we also should not expose children to this kind of scenarios so that they are going to grow up with this kind of image and lack of values" (as cited by Fahey, 2011).

Before too long, scholars joined these conversations with critical and empirical lenses to comprehensively understand video games and gaming culture. It is increasingly common to see video games scholarship published in peer-reviewed journals, both in more focused journals such as *Games & Culture* and *Game Studies* to broader journals such as *Journal of Media Psychology, Media Psychology*, and *Psychology of Popular Media* (from a psychological tradition), *Annals of the International Communication Association*, and *New Media & Society* (from a media studies and mass communication tradition), and *Entertainment Computing* and proceedings in Association of Computing Machinery conferences (from a human-computer interaction tradition)—the latter even developing the CHI Play conference focused on games and play.

Yet as will be seen in the following essay, the Latin American experience with video games has not been as well captured in existing international scholarship, which has resulted in a globally accepted narrative about gaming absent nuanced conversation and investigation. For example, the historical discussion of gaming above omits scenarios in which economic policies and presumptions about commercial viability excluded Latin Americans from the gaming market—from the enduring popularity of the Sega Master System in Brazil (Amaro & Fragoso, 2022; Villemor & Bowman, 2022) to the development of the unlicensed "NESA-Pong" in Mexico (Mexico Desconocido, n.d.). Indeed, even in global discussions about gun violence and video game play (see Chang, 2019), Brazil—at the time, the 13th largest gaming market-was ignored in the analysis (see correction offered by Shackford, 2019), presumably because Latin American gaming markets are not at the forefront of ongoing dialogues about the medium.

In reflecting on the growth of video gaming and games-focused scholarship, the following essay highlights where and how scholars can contribute to a deeper and more nuanced understanding of the uses and effects of video games by directly engaging with Latin American experiences.

GAMES ARE GLOBAL BUT HOW ABOUT GAMES SCHOLARSHIP?

Mirroring the broad growth of video games globally, we see sustained and continued growth in the video games segment in Latin America. Using the nine largest Latin American economies to illustrate this point¹, revenues more than doubled in the five-year period from 2017 to 2022, from \$1.87 billion to \$4.06 bil-

¹ As of this writing (IMF, 2022) and organized by gross domestic product (GDP): Brazil, Mexico, Argentina, Colombia, Chile, Peru, Dominican Republic, Ecuador, and Guatemala. Data from Venezuela (the 10th largest economy) was not available.

lion USD. This growth is estimated to grow to nearly \$6 billion USD or mor by the end of 2029. By users, the market continues to gain players, from an estimated 111.2 million in 2017 to over 160 million by 2022; again here, growth to more than 200 million layers is expected by the end of the decade. By comparison in the same region, video streaming had 71.6 million viewers and music streaming had 72.4 million listeners in 2022. When looking at gameplay frequency within nations, Mexico has the highest proportion of the population playing video games across all formats in the Americas (console-based, mobile, and others) at 91%, with Columbia and Argentina are next at 89%. These proportions are notably above the worldwide average of about 84% and substantially higher that gameplay in the United States (80%; Clement, 2022). It is unquestionable that gaming has diffused and grown with in Latin America in ways that mirror and even outpace other global markets (especially the US) that tend to get more attention from scholars.

Such growth is especially compelling when we consider historical barriers to video games in several Latin American regions. Several presentations at a recent symposium sponsored by the Thomas Jay Harris Institute for Hispanic & International Communication entitled "The Hispanic and Latin American Video Gaming Experience: Imagery, Industry & Audience" focused on this history.² For example (and noted earlier), both Amaro & Fragoso (2022) and Chauveau & Bowman (2022) discussed early efforts for SEGA to distribute their 8-bit Master System in Brazil, which was complicated by nationalist economic policies that required technologies to be manufactured in-country to avoid heavy import taxes. SEGA enjoyed early market penetration by coordinating with domestic manufacturer Tec Toy which resulted in sales that far outpaced their main competition in Nintendo-indeed, Brazilian customers can still purchase a Sega Master System today, and the console is regarded as the longest continually manufactured device in video gaming history.3 Import taxes again stifled Nintendo's engagement in the modern Brazilian gaming market, where the company again halted sales in 2015 to the region before returning in

2 The complete symposium program is online at https://www.depts.ttu.edu/comc/research/hihic/events/gaming/.

2020 to launch the Nintendo Switch (Holt, 2020). Zagal (2022) and Penix-Tadsen (2022) likewise discussed the proliferation of pirated game software and gaming consoles in several regions for which those technologies were either not available for sale or were prohibitively expensive (also see Horst, 2011). One of the more infamous of these was the aforementioned NESA Pong system manufactured by Novedades Electronicas, S.A. of Mexico. The console was a developed by engineer Morris Behar to replicate the popular Atari Pong machines that were not widely distributed in Latin America. By some accounts, the NESA Pong was so popular that Mexican gamers referred to even Atari's Pong as NESA Pong, much in the same way that "Nintendo" or "Play-Station" are used as common monikers for video games elsewhere (National Videogame Museum, 2016). Thus, while regional markets might not have started on the same footing as others, video games nonetheless persevered and penetrated as relevant and important sociotechnical and psychological experiences for millions.

LATIN AMERICAN-FOCUSED GAMES SCHOLARSHIP LACKING IN INTERNATIONAL JOURNALS

For readers of PanAmerican Journal of Com*munication*, it is likely no surprise that video games are popular in the region. Yet, a cursory review of the international scholarship on gaming de facto suggests otherwise. On the one hand, and especially from a humanities perspective, there are impactful example of Latin American games scholarship. Following similar calls to take more seriously game studies in Latin America (Penix-Tadsen, 2013) and the exceptional scholarship emerging from groups such as Digital Games Research Association chapters in Mexico (http://www.digra.org/ the-association/chapters/digra-mexico/), Brazil (http:// www.digra.org/digra-brazil/), and other Latin American regions (http://www.digra.org/the-association/chapters/ the-latinamerican-chapter-of-digra/), it is quite clear that games-based scholarship is growing in the region.

On the other hand, and on consultation with editors of leading international journals focused on media and communication, there is a less positive sto-



³ From retailer Americanas: https://www.americanas.com.br/busca/master-system-evolution?fbclid=IwAR1rCPH-5ms_NmwfKVXfJ9vSO6RbX3ITkMg0uErwidtRpNliNQfz_zmwojc

ry-Latin American scholarship is severely under-represented. For example, at the Journal of Media Psychology (where I current serve as Editor-in-Chief; five-year impact factor of 3.043), only two papers have been submitted from authors in the region (one from Brazil and one from Columbia) in the past five years, neither of which was published. From our colleagues at Media Psychology (five-year impact factor of 5.497), 18 manuscripts have been submitted from the region in the last five years (scholars in Argentina, Brazil, Chile, Columbia, and Mexico), with a single acceptance. In that same time frame, Psychology of Popular Media (2021 impact factor of 2.90) received three submissions during this time period (one each from Brazil, Ecuador, and Mexico) but none were accepted, and the upstart Technology, Mind, and Behavior has never received a submission from the region. For these journals, submissions tend to be in the several hundred per year-by example, Journal of Media Psychology receives between 200 and 300 submissions per year and publishes less than 10% of those; other journals listed above receive even more submissions, with similar (or even more strict) acceptance rates. There is clearly room for deeper and more meaningful representation from our Latin American colleagues, and I am eager to see scholarship from our Pan-American colleagues that broadens our understanding of the functional role of video games in the lives of their players. The current time is especially open to submissions, as journal editors (including myself) are already reconsidering biases in the current peer review system that could discourage colleagues from submission, including deprioritizing strict language and styleguide requirements on initial submissions and seeking out additional mentorship and financial support for the publication process itself. Regarding the former, there is growing support for "submit your way" manuscripts in which initial drafts are not required to meet journal guidelines and thus, authors are provided with feedback (including language and formatting feedback) as part of the revise and resubmit process—such a process helps greatly reduce biases that disenfranchises non-native English speakers or scholars not trained in specific academic communities (such as those reliant on the American Psychological Association formatting guides). Regarding the latter, journals such as *Technology, Mind, and Behavior* offer reduced rates for open-access fees, including waiver applications from colleagues who might not have access to publication budgets. Another barrier that could be addressed is a lack of editorial board representation among Latin American scholars, which editors (such as myself) play an active role in shaping (see COPE, 2021). Indeed, scholars such as Goyanes and Demeter (2020) found that in analysis of communication journals, geographic diversity of editorial boards is correlated with a diversity of submissions to those journals.

A NEED FOR NON-WEIRD DATA

Discussions above are part of a broader call within the social sciences that recognizes the limitations of our theory and scholarships due to our over-reliance on WEIRD data—research participants from White, Educated, Industrialized, Rich, and Democratic nations (Henrich et al., 2010). WEIRD data has resulted in knowledge claims about the functional role of gaming to be unhumble, as we (either implicitly or explicitly) make claims about "all gamers" based mostly on a subset of the global gaming population. Although some scholars push back on a potential fear that WEIRD data is interpreted in dichotomous terms (see Ghai, 2021), the central issue of diversity and inclusion is not challenged. Simply put, and as somewhat seen in the journal publication statistics presented earlier in this essay, we have nearly no data from Latin America for which to inform border discussions of video game uses and effects. Indeed, such issues have been especially highlighted in the human-computer interaction community. In analysis of the research participants from empirical scholarship published in the proceedings of the CHI conference from 2016 to 2020. Linxen et al. (2021) found that 73% of research participants were drawn from Western nations meeting many of the WEIRD criteria. Indeed, no Latin American nations were featured among the 10 most common data collection sites, and while data from 93 countries was included in their analysis, data from Latin America was nearly always under-represented with respect to global populations. Notably, these



data consider only the proportion of research participants to global populations and do not consider the focus of the studies themselves.

IMMEDIATE OPPORTUNITIES FOR DIVERSIFYING PUBLISHED RESEARCH

One way in which we can already consider ways to be more inclusive of Latin American voices is to reconsider where and how we engage those communities. Linxen et al. (2021) discuss the role that online data collections can play in cutting across national boundaries, and likewise their study noted that more than 80% of CHI papers were such that authors recruited from their own accessible communities (i.e., an author in Syracuse recruiting participants from their campus or metropolitan region). Here, we can already see two paths towards engagement with Latin American gamers. The first would be to actively solicit authentic and meaningful partnerships with colleagues in the region able to recruit locally for scholarship, especially for those studies that can be directly "ported" from one region to another. However, a second crucial path towards authentic and meaningful engagement would be to work towards localized translations of the many different research scales and surveys that are commonly used in gaming scholarship—in a very real sense, soliciting gamer feedback in their own words. For example, our work with the video game demand scale (Bowman et al., 2018) was initially tested on a population of mostly US-based English speaking gamers—the scale assesses the perceived cognitive, emotional, physical (both controller intuitiveness and physical exertion), and social demands of video games, from the presumption that the interactivity inherent to video games represents a multidimensional co-created entertainment experience for which these demands have unique impact on focal outcomes (see Bowman, 2021). We have since broadened our scope to consider German (Koban & Bowman, 2020), Taiwanese (Bowman et al., 2021), Turkish (Kona & Bowman, under review) and Korean (Lee et al, under review) gaming communities, each of which has replicated the five-factor structure of the original scale with few modifications needed (mostly removing reverse-coded survey items, or refining items for language specificity). These translations follow in the tradition of the translation-backtranslation method (Brislin, 1970), although recent advances have suggested additional steps that include a wider variety of native speakers for confirmation (Behr, 2015). That said, we too have failed to engage with Latin American populations and likewise, this research has been more focused on language translations of an existing user experience scale, rather than engaging regional cultures in a more authentic and meaningful way. Speaking to the latter, the immense popularity of mobile-based gaming in Taiwan and Korea has already suggested that the manner in which gamers might think about the perceived demands of games could differ from the more console-heavy samples in the US and Germany. That said, the importance of translation work cannot be understated, as providing validated measures that are localized for different languages represents an initial step towards a better understanding of gamers' experiences.

REPLICATIONS AS KEY SCHOLARLY CONTRIBUTIONS

One area of scholarship that has enjoyed a resurgence in international interest as of late is that of replication studies—research conducted with the specific purpose of testing the extent to which already-published research finding are found when conducted in other contexts (also known as conceptual replications, Dienlin et al., 2020). A commonly repeated trope among scholars is that journals will not publish replication studies as they are seen as "uninteresting" or "lacking in novelty" and indeed, anecdotes abound of scholars frustrated with replication studies being desk-rejected at academic conference and journal outlets alike. In analysis of more than 1100 psychology journals, Martin and Clarke (2017) found that only 3% explicitly stated that they accept replications for peer review.⁴ In the framework of communication scholarship, scholars such as McEwan et al. (2018) and Keating and Totzkay (2019) have lamented the overall lack of replication studies in media and communication scholarship-

⁴ The Journal of Media Psychology is among those journals with an explicit call for replication research: https://t.co/uXiM13mvAo. In my personal experience, Psychology of Popular Media and Media Psychology have also published replication studies, as can be confirmed by a browse of their recently published manuscripts.

the latter finding that approximately one in seven published manuscripts could be framed as a conceptual replication (an attempt to replicate a given finding in a novel context). Replication studies are crucial to ensuring that the findings from a single study are robust enough to be found in novel samples and environments, and such work directly challenges an over-reliance on WEIRD samples. To a large extent, the findings of such replication studies are compelling regardless of their valence as studies confirming prior results provide for increased confidence in global claims and video game uses and effects, whereas studies with data contrary to prior results provide for opportunities to refine theory and research to account for such divergence. For example, one can imagine a scenario in which research into video games and nostalgia (see Bowman & Wulf, in press) could result in rather different memories between US, Brazilian, and Mexican participants having grown up in the 1990s, given differential access to gaming content for those groups. At the same time, variance in the referent gaming memories might not necessarily change the associations between nostalgia and psychological well-being already found in established research (see Wulf et al., 2020). Here also, Linxen et al. (2021) suggested that replications (such as those part of the RepliCHI movement, see Wilson et al., 2013) are critical for efforts to "uncover variations in the findings that may be due to demographic, geographic, and/or cultural differences between samples included in the original and replication study."

The replication of existing scholarship using translated materials and metrics deployed in Latin American communities is crucial for both supporting already established knowledge claims about video games and gamers, but also for uncovering variance in findings that could be unique to these communities. Such work can be further encouraged through engagement with so-called open science practices (Dienlin et al., 2018), such as the responsible sharing of research materials and scientific data (for more details, see Bowman & Keene, 2018; Bowman & Spence, 2020). Scholars looking to replicate published studies can turn to databases such as the Open Science Framework to find study materials to facilitate designing replications, and scholars conducing work in Latin American could consider sharing their own study materials in these same databases to further encourage extension of the research.

CONCLUSION

As we move into the middle of the 21st Century, we already see the widespread adoption and innovation of interactive media technologies such as video games. Games are a primary source of entertainment for global audiences of all ages, yet research being conducted suffers from global biases in which WEIRD data dominate and thus, we lack authentic inclusivity of data and theorizing from global audiences—including Latin American audiences that represent a sizable proportion of gamers. It is my hope that this essay serves as an active call from colleagues to reconsider the invaluable contribution that they can make to the global game studies knowledge base. Especially to those who hav been discouraged by prior efforts, there is an international conversation around the importance of replication and extension research. It is a proud and loud conversation only gaining momentum, but such momentum can only be sustained with the authentic integration of our colleagues from all corners. Much in the way that games have far outgrown their initial limitations, so to is gaming scholarship. As an editor and colleague (and life-long gamer), I am an ever-eager Player Two, waiting in anticipation for my Latin American colleagues to take their turn at the joystick.

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