

Imitation, Fear, and Conviviality, Overlooked Histories of Immersive Arts and Technologies

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ABSTRACT

This essay discusses alternative models to mimesis as the norm in mainstream immersive technologies. Projects by two Latin American designers, the Uruguayan videogame designer Gonzalo Frasca, and the Cuban interaction designer, Iván Abreu Ochoa, exemplify such alternatives. I examine how both designers eschew idealized realism in favor of repositioning immersive spaces as a forum of debate about issues relevant to contemporary civic life, respectively, war and immigration. Conceived thusly, these works constitute uses of immersive technologies, gaming and the internet, for purposes of cultural critique and catalyzing emancipatory social energies. In this light, I argue that these projects work to both undermine normative conceptions of mimesis, as mimetic simulations are revealed to be partial, not neutral; and as well, demonstrate belief in the role of immersive technologies as support of convivial culture. As such, these projects are not unique, but can be understood as being part of transnational networks of alternative media, and extensions of the significant historical and contemporary contributions of Latin American artists and designers to this project.



Figure 1. United States Army, Ubisoft, Sega Studios, Red Storm Entertainment, America's Army, 2002-present, screenshot.

INTRODUCTION

A holy grail of sorts of the digital entertainment industries, mimesis drives the quest for ever more immersive technologies, including videogames.¹ This trend is driven by the assumption that realistic simulations are the most conducive to participation in the virtual world. *America's Army* (United States Army, Ubisoft, Sega Studios, Red Storm Entertainment, 2002-to present), a free game financed by the US army post-9/11, typifies this approach. The game is a training simulation and a recruiting tool. It simulates combat in settings indistinguishable from the real environments of Baghdad or Kabul (Figure 1). *America's Army's* seamless realism is exemplary of the overall trend in simulation: the goal is to keep players immersed in the virtual world at hand. The industry uses it to attract consumers. The US army uses it to attract the industry's consumers. Young men are coveted as recruits because of their gaming skills. As it turns out, years of videogame playing are the perfect training for the future drone operator. The idea is to put in the shoes of an American soldier, virtually speaking, so as in practice, to prevent "boots on the ground." Videogames are examples of how realism, commodity, and *realpolitik* operate together in the US-led war on terror.

But this penchant for verisimilitude is not unique to industry. It is shared by some in the digital art world, albeit for distinct reasons, often concurring to normative aesthetic criteria in Western art in which mimesis is taken to signify the ideal in art.² In contrast, post-colonial theorists and artists have discussed the integral role of such Western canonical aesthetic constructs in colonial and neo-colonial domination.³ Because influence has been a key epistemic tool in the appreciation of art, non-mimetic representations, often associated with non-Western arts, are seen as inferior rather than as distinctive expressions of other cultures and cultural outlooks. Similarly, a number of contemporary Latin American designers have brought these concerns to interactive media, in

projects influenced by historical artistic practices averse to the linearity of imitation. Of these, the proposal made by Uruguayan videogame designer and educator, Gonzalo Frasca, to rethink immersion beyond mimesis, was not only exceptional in game design in the early 2000s, but also proved influential transnationally, among other politicized practitioners. Albeit created in a different context, in the transnational space of the United States/Mexican border, *Cross-Coordinates* (2010-2011), a game installation by Ivan Abreu Ochoa, a Cuban artist residing in Mexico, reflects similar concerns. Both projects stand in contrast to the dominant model of representation in digital art and media, mimesis. They disavow the prevalence of imitation, yet are also aware in deploying it to create spaces of conviviality.⁴ In so doing, they extend a key focus of historical and contemporary cultural and social struggles into virtual environments, on creating alternatives to dominant representations of the realities of marginalized perspectives.

Frasca's counter-model to immersion by mimesis combines Bertolt Brecht's concept of defamiliarization with Augusto Boal's participatory "theater of the oppressed," resulting in what he calls "videogames of the oppressed." Eschewing idealization, such games revolve on real-life issues. His games stand in protest of the war-on-terror. Like Brecht's and Boal's theaters, they call attention to mimesis as neither a culturally neutral nor a particularly appropriate model of representation to catalyze cultural change. Frasca wants simulations designed to both disrupt and reveal mimesis as a culturally-coded construct of reality, and by extension drive the point that reality is subject to change through one's participation.

Similarly, Abreu's *Cross-Coordinates* is an ironic pun on imitation and a participatory platform to create a symbolic cross-border gesture of resistance. Inspired by border art, the project combines a wired physical game between El Paso and Ciudad Juarez residents and officials, an immersive gallery installation, and an online application. In physical spaces, players are challenged to replicate and synchronize each other's gestures, so as to successfully balance a carpenter's level. This interaction is extended in virtual space, on the internet, with the game's goal being to exceed the length of the United States/Mexico border wall, which it achieved.

Both Frasca's notion of games of the oppressed and Abreu's work carry decolonializing implications. Altogether, both projects are as much extensions of historical artistic trajectories, including participatory theater and border art, on which they are based and which they extend into digital culture, as they are interventions into the retrograde culture of the videogame industry. Their shared aversion of imitation evidences resistance to the melancholia of post 9/11 politics of fear, as videogames are integral to both its economies of entertainment markets and at-remote warfare. Their focus, on situating videogame culture within alternative spaces and vocabularies of representation, speaks of Frasca's and Abreu's deep affinity for the medium of videogames. It is out of this sentiment that their projects articulate play both as "emancipatory interruptions" of imperialist culture, and as a forum of convivial culture.⁵

VIDEOGAMES OF THE OPPRESSED

Conceptually, as aforementioned, Frasca envisioned forum videogames on the type of participatory theater developed by the Brazilian dramaturg-activist Augusto Boal (1931–2009). Boal drew himself on the work of his friend, the Brazilian Paulo Freire in the field of pedagogy. Freire in turn adopted his notion of "critical consciousness" from the Martinique-born, Algeria-based psychiatrist-philosopher-activist Frantz Fanon (1925–1961), who stressed the decolonization of

education as integral to anti-colonial processes and struggles. Aesthetically, Boalian theater, which includes games, dovetails with the anti-naturalism of the “epic” or “dialectical” theater” developed earlier by the German playwright Bertold Brecht (1898–1956).⁶ Emerging out of kindred anti-imperialist sentiment, respectively on the backdrops of the rise of National Socialist in Germany, and the military regime in Brazil (1964-1985), both Boalian and Brechtian dramaturgies translate Marxian theory into theatrical formats. Taking culture to be a tool of progressive change, both go against the cathartic realism of classical drama, instead favoring strategies designed to convey the point that reality is a human construct, and thus subject to change, providing one’s participation therein.

The participatory model of Boalian theater that most appeals to Frasca consists of short public engagements in which members of the audience are asked to enact a daily-life situation that concerns them in front of the group. For example, a worker might wish to enact an exploitive relation with the boss. As the issue is enacted, audience members can interrupt and engage the person speaking. This process is repeated several times. The point is not to find solutions to the problem proposed, but to create communal awareness about its existence and to generate discussion. In this way, forum games create a ‘stage’ for democratic deliberation and the capacitation of participants toward emancipatory action. Boal’s notion of the “spect-actor,” his term for the dual role of those involved in forum theater, as spectators or observers, and actors, or creators of the meaning and action in the performance, speaks to this idea. Boal’s notion that to partake in performative exchanges is a potentially transformative activity with impact in real life is re-elaborated in Frasca’s concept of a simulated forum in which players engage in analogous actions.

Whereas forum games were conceived as a conceptual exercise, Frasca did develop digital games under the heading “Play the News” (Frasca later renamed the project “newsgames,” a term denoting a new genre of digital games).⁷ The design strategies employed in these games are based on Brecht’s dialectical methods, which he applied to both technologically-mediated and theatrical forms. His notion of radio as a two-way, rather than a one-way medium, and his concept of epic theater, emerge out of the same concerns with human alienation, and the possibility of its transformation through capacitation of the individual’s active participation. To this end, Brecht made the *verfremdungseffek* or alienating effects central to his epic theater, dramas about contemporary political and social issues. Including various techniques such as fragmentation, interruption, juxtaposition, and contrast and contradiction, Brecht’s alienating effects were altogether designed to disrupt the audience’s immersion into the spectacle. For example, actors would address the public directly, or speak out loud stage instructions, use songs to interrupt the action, or rearrange the set in full view of the audiences. Disruptive uses of props, including explanatory placards, or elements of the set, such as lighting flooding the theater (not just the stage), would be similarly employed, to literally alienate the audience, as these interruptions made for drama that denied a complete adhesion of the viewer to the dramatic actions and characters. Brecht believed that the absence of cathartic resolution would create an emotional gap that could only be resolved through the audience’s involvement in political action in the real world. Conceived on this perspective, newsgames draw attention to the simulation’s artifice by way of similar strategies, as the aim is likewise to ultimately provoke reflection about a particular issue. Like Brechtian epic theater, and as the title indicates, newsgames engage players with views on current social and political events. Similarly, according to Frasca, newsgames emerged out of anti-war sentiment, in protest of the United States’ call for “war-on-terror” subsequent the 9/11 events: “for political video

games, September 11 was the trigger. If it had happened in the sixties, people would have grabbed their guitar and written a song about it. Now they're making games."⁸ Lastly, just as Brecht's and Boal's participatory theaters were rooted in personal experiences with authoritarian politics, newsgames are rooted in Frasca's personal background growing up during the military dictatorship in Uruguay (1973-85). In some of his writings, he references this background by recounting a childhood memory of witnessing his family burning banned literature in their house's backyard.

In reflection of Frasca's anti-war stance, *September 12th* (2003) (Figure 2) was the first newsgame simulation designed by him and the team at Powerful Robot (PR), Frasca's then videogame studio, and the first of its kind in Uruguay.⁹ The studio created a variety of web-based games for American entertainment corporations, including the Cartoon Network, Disney, Pixar, Warner Bros., and Lucasfilm. This work in turn financed the creation of games like *September 12th*, a freely available short simulation designed in a cartoonish style evocative of popular videogames at the time, such as the *Sims* franchise. Using the familiar aesthetic of entertainment games, the game also plays with the mechanics and alleged realism of mainstream games, in particular first person shooter videogames (FPS), to convey an anti-war message.¹⁰ *September 12th*'s opening image, showing an Arab woman holding a dead child in her arms evokes the iconic anti-war depictions of the German expressionist Käthe Kollwitz. A follow-up image shows a clichéd image of a 'terrorist,' recognizable by a white turban and a gun next to a similarly stereotypical family of Muslim 'civilians,' the woman fully covered, and the man and child wearing *dishdashas*. The accompanying text reads:

This is not a game. You can't win and you can't lose. This is a simulation. It has no ending. It has already begun. The rules are deadly simple. You can shoot. Or not. This is a simple model you can use to explore some aspects of the war on terror.¹¹

The scenario is set in a crowded market square of a Middle Eastern town, where terrorists mingle with dogs and civilians. An obvious reference to Pablo Picasso's *Guernica* (1937), this setting further drives the oppositional point of the game.¹² The painting, which is considered one of the most powerful anti-war paintings of the twentieth-century, not only documents a war crime, the bombing of Guernica by Nazi Germany and Italian fascist warplanes at bequest of Franco, but does so with specific symbolism. The destruction of the market square, the first forum, to which we trace democracy, has a clear message. The German and Spanish fascists knew it as did Picasso. *Guernica* depicts a terrorized forum. Additionally, this reference is the more poignant because of *Guernica*'s role in the public relations fiasco involving general Colin Powell and other United States diplomats arguing for war on Iraq against the background of a large blue curtain placed to cover the full-sized tapestry copy of the painting hanging in the United Nations building in New York City, during televised conferences on February 5, 2003.

In *September 12th*, the player controls a side-scrolling sniper window juxtaposed onto the scene. Despite the suggestion of a gun, it soon becomes obvious that it is not a bullet that is fired, but a missile. The player is in the shoes of a remote drone operator. Because of the impact, it is impossible to strike accurately, and when a passerby is hit, others gathering around the casualty transform into terrorists. Repetitive shooting causes the square to become entirely populated by terrorists amidst the rubble. A reference to the disproportioned firepower of the United States military, the message of *September 12th* is evident: violence elicits violence.¹³ Formally, the game conveys this message elegantly through the use of shapes: the circle of violence juxtaposed onto the square of the forum.

It takes the perspective of the drone operator and shows you what the likely consequences of this type of warfare are.



Figure 2. Gonzalo Frasca and Powerful Robot, September 12th, 2003, screenshot, flash game, image courtesy of the artist.

In contrast, *Madrid* (2004) (Figure 3), the second simulation designed by Frasca’s studio highlights global, non-violent dissent. Released two days after the Madrid train bombings on March 11, 2004, the game commemorates the attacks. It consists of a single vignette styled on political cartoons in newspapers, and shows a group of people, both young and old, holding candles amid darkness.¹⁴ Each character wears a T-shirt that reads: “I love,” and the name of a world city that has been the target of terrorist acts, including New York City, Oklahoma, Paris, Madrid, Tokyo, and Beirut. The goal is to synchronize the candle flames by clicking on one at a time, though the futility of this task soon becomes clear, because by the time the player is through with clicking on all the flames, the candles first clicked on have already died out. In absence of action, a screen appears that reads, “You must keep trying,” urging the player to keep clicking.¹⁵



Figure 3. Gonzalo Frasca and Powerful Robot, *Madrid*, 2004, screenshot, flash game, image courtesy of the artist.

In contrast to *September 12th*, the frustrating repetitiveness of *Madrid* does not appear at first sight to correspond to an evident take-away message beyond its overall suggestion of collective mourning and remembrance. Ian Bogost, a game theorist and Frasca's onetime collaborator, noted that players mistook the difficulty of the game as making an argument for "the futility of remembrance rather than its necessity," and yet, this simulation can be best understood as a follow-up comment on *September 12th*.¹⁶ As well as a memorial, it functions in this regard to clarify Frasca's and his team's position, which conceived in the spirit of Brechtian and Boalian theater, reaffirms belief in the possibility of change through active participation in social processes. In this regard, *Madrid* is made in the image of the massive global dissent and movement against the war-on-terror.¹⁷ It uses a global platform, videogames, not only to show and amplify anti-war sentiment, but also to ask the player to join in, "to keep trying", even if trying (organizing, protesting) feels at times, as the game implies, like playing *Madrid* – frustrating.

The merit of Frasca's and his team's project, to infuse videogame culture with democratic principles, was recognized by the Knight Foundation with a Lifetime Achievement Award. Additionally, it gained resonance among some in transnational game designer circles. So for instance, *Madrid* inspired *Huys* ("Hope") (2009), the first Turkish political game by Yavuz Kerem Demirbaş. Similarly conceived as a newsgame, *Huys* pays homage to the then recently assassinated Turkish-Armenian journalist Hrant Dink. Dink was killed by a Turkish nationalist in 2007 on account of his outspoken critiques of the denial of the 1915 genocide of Armenians by the Ottoman Empire.¹⁸ Like *Madrid*, *Huys* portrays and implicates the player in a symbolic gesture in support of civic protest, in this case, the peaceful demonstrations in Turkey in response to Dink's assassination. Similarly, like Frasca, Demirbaş uses the medium to affirm global freedom of speech, not least just as Frasca, by bypassing the control of the industry over videogames through releasing the game freely on the internet.

CROSS-COORDINATES

Instead of operating just in online spaces, Iván Abreu Ochoa's *Cross Coordinates* (2010-2111) (Figures 4 A, 4 B) is an urban game that engages participatory theater in both physical and virtual

environments, and in connecting these spaces turns them into forums for transnational encounters. Set on the spaces of a city split between the United States and Mexico, *Cross Coordinates* addresses the harmful impact of increasing nationalistic policies shaping border regions post 9/11 events.¹⁹ Its playful form stands in stark contrast to the controlling and divisive implications of the ongoing recomposition of the global city as 'safe' and 'surveilled' environments, as well as concretizes the possibilities of alternative conceptions of urban geographies, mobilities, and citizenship.

In practice, the project consists of a game of balance played in public spaces, in a gallery, and on the internet. The goal of the game is to achieve balance. Playing *Cross Coordinates* requires two opponents' cooperation in stabilizing a custom-made carpenter's level. Thus it effectively required the replication of gestures by both participants. A tool used to build walls, the level is here used to opposite effect: to produce a gesture against the symbolism of walls, and the divisions they represent. The level created by Abreu for the game existed both as an analogue and as a wired object. *Cross Coordinates* references balance as a key principle in game design, the concept and the practice of managing or adjusting a game's rules, usually with the aim of preventing any of its component systems from being ineffective or otherwise undesirable to players. Commissioned by the curators at the Rubin Center at the University of Texas at El Paso, the game was designed for bi-national play. In this context, it functions metaphorically, in reference to the balancing act of daily living in a historically loaded geography, on the northern border of the United States and Mexico dividing El Paso and Ciudad Juarez.

This bi-national area is the largest metropolitan region on the United States/Mexico border. Once a unified city, this territory was separated along the shores of Rio Grande which became the border between the United States and Mexico under the 1948 Treaty of Guadalupe Hidalgo. The United States annexed the area located on the northern shore, which today is El Paso, a city located in the US state of Texas. The south shore became Ciudad Juarez, located in the Mexican state of Chihuahua. While divided by the border walls, these cities' populations remain united by shared familial and cultural ties. Some spaces, including a catholic church on the border, hosting one of the matches in its yard, function historically as liminal spaces, as a no-man's land where residents from both cities still meet to worship.²⁰ Border crossing, however, is subject to fluctuating immigration policies on the part of the United States. At the time of Abreu's project, the area experienced a buildup of the U.S. government's security apparatus at the border on account of national security. Under these conditions, the game functioned to countervail the politics of fear with the perspectives of the area's residents on this issue.

During the four month-residency at the University of Texas at El Paso, Abreu invited residents from each side of the border fence to play *Cross Coordinates* on the streets and public spaces of these cities. The videos shot by Abreu during these matches show residents coaching each other in an effort to balance the carpenter's level. A metaphor for the delicate balance of border life, the act of successfully balancing the level made concrete the difficulty of negotiating border life as opponents. It also made visible the depth of conviviality of these spaces, yielding a profound suggestion of countervailing to the dominant representations of them as violent and lawless (the violence in Ciudad Juarez was much cited as a security concern). A riposte to the U.S. government's rhetoric of safety, the game and its documentation refuted the divisive politicization of migration, and its appeal on fear and the depiction of outsiders as frightening threats. This refusal is embodied in the act of playing itself: the game presents a win/win or lose/lose situation. The delicate act of

achieving the game's goal, balance, is also its message: only the existing culture of conviviality on the border, not artificially imposed separation, can serve as a model capable of bringing about a balanced co-existence.



Figure 4 A. Iván Abreu Ochoa, Cross Coordinates, 2010-2011, game-performance at the border fence between Ciudad Juarez (Mexico) and El Paso (United States), image courtesy of the artist.

Abreu's wiring of the carpenter's level for the game's installation at the Rubin Center of the University of Texas at El Paso made this statement even more forcibly.²¹ In parallel with street play, gallery visitors played with a different level attached to an electronic device that detected balance and logged the face-to-face play time onto a data base and converted it to meters of convivial play. The results were projected on the walls of the space. Thus, the goal of the game was immediately visualized as the numbers on the walls directly referenced the accumulation of meters by gallery visitors. The goal was to play to exceed the length of the MX-US border (3,169,000 m.). The game in the gallery mirrored the games played on the streets by the communities' residents. The final score at the gallery, 70,865 meters, however, reflected mostly the El Paso residents' point of view, not the residents of Ciudad Juarez, since the latter had circumscribed access to the gallery space by virtue of its location in the United States.

To correct this imbalance, Abreu designed a website that afterwards continued to serve as a platform to extend the goal of surpassing the length of the border wall. Still functioning at the time of writing, the website application adds meters under the following rules: 1) the time spent on the

website accumulated meters, 2) sharing the URL duplicates the meters accumulated during the visit, 3) the number of simultaneously connected people adds to the score exponentially.

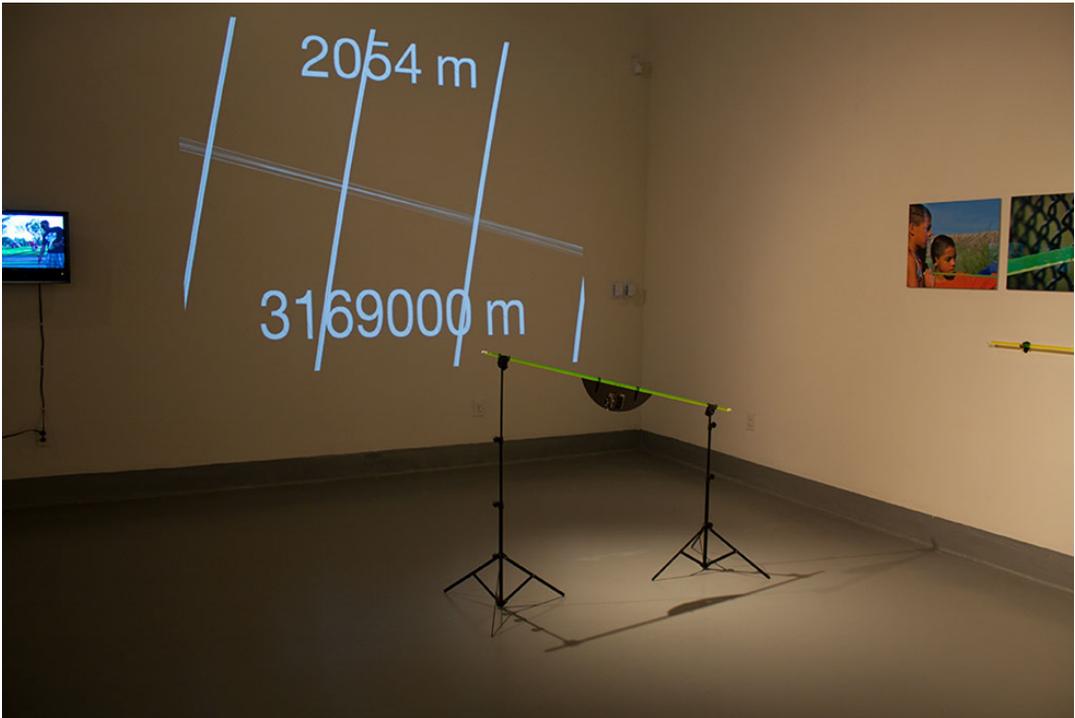


Figure 4 B. Iván Abreu Ochoa, Cross Coordinates, 2010-2011, game-performance installation at the Ruben Center of the University of Texas at El Paso, image courtesy of the artist.

The deterritorialized space of the internet enabled bi-national play, which because of the increasing legal restrictions on border access for Mexican nationals, was not possible in physical space. On March 16, 2011, the gallery score was raised over a four-hour meeting on the website, as 1,500 people in Mexico and the United States gathered on Abreu's call. The end result, 15 million meters, exceed more than four times the length of the Mexico-U.S. border. As the project was exhibited internationally, the website served to broaden play transnationally, thus, effectively linking and amplifying the civic affirmation of El Paso's and Ciudad Juarez's convivial culture globally.

In all, *Cross Coordinates* exemplifies Abreu's overall goal in integrating art, technology, and design to create what he calls a "poetics of demonstration," or situations of exception that arise through linking an object loaded with metaphoric meaning, a game, and the social specificity of a particular place. These situations are constructed to activate critical thinking and enable the desire of the possible, in this case a decolonized, convivial space. The last iteration of the project is particularly poignant in this regard, as it recasts a localized issue about borders, immigration, and mobility within the context of a global space and community. Beyond the streets and squares of El Paso and Ciudad Juarez, and beyond the walls of the Ruben Center of the University of Texas at El Paso, the game still continues to extend the possibility to express support for convivial culture

through mutual support and collaboration transnationally. In this regard, *Cross Coordinates* surpasses Frasca's games, *September 12th* and *Madrid*, as rather than representing a particular designer's view, it conveys civic society's perspective on a political issue. *Cross Coordinates* provides a forum for the expression and affirmation of conviviality as a chief characteristic of thriving communities, be they in physical and virtual forms.

LATIN AMERICAN GAMES

The politicized perspectives of Frasca's and Abreu's projects are not unique, but shared by a number of Latin American artists and designers working with games in Latin America and the United States. As documented by the cultural theorist Phillip Penix-Tadsen in his *Cultural Code, Video Games and Latin America*, such projects have a distinct cultural imprint, and involve concerns about the representation of social and political life in the margins.²² It is from this perspective that Penix-Tadsen sees them as "realist games," as their particular focus is "on historically marginalized groups." In addition to Frasca's and Abreu's work, other examples include, Rafael Fajardo's *Crosser* (2000) and *La Migra* (2001), Ricardo Miranda Zúñiga's *Vagamundo* (2002), *Tropical America* (OnRamp Arts, 2002), and Coco Fusco and Ricardo Dominguez's *Turista Fronterizo* (2006).²³ Respectively, these games make a point by having players play from the perspectives of characters and situations that are either absent or caricatured in mainstream games. The plight of undocumented migrants is central to *Crosser* and *La Migra* both of which are set on the Rio Grande border, as is in *Vagamundo*, a game that puts the player in the shoes of an undocumented worker in New York City. *Tropical America* has you in the role of the sole survivor of the real-life massacre of El Mozote, a small village in El Salvador, a crime perpetrated by Salvadoran soldiers. *Turista Fronterizo* provides the player a window into border life on the San Diego and Tijuana divide, as you explore this space from the eyes of American and Mexican characters. Altogether these projects are part of a broader cross-cultural trajectory in art and technology that goes against dominant models of representation for critical purposes. In these projects realism or mimesis stands in contrast to entertainment games, where it functions as verisimilitude, as an illusion of reality as a stable, airtight thing. In these works, it is a signifier of partial perspectives. Consequently, they clarify realism as a partial perspective itself, not a claim of objectivity and truth. It is from this vantage point that these games refute claims about the correlation of immersion ("suspension of belief") and agency ("the ability of computer users to participate in a simulation") in digital simulations.²⁴ Rather, they favor a multiplicity of perspectives on a particular topic, in this case on the representation of international conflicts. They also show, as is the case with *Madrid* and *Cross-coordinates*, the possibility of change, of what could be. If in the end such projects refute closure, and leave us unsatisfied, then their work is done. After all, play is here not conceived as a goal in and of itself, but is constructed as an argument about the contingency of change on one's perspective, and moreover, as a process whose outcome is not yet determined, but dependent on one's involvement therein. In so doing, they remind us that the forum has many forms because it is an idea about the way forward to a more just and peaceful world, toward a culture of conviviality. They show that as the medium changes overtime, the aim, to open spaces for dialogue with as many viewpoints as possible, remains similar.

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ENDNOTES

1. According to Lev Manovich, this type of realism is used as a benchmark of success in the digital industry: "In media, trade publications, and research papers, the history of technological innovation and research is presented as a progression toward realism—the ability to simulate any object in such a way that its computer image is indistinguishable from a photograph". Lev Manovich, *The Language of New Media* (Cambridge, MA: MIT Press, 2001), 184. Manovich also notes that the rise of this type of realism both drives and is driven by high-end technology. The degree of the reality effect of graphics is dependent on powerful technology. As he writes: "... the reality effect of a digital representation can be measured in dollars. Realism has become a commodity. It can be bought and sold like anything else." Lev Manovich, "The Aesthetics of Virtual Worlds: Report from Los Angeles," in *Telepolis*, www.ix.de/tp, (Munich: Verlag Heinz Heise, 1996); reprinted in *Digital Delirium*, ed. Arthur Kroker and Marilouise Kroker (New York: St. Martin's Press, 1997).
2. As exemplified by the late theorist Vilem Flusser's view of the aesthetic value of digital images on their degree of realism: "From now on we will have to embrace beauty as the only acceptable criterion of truth ... This is already observable in relation to computer art: the more beautiful the digital apparition the more real and truthful the projected alternative worlds". Vilem Flusser, "Digital Apparition" in *Electronic Culture: Technology and Visual Representation*, Timothy Druckrey ed., (London: Aperture, 1996), 243.
3. See, Maria Fernandez, "Postcolonial Media Theory", in *Art Journal*, Fall 1999, 58-73.
4. Paul Gilroy, *Postcolonial Melancholia* (New York: Columbia University Press, 2006). As Gilroy explains, conviviality is distinct from multiculturalism, which is a top-down co-option and repackaging of the spontaneous, unruly, and bottom-up characteristics of convivial culture.
5. Gilroy, *Postcolonial Melancholia*, 75.
6. See Augusto Boal, *Games for Actor and Non-Actors*, trans. Adrian Jackson (London and New York: Routledge, 1992).
7. Personal communication with Gonzalo Frasca.
8. Jim McClellan, "The Role of Play," *The Guardian*, 2004/5/13, <https://www.theguardian.com/technology/2004/may/13/games.onlinesupplement>.
9. PR was co-founded with Sofia Battezzore. See: "Powerful Robot," <http://www.powerfulrobot.com>. Part of PR's profits are donated to various progressive causes. Personal communication with Gonzalo Frasca.
10. In this same vein, Bogost suggests that the game comments on the escalating effects of surgical strikes. Ian Bogost, Simon Ferrari and Bobby Schweizer, *NewsGames: Journalism at Play* (Cambridge, MA: MIT Press, 2010), 11–13.
11. Powerful Robot, "September 12th," 2003, <http://www.powerfulrobot.com>.

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12. Created in response to the bombing of Guernica that was executed on the village's market day by Nazi Germany and Fascist Italian warplanes at the request of the Spanish Nationalists, *Guernica* is considered by many to be one of the most moving and powerful anti-war statements by a twentieth-century artist. *Guernica* was first displayed at the 1937 World's Fair in Paris, and subsequently toured around the world to raise funds for the Spanish war relief. It was used again as a background by anti-Vietnam protesters in the United States, including at the Museum of Modern Art (MoMA) in New York City in the 1970s.
 13. Brecht fled Nazi Germany to Scandinavia and then to the United States only to return to East Germany as anti-communist sentiment in the United States led to his blacklisting by Hollywood bosses and persecution under MacCarthyism. Boal was kidnaped, tortured, and exiled because his teachings were seen as a threat by the Brazilian military regime.
 14. Powerful Robot, "Madrid," 2004, <http://www.newsgaming.com>. See Ian Bogost, Ferrari, and Schweizer, *NewsGames: Journalism at Play* (Cambridge, MA: MIT Press, 2010), 22.
 15. Robot, "Madrid."
 16. Bogost, Ferrari, and Schweizer, *NewsGames: Journalism at Play*, 28.
 17. Estimates quote 36 million people across the globe took part in almost 3,000 protests against the Iraq war between January 3 and April 12, 2003. Protests were often coordinated to occur simultaneously around the world. *New York Times* writer Patrick Tyler wrote that the protests showed that there were two super powers in the world: the United States and worldwide public opinion.
 18. Kerem Demirbas, "Huys," 2009, <http://kafaayari.wordpress.com/2009/01/18/huys-umut/> and Tonguc Sezen, "Huys"/"Hope"—Turkey's first political game, *NewsGames* Blog, 2/18/2009 and Bogost, Ferrari, and Schweizer, *NewsGames: Journalism at Play*, 32.
 19. <http://www.ivanabreu.net/crosscoordinates/>.
 20. Personal communication with Iván Abreu Ochoa.
 21. The piece was part of "Contra flujo: Independence and Revolution", opened on August, 2010 at the Stanlee and Gerald Rubin Center for the Visual Arts at the University of Texas at El Paso. The exhibit was a joint curatorial project by Kerry Doyle and Karla Jasso.
 22. Phillip Penix-Tadsen, *Cultural Code, Video Games and Latin America* (Cambridge, MA: MIT Press, 2016).
 23. Penix-Tadsen, *Cultural Code*, 77-93. See also, Mark J.P. Wolf, ed., *Video Games Around the World* (Cambridge, MA: MIT Press, 2015).
 24. Gonzalo Frasca, "Rethinking Agency and Immersion: Videogames as a means of Consciousness-raising" in the Proceedings of Siggraph 2001 Conference, Los Angeles, 2001, <http://www.siggraph.org/artdesign/gallery/S01/essays/0378.pdf>.

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