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INTERACTIVE NARRATIVES

Addressing Social and Political Trauma through New Media

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A simple click on the July 30, 2015 “World” section of the *New York Times* brings you to headlines describing social and political turmoil. Here are just a few examples:

Africa: “‘Nobody Should Be President for Life,’ Obama Tells Africa”

Americas: “Chile: 7 in Pinochet’s Military Charged in Death of Protester”

Asia: “Landslides in Western Nepal Leave at Least 33 Dead”

Europe: “A Desperate Nightly Race as Migrants Rush the Channel Tunnel”

Middle East: “Signs of War Crimes Seen in Israeli Hunt for Ambushed Soldier”

Common headlines like these constitute a narrative in media and journalism describing traumatic processes that have affected a great number of people over long periods of time. They provide an account of societies where dictatorial regimes, political injustices, natural disasters, economic inequalities, violence, and war mongering deeply impact people’s lives, often viscerally. They describe societies in continuous turmoil, wherein traumatic events occur at individual and collective levels. Most important, the social, historical, and “official” perspective of these headlines can suppress people’s psychological and sociopolitical expression of trauma, thereby reducing the opportunity for personal narration. Yet, to overcome social distress, the voices of affected people are important. Their stories—their “unofficial” perspectives—are necessary to open new dialogic spaces, where people not only reflect on the social circumstances that produce trauma but also develop critical reflections that help them mobilize toward healing and change.

According to Pilar Hernández, personal narratives are needed to understand societal trauma caused by war and political persecution (2002: 16). She writes, “the healing of trauma takes into account the development of new social identities and, in doing so, contributes to the building of social movements that question the existing social order” (17). Individual perspectives contribute to the healing process because they act as a psychology of liberation

that intertwines individual and social distress. They help us examine “the concept of trauma from the standpoint of the individual within context” (24). At the same time, mobilization toward social change can be accomplished by facilitating dialogic spaces for people’s actions and interactions. Dialogue is necessary because traumatic events impact people at different levels. These events impact individuals’ realities and society as a whole. Along these lines, it is possible to say that the intimate and private effects of personal trauma also affect others: family, relatives, friends, neighbors, colleagues, and fellows. As Sharon Davis Massey points out, “traumatic ruptures in relationships between individuals and within and between groups occur at all levels in human systems and quickly spread from the level at which they originate, impacting others” (2009: 83). Dialogue is important because trauma is societal. It affects a group of people in a particular context (Giddo 2009: 199).

There is precedent for this sort of cultural mobilization in Paulo Freire’s *Pedagogy of the Oppressed* (1972) and Augusto Boal’s *Theater of the Oppressed* (Boal et al. 2008). Both Brazilian authors express the need for liberation of individuals and society through critical thinking. Specifically, Freire advocates for the liberation (or humanization) of oppressed people by allowing them to recognize the sources of oppression and then transmute that oppression by recovering self-confidence, critical thought, and creative life (Freire 1972: 31–35). Freire’s theory encourages individuals to write their lives as not only passive witnesses but also active authors of their own history. He says, “Men are not built in silence, but in word, in work, in action-reflection” (76). The conceptual bases of Freire’s invitation are to overcome passivity and undertake the creation and recreation of new realities (31–33). They only occur through social dialogue and interaction, in which people are equal and work toward a common goal to recover their sense of humanity.

With *Theater of the Oppressed*, Augusto Boal expands Freire’s ideas of critical process by opening performative possibilities of theatrical representation to the audience. In particular, Boal advocates for the importance of physical and mental emancipation, allowing the emergence of a “Critical Conscience,” which will lead to individual and social transformations:

The audience mustn’t just liberate its Critical Conscience, but its body too. It needs to invade the stage and transform the images that are shown there. To transform is to be transformed. The action of transforming is, in itself, transforming. The members of the audience must become the Character: possess him, take his place—not obey him, but guide him, show him the path they think right. In this way the Spectator becoming Spect-Actor is democratically opposed to the other members of the audience, free to invade the scene and appropriate the power of the actor.

(Boal et al. 2008: xx–xxi)

In Boal’s theater, audience members are openly invited to become actors, with bodies and minds intertwined in a critical process. Each participant on stage becomes a part of a group that creatively affects the scene by transforming the original premises or invitation of the artist. The power that Boal offers to spectators starts with individual self-expression, where individuals assume new identities, and moves toward collective reflection, facilitating dialogical spaces for social emancipation.

With new media—understood in our analysis as digital media, numerical representations, and the convergence of art and technology—the interactive and performative possibilities that spectators have in Boal’s Theater are expanded to new levels of physical and mental involvement. Novel approaches to develop interactive and dialogical spaces emerge, and

the possibilities for individual and social mobilization are greatly enhanced, too. Within this context, new media offers many opportunities for the development of dialogue and spaces that “give birth to new forms of text and to new forms of narrative” (Ryan 2006: 28). Specially, new media opens possibilities for audience participation as well as for unofficial narratives by individuals, collectives, and societies affected by social and political trauma. These narratives go beyond written and oral expression and, in many cases, integrate audience gestures and physical actions. At the same time, they encompass forms in which content unfolds under a creative collaboration between authors and readers. This collaboration, sometimes implicit and sometimes explicit, aligns with Michael Joyce’s understanding of audience participation in what he calls “constructive hypertexts” (2003: 616–17), where the audience’s active participation in content development seems to “renew an ancient promise, one which would make us know ourselves and become authors of our learning” (617). This type of audience participation is also present in Janet Murray’s work:

When the writer expands the story to include multiple possibilities, the reader assumes a more active role. Contemporary stories, in high and low culture, keep reminding us of the storyteller and inviting us to second-guess the choices he or she has made. This can be unsettling to the reader, but it can also be experienced as an invitation to join in the creative process.

(Murray 1997: 38)

Additionally, new media collaboration between authors and audiences echoes the redefinition of authorship and the hegemony of the author as the privileged creator. It affords people active and creative roles in the aesthetics of reception. For instance, the French semiotician, Roland Barthes, talks about the text as a “methodological field” that requires reader activity: “the Text is experienced only in an activity of production” (1977: 157).

The aforementioned ideas help us to understand the dynamic relationships among authors, readers, and text in new media narratives. More important, they provide language for examining the potential of these narratives for dialogical spaces. Borrowing from Barthes, new media narratives constitute *methodological fields* where the content unfolds under a creative and collective collaboration between individuals, both authors and readers.

Remote Sensing and Physical and Cognitive Involvement

The creative role of the audience is enhanced by forms now at work in new media and interactive narratives: web-based applications, stand-alone devices, virtual and augmented environments, smart phone applications, teleconference systems, and interactive installations, among others. Many of these share an expanded perspective of space, intertwining screens with virtual and physical spaces, by using some sort of remote sensing technology in the collection of audience participation data. These sensing technologies capture action and interaction through sensors, web cams, and global positioning systems (GPS), among others. When used critically, they may enhance an audience’s physical and cognitive engagement with a narrative. For instance, the audience may construct new relationships with themselves through representations of their own bodies and actions on screen, often in the form of avatars. In the context of new media and games, an avatar represents a vehicle for self-expression. It is “the essential unit within the network of the play community, and is the means whereby the individual player interacts with both other players and the ecosystem of the play

environment” (Pearce 2009: 111). In our analysis, avatars are not merely representations of actions and bodies on a screen; they may help people build new identities and—returning for a moment to the work of Pilar Hernández—serve as strategies to heal trauma (2002: 17).

In this chapter, we will focus on the analysis of interactive narratives that use remote sensing technologies to reflect on traumatic events. These narratives create hybrid environments that intertwine digital and physical components. Such narratives also use technology as not only a tool to expand audience participation and engagement but also a symbolic medium to facilitate different levels of self-expression, creativity, and social and political reflection. By developing interactive components with computers, an interactive narrative affords collaborative writing and authorship (Landow 1992). It also allows individuals to create and perform new identities via the relationships that emerge between actions, bodies, and representations on screens. Participants in such environments expand their self-perception and self-representation in the present moment. They live the now in a hybrid space—simultaneously here (physical space) and there (on screen).

With this focus on hybrid environments, we are departing from the premise that new media and representational environments empower people to have aesthetic and cognitive experiences via physical perception. People’s bodily actions and gestures not only activate emerging narrative content but also become part of it. For example, participants may activate, alter, or even recreate sounds, images, and videos by walking, singing, dancing, and gesturing. In this environment, physical and cognitive exploration starts “within the body, as if you know by dancing” (“desde dentro del cuerpo, como si conociera danzando,” Negri & Sánchez 2000: 73). In fact, the environment creates a physical and emotional connection with the emerging imagery that affords both introspective and collective reflection. The relation of people with their own representations on screen facilitates a space for action in various ways: through individual satisfaction, individual and collective physical development, experiential pedagogy, and individual, social, and political transformation, for example (Restrepo 2014). As a result, interactive narratives may serve as dialogical spaces to help people affected by trauma work toward healing and change. They may combat feelings of loneliness (Landry et al. 2010: 783), connect with other people (783), and develop actions to remodel their lives and communities (Hernández 2002: 17). In this context, the participatory characteristics of new media and hybrid spaces (simultaneously virtual and physical) may empower people’s actions. Yet the environment may also produce visceral aesthetic and cognitive experiences, resulting from new or unfamiliar relations between bodies, actions, and technologies.

Interactive narratives, particularly those dealing with trauma, may benefit from a “digital ethnographic” approach, which Natalie M. Underberg and Elayne Zorn define as such:

A method for representing real-life cultures through combining the characteristic features of digital media with the elements of story. These projects use the expressive and procedural potential of computer-based storytelling to enable audiences to go beyond absorbing facts about another culture to entering into the experience of that culture.

(Underberg & Zorn 2013: 10)

In this case, audiences are invited to enter a re-created political and social situation that is filtered—both conceptually and aesthetically—with a high consideration of people’s feelings. Designing interactive narratives that address trauma requires sensitive and accountable approaches, where the content of the interaction helps people overcome the negative effects

of that reality without emphasizing them. Put this way, digital ethnography can improve design methodologies by bringing physiological and ethical considerations to the process while also experimenting with new forms of media and genres of narration (Ryan 2006: 28–30), including forms and genres that address social trauma.

Consider three examples, each about desapariciones (disappearances or missing people), across three different Latin American countries (Colombia, Argentina, and Mexico): my installation, *Ausentes (Absentees)*; Leo Nuñez's *Desilusiones Ópticas (Optical Disillusions)*; and Rafael Lozano-Hemmer's *Nivel de Confianza (Level of Confidence)*. Although they all use remote sensing technologies to develop their semantic, poetic, and narrative components, they were selected to exemplify different levels of impact on audience participation in the configuration of narrative. In general, they playfully engage people in the traumatic situation of disappearances by tracking viewer's presence and, consequently, activating or affecting the visual imagery on the screen. They not only produce new relationships between individuals and installations, but also constitute environments where people experience transition from ludic to reflective experience. More specifically, they engage people by facilitating some emotional engagement, or what Brenda Laurel calls *dramatic pleasure*, resulting from active participation in new media spaces. According to Laurel, viewers become agents with "the power to take action" (1993: 117). She elaborates:

When we participate as agents, the shape of the whole action becomes available to us in new ways. We experience it not only as observers or critics but also as comakers and participants. Systems that incorporate this sensibility into their basic structure open up to us a whole new dimension of dramatic pleasure. This is the stuff of dream and desire, of life going *right*. It is the vision that fuels our love affairs with art, computers, and any other means that can enhance and transform our experience.

(Laurel 1993: 120)

Interactive narratives create an atmosphere that takes spectators out of their daily routines, in a manner similar to Johan Huizinga's observations in *Homo Ludens* (1955). These experiences constitute an alternate reality of sorts, with an enormous potential to capture attention and engage people in a combination of dramatic pleasure with serious reflection.

Across their conceptualization, development, and implementation, all three of the installations below also depend on some sort of interdisciplinary methodology that requires an "artistic gesture of working with algorithms" (Wilson 2002: 336) and an ethnographical approach to the psychological and social dimensions associated with the trauma of *disappearances* and their specific contexts. They facilitate space to reflect on trauma, shifting from the loneliness of personal experience to connecting individual stories and expanding the mental and physical involvement of other people. They also represent collective experiences that integrate victims and spectators on the screen through the use of remote sensing.

Ausentes

This installation departed from personal, conceptual, social, and technological considerations to reflect on disappearances in Colombia due to violence, political turmoil, and illegal drug trafficking during one of the country's most difficult times (1986–2002). Six electromechanical light-boxes with digital prints of missing people were displayed on a wall to create a dynamic database of *desaparecidos* reported in the newspapers. For the initial configuration, the machines

were off, and they only turned on and moved when a spectator entered the space. This behavior was actuated using motion sensors and programmable logic controllers (PLCs). Conceptually, the piece was a dialogic space that required a spectator's disposition to participate—to act. Although the visualization of lost people individualized their stories by highlighting one person on each machine at a time, it created a collective narrative by putting them together in a series of random arrangements resulting from viewer interactions. The research process required the analysis of sources such as newspapers, reports, and videos to develop different levels of visualization, poetics, and interaction through digital media. To develop the technical components, I collaborated with Loren Schreiber in the Department of Theater at San Diego State University. Through personalized teaching and interdisciplinary dialogue, he offered technical advice for developing the electronic and interactive components of the interface (see Figure 8.1).

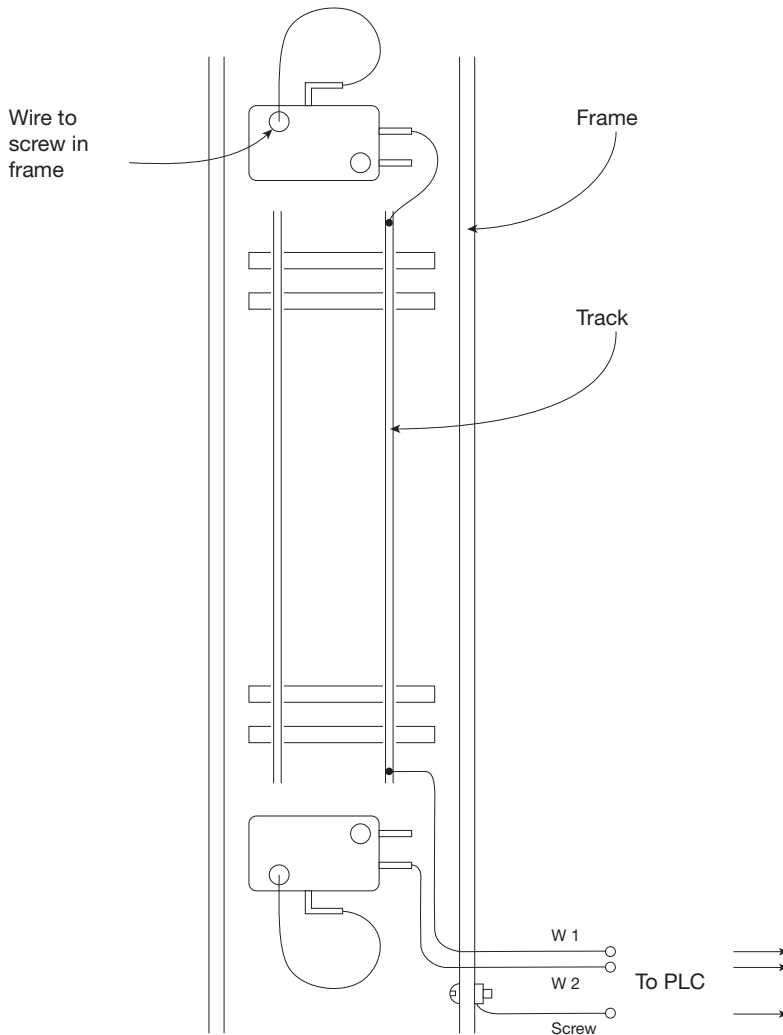


Figure 8.1 Wiring diagram for *Ausentes*.

This piece exemplified first-level audience impact in narrative configuration. Two proximity sensors detected individual presence and activated the six randomly programmed light-boxes that acted as screens displaying the preloaded images (see Figures 8.2 and 8.3). Although participants were not visually represented through avatars or photographs on the screens, they understood the correlation between their actions and the activation of imagery, even in the absence of self-representation. Without their presence or proximity to the screens, no content appeared. This relationship between spectator actions and resulting visualizations produced a

pic		INPUTS				OUTPUTS					
1	S1	Machine	Sensor	a	X0	→	Y0	a	Motor 1- ON	Mot-On1	1
2	MB1	1	Botton	b	X1	→	Y1	b	Light	L1	2
3	MT1		Top	c	X2	→	Y2	c	Motor 1- Reverse	Mot-Rev1	3
4	S2	Machine	Sensor	a	X3	→	Y3	a	Motor 2- ON	Mot-On2	4
5	MB2	2	Botton	b	X4	→	Y4	b	Motor 2- Reverse	L2	5
6	MT2		Top	c	X5	→	Y5	c	Machine2- Light	Mot-Rev2	6
7	S3	Machine	Sensor	a	X6	→	Y6	a	Motor 3- ON	Mot-On3	7
8	MB3	3	Botton	b	X7	→	Y7	b	Motor 3- Reverse	L3	8
9	MT3		Top	c	X10	→	Y10	c	Machine 3- Light	Mot-Rev3	9
10	S4	Machine	Sensor	a	X11	→	Y11	a	Motor 4 - ON	Mot-On4	10
11	MB4	4	Botton	b	X12	→	Y12	b	Motor 4 - Reverse	L4	11
12	MT4		Top	c	X13	→	Y13	c	Machine 4 - Light	Mot-Rev4	12
13	S5	Machine	Sensor	a	X14	→	Y14	a	Motor 5 - ON	Mot-On5	13
14	MB5	5	Botton	b	X15	→	Y15	b	Motor 5 - Reverse	L5	14
15	MT5		Top	c	X16	→	Y16	c	Machine 5 - Light	Mot-Rev5	15
16	S6	Machine	Sensor	a	X17	→	Y17	a	Motor 6 - ON	Mot-On6	
17	MB6	6	Botton	b	X20	→	Y20	b	Motor 6 - Reverse	L6	
18	MT6		Top	c	X21	→	Y21	c	Machine 6 - Light	Mot-Rev6	

Figure 8.2 Programming diagram for *Ausentes*.



Figure 8.3 Audience interaction in *Ausentes*.

ludic dynamic that caught people's attention and ultimately prompted more in-depth reflection about life, death, and time, especially in the context of missing people.

Desilusiones Ópticas

A second example of an interactive narrative that used a ludic—or spontaneously playful—strategy to invite critical thinking about the complex political situations of disappearances is *Desilusiones Ópticas* (*Optical Disillusions*), by Argentinian artist Leo Nuñez. The piece assumed a new level of physical and cognitive involvement by using a sensor to track actions and bodies to shape the emerging visualization on the screen. For this piece, Nuñez created an interface that conceptually and formally combined two contrasting realities: the celebration of the 1978 FIFA World Cup in Argentina and the disappearances occurring at the same time, in the same place. To engage people, Nuñez filled the floor with little pieces of paper cut from telephone directories and newspapers. Inviting interaction, the pieces represented confetti used during soccer game celebrations. Nuñez writes that, during the World Cup:

People celebrated the success of the football team by throwing papers in the air to show their joy only a few meters from where the greatest atrocities were committed [sic] in the country. The time spent in the installation allows viewers to see both realities of the era.

(Nuñez n.d.)

This playful action became the starting or, better yet, breaking point to initiate individual and collective reflections about the past. Active bodies and smiling faces were some of the gestures that built an emerging choreography to reveal the cruel reality behind the celebration. By physically participating, the spectator unveiled the faces of people who disappeared during the dictatorship. This visualization corresponded with a reality veiled, ignored, or not officially discussed for many years.

Disoluciones Ópticas exemplified second-level audience impact in narrative configuration by giving audience members visual presence on the screen, where their bodies were traced and their actions were emulated. In this sense, spectators became silhouettes who arranged and expressed the imagery of disappeared people by throwing confetti in the air. When compared with the first-level audience impact of *Ausentes*, where participants had no self-representation on the screen but their actions directly triggered content, the silhouette form of *Disoluciones Ópticas* combined abstract self-visualizations with preloaded images on the screen through an interface driven by remote sensing. Nuñez further experimented with this approach in *Rostros*, a piece that intertwined spectators' faces on screen with the faces of missing people. The spectators became part of the visualization, and the work thus became a space to reflect on trauma. According to the artist, being part of the system not only intertwined spectators with images of reality but also prompted their awareness of how they are involved in, or complicit with, that reality, both past and present (n.d.). To further engage spectators in reflecting on this trauma, Nuñez used a television from the time of the regime, creating a contextual environment for the piece that evoked the nuances of time and memory.

Nivel de Confianza

Nivel de Confianza, by Mexican–Canadian artist, Rafael Lozano–Hemmer, reflected on the disappearance of students from Ayotzinapa School in Iguala, Guerrero, Mexico. Like Nuñez,

Lozano-Hemmer used a sensor to connect spectator's faces on screen with a face database of *desaparecidos*. However, in *Nivel de Confianza*, audience presence shaped not only visual imagery but also the behavior of algorithms, which endlessly searched for similarities between disappeared people and spectators. This process only ended when a spectator left the space and the installation image subsequently returned to its original configuration. Lozano-Hemmer writes:

The piece will always fail to make a positive match, as we know that the students were likely murdered and burnt in a massacre where government, police forces and drug cartels were involved, but the commemorative side of the project is the relentless search for the students and the overlap of their image with the public's own facial features.

(Lozano-Hemmer 2015)

To further active participation in *Nivel de Confianza*, Lozano-Hemmer allowed spectators to download, implement, and modify its code. This approach encouraged extensive forms of participation with the piece and the reflections it invited. Perhaps the strategy to mobilize collective reflection involves not only a public exhibition but also prompting variations of the work itself.

Conclusion

These three interactive narratives facilitate creative action with a high potential to help people reflect on and mobilize from the traumatic situation of disappearances as social and political phenomena. They are the result of collective reflections that allow for self-expression and social engagement by integrating audiences both physically and cognitively. They constitute dialogical spaces to re-signify trauma. At the same time, they enable different levels of participation and creativity within methodological fields, as both the content and narrative emerge through the creative complicity of artists with audiences.

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Further Reading

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- Bishop, C. (2012) *Artificial Hells: Participatory Art and Politics of Spectatorship*, London: Verso Books.
 Frieling, R. (ed.) (2008) *The Art of Participation: 1950 to Now*, London: Thames and Hudson.
 Kwastek, K. (2013) *Aesthetics of Interaction in Digital Art*, Cambridge, MA: MIT Press.
 Lozano-Hemmer, R. (2007) *Algunas Cosas Pasan Más Veces Que Todo El Tiempo / Some Things Happen More Often Than All of the Time*, México: Turner.
 Murray, J. H. (2012) *Inventing the Medium: Principles of Interaction Design as a Cultural Practice*, Cambridge, MA: MIT Press.

References

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- Barthes, R. (1977) *Image, Music, Text: Essays*, London: Fontana.
 Boal, A., M.-O. Leal-McBride, C. A. Leal McBride, and E. Fryer (2008) *Theatre of the Oppressed*, London: Pluto Press.
 Freire, P. (1972) *Pedagogy of the Oppressed*, New York, NY: Herder and Herder New York.

- Giddo, S. A. (2009) "Dafur: Efforts to Forgive and Reconcile in an Unresolved Conflict," in A. Kalayjian and R. Paloutzian (eds.) *Forgiveness and Reconciliation: Psychological Pathways to Conflict Transformation and Peace Building*, New York, NY: Springer, pp. 189–206.
- Hernández, P. (2002) "Trauma in War and Political Persecution: Expanding the Concept," *American Journal of Orthopsychiatry* 72(1), 16–25.
- Huizinga, J. (1955) *Homo Ludens: A Study of the Play Element in Culture*, Boston, MA: The Beacon Press.
- Joyce, M. (2003) "Siren Shapes: Exploratory and Constructive Hypertexts," in N. Wardrip-Fruin and N. Montfort (eds.) *The New Media Reader*, Cambridge, MA: MIT Press, pp. 613–24.
- Landow, G. (1992) *Hypertext: The Convergence of Contemporary Critical Theory and Technology*, Baltimore, MD: Johns Hopkins University Press.
- Landry, B. M., E. Kyoung Choe, S. McCutcheon, and J. A. Kientez (2010) "Post-traumatic Stress Disorder: Opportunities and Challenges for Computing Technology," in *Proceedings of the 1st AMC International Health Informatics Symposium, IHI '10*, pp. 780–89, retrieved from dl.acm.org/citation.cfm?doid=1882992.1883110.
- Laurel, B. (1993) *Computer as Theater*, Boston, MA: Addison-Wesley Longman Publishing Co.
- Lozano-Hemmer, R. (2015) "Level of Confidence," retrieved from www.lozano-hemmer.com/level_of_confidence.php.
- Massey, S. D. (2009) "Forgiveness and Reconciliation: Essential to Sustaining Human Development," in A. Kalayjian and R. Paloutzian (eds.) *Forgiveness and Reconciliation: Psychological Pathways to Conflict Transformation and Peace Building*, London, UK and New York, NY: Springer, pp. 83–96.
- Murray, J. H. (1997) *Hamlet on the Holodeck: The Future of Narrative in Cyberspace*, New York: The Free Press.
- Negri, A. and R. Sánchez (2000) *Arte y Multitudo: Ocho Cartas*, Madrid, ES: Trotta.
- Nuñez L. (n.d.) retrieved from www.leonunez.com.ar.
- Pearce. C. (2009) *Communities of Play: Emergent Cultures in Multiplayer Games and Virtual Worlds*, Cambridge, MA: MIT Press.
- Restrepo, I. (2014) *Tocar con los ojos, ver con las manos. Cuerpo, acción y tecnología en los espacios de interacción digital con monitoreo remoto*, unpublished PhD dissertation, Universidad de Antioquia, Medellín, Colombia.
- Ryan, M.-L. (2006) *Avatars of Story*, Minneapolis, MN: University of Minnesota Press.
- Underberg, N. and E. Zorn (2013). *Digital Ethnography: Anthropology, Narrative, and New Media*, Austin, TX: University of Texas Press.
- Wilson, S. (2002) *Information Arts: Intersections of Art, Science and Technology*, Cambridge, MA: MIT Press.