A Contra corriente
Una revista de estudios latinoamericanos
Vol. 22, Núm. 2 (Winter 2025): 150-172

Sculpting Digital Testimony in Alejandro González Iñárritu's *Carne y Arena/Virtually Present, Physically Invisible* (2017)

William R. Benner
Texas Woman's University

Introduction

How close should testimonial art place civil society into the traumatic memories of Latin American diasporas? The urgency to develop mnemonic practices to protect human rights is a vital concern in light of the proliferation of new mobile digital cultural frameworks that have moved towards a "post-witness era" where testimony is performed at the site of trauma, allowing the spectator to become a "secondary witness" (Popescu 2015; Garde-Hansen 2016; Lothe et. al 2012; LaCapra 2014; Arnold-de Simine and Ch'ng 2023). This article builds on the early research of memory scholars and digital media scholars on virtual reality (VR) testimony. VR testimony presents the art image in complex processes that open new lines of scholarly inquiry within the established research on media and memory (Steuer 1992; Landsberg 2004; LaCapra 2014; Gregory 2016; Friedman 2017; Nash 2018; Walden 2019; Rothberg 2019; Dastens, de Graef, and Mandolessi 2020; Simine and Ch'ng 2023). As Arnold-de Simine and Ch'ng (2023) assert, VR testimony is embedded and embodied, whereas remembering is unevenly distributed across a continuous network of people and the technologies at their disposal to create testimony. As a result, the traditional notions and practices of author and reader have become further entangled. VR technologies are completely reliant on a multidisciplinary team of artists and engineers to render the survivor's testimony with 360-degree panorama video and

stereoscopic sound. The result is a unique presence in a "frameless" space where the spectator freely navigates and interacts with the unfolding diegesis (Grau 2013; Simine and Ch'ng 2023). In addition, virtual reality allows for other existing digital cultures to embed themselves into the spherical audiovisual experience. Only recently have memory scholars turned their attention to VR's unique ability to create testimony. This is in part due to the rapidly changing frontier of VR technologies. Considering the cost and time it takes to make a VR testimonial, there is an added risk that the equipment that houses the testimonial could become obsolete and that the VR testimony might then be inaccessible.

Not only has it been a struggle to keep up with the innovations brought about by VR and AI technologies, digital memory scholarship has long warned of the importance of developing a visual literacy or image pedagogy capable of embracing digital imagery's innovative and iconoclastic nature while circumventing political and neoliberal attempts to control and cheapen efforts to reckon with the past in a fleet-footed digital media memory market (Benjamin 2022, DeKosnick 2016, Garde-Hansen 2011, Grau 2013).[1] Recent criticism agrees that for virtual reality technology to be considered a tool for activism and critical thought, each work must be carefully examined on a case-by-case basis to ensure that a historical and cultural context is provided and to ascertain how the viewer is placed in relation to this digitally recreated context (Grau 2013; Leen 2021; Rose 2018b; Raessens 2019; Simine and Ch'ng 2023; Sutherland 2016). Engaging with these concerns, this article closely examines Alejandro González Iñárritu's mixed-media installation *Carne y arena/Virtually Present, Physically Invisible* (2017), demonstrating how it deploys a conceptual and technological praxis of distancing to provoke introspection on how virtual reality can and *should* digitally recreate the testimonies of undocumented immigrants and refugees that cross the U.S.-Mexico border. This article engages with notions of filmed space put forward by Martin Lefebvre and Georges Didi-Huberman; Didi-Huberman's observations on the skull and sculpture; Sara Ahmed's figure of the stranger; Jens Andermann's poetics of landscape in relation to traumatic memory; as well as notions of affect and embodiment put forth by a number of memory studies scholars to develop a

[1] Recently, entrepreneurs, spokespersons of mass media corporations, and academics have enthusiastically marketed VR journalism as capable of yielding more empathy from the user than traditional forms of digital news (De la Peña 2015; Milk 2015). The academic community has rightfully questioned whether VR journalism generates empathy or whether it is a distraction that creates a spectacle out of human suffering (Robertson 2017; Rose 2018b; Sánchez 2018).

theoretical lens that hones in on the performative nature of testifying and witnessing trauma within a world of images.

Alejandro González Iñárritu began his film career in Mexico City and enjoyed early global critical and commercial success in the 2000s with his first film *Amores perros* (2000). Over the last twenty years, he has become one of the most celebrated directors from Mexico, serving as a model of international success for many other Latin American filmmakers. This is in part due to his ability to transcend local issues to depict global phenomena—including transnational migration—and his ability to collaborate with international film industries. As Celestino Deleyto and María del Mar Azcona (2010) observe, in addition to González Iñárritu's global appeal and his thematic treatment of global human rights conflicts, his cinematographic strategies of multi-protagonist narration and quick editing transitions allow for his films to destabilize diegesis, fragmenting time and space, which allows for more nuanced analysis of the immigrant experience.

In his first three films, *Amores perros* (2000), *21 Grams* (2003), and *Babel* (2006) González Iñárritu continuously revisits the borderland to explore the spatial, temporal, and (im)material qualities that make it a "powerful signifier of contemporary identity" (Deleyto and Mar Azcona 2010, 86). In *Amores perros* (2000), the borderland extends to the megalopolis Mexico City, a transnational urban hub that violently isolates and restricts socio-economic and corporal movement, which I argue evokes the dangers immigrants and refugees face as they attempt to flee to the United States by foot. The three love stories that comprise *Amores perros*'s multiprotagonist diegesis are bound together by a horrific car accident that leaves couples and families stranded, with little hope to be reunited in an emotionally and physically dangerous cityscape. In agreement with Deleyto and Mar Azcona (2010), Iñárritu's visual strategies such as the wide-angle lens, lingering close-ups, fades, hand-held camera, and panoramic establishing shots to portray the multiple protagonists invites critical analysis that sees the cityscape as a protagonist or a rhetorical figure rather than simply the setting (70). *Amores perros* utilizes these visual strategies to destabilize traditional notions of filmic space, where the expansive establishing shots allude to a collective and inclusive suffering rather than a distant and impersonal suffering. The cramped close-up sequences of domestic life document the futility of proximity when there remains an irrecoverable emotional distance between the characters. This inability to form and maintain affective bonds impacts everyone, regardless of their socio-economic standing, converting the home and Mexico City

into a transactional space starved of socio-economic and emotional opportunity. This paradox of filmed space evokes Didi-Hubermann's observations on the purpose of distancing, where the unraveling of our expectations of what near and far mean within diegesis produces a critical image, a new unity that contains a historical socio-political position, within montage. Furthermore, Iñárritu's visual poetry of Mexico City translates to how he will later portray the U.S.-Mexico border in *Carne y arena*, as a space that paralyzes and fragments affective bonds denying permanence to the migrant body.

Babel (2006)—the final film of what critics refer to as "the trilogy of death" —is a U.S.-Mexican-French coproduction that crosscuts four non-simultaneous stories to produce a temporal and spatial dislocation. As all the protagonists are attempting to reckon with the traumatic loss of a loved one, *Babel* reveals the profound loneliness that stems from the transactional and fragmented relationships characteristic of global neoliberal society that enforces borders to determine who belongs where, which in turn encourages the exploitation of the migration of peoples. Of his more recent films, *Biutiful* (2010) expands on the notion of the borderland by exporting it to Barcelona, Spain, where, like Mexico City, the Spanish borderland extends into another vital urban hub for migrants, trapping them and preying on their undocumented status. The counterfeit purses that African immigrants sell in public spaces to tourists are made by Chinese immigrants in a local sweatshop. Spanish national Uxbal coordinates with both the Chinese and Africans as well as bribes a cop to look the other way. This agreement unravels when the cop, who receives his bribes late, decides it is in his best interest to betray them and allow a sting to violently apprehend the African venders and Uxbal. Iñárritu creates a chaotic montage with the incorporation of wide-angle lens, handheld camera work, dark filters to dull color and darken the sequence, abrupt jump cuts to disorient the viewer, and tense close-up shots. Together, the apprehension sequence exposes a distance between the personal suffering of the fleeing migrants and Uxbal and a hypocritical tourist economy that both feeds off the counterfeit goods and gives the police impunity to violently arrest the migrant street vendors. *Biutiful* reveals how neoliberal exploitation causes a collective trauma that also touches the socio-economically disadvantaged Spanish locals. The ailing protagonist Uxbal, despite his best efforts, cannot offer a safe and dignified life for his family or the African and Chinese immigrants that he finds work for in Barcelona. The film is bookended by opening and closing with two generational traumas in Spain that create a spatial-temporal boundary: the cruel neoliberal present

and its inescapable historic Francoist origin. Uxbal dies, leaving his two children in poverty, with a final wish to be reunited with his father who died fleeing the Franco regime. As with the trilogy of death, in *Biutiful,* the paradoxical relationship of filmic space between characters—where proximity does not lead to intimacy and the maintenance of stable familial bonds—evokes the cinematographic techniques that González Iñárritu will later use in his highly innovative *Carne y arena*.

Carne y arena [*Flesh and Sand*] (2017) is a U.S.-Canadian-Italian-produced multimedia project that is marketed and conceptually centered on a self-contained virtual reality reenactment of the capture of a group of Mexican and Central American undocumented immigrants and the testimony of one border patrol agent on the Mexico-Arizona border. The immersive installation, meant to be approximately twenty minutes long, has been hosted by various cities throughout the United States, Mexico, Canada, and Europe for the past five years. González Iñárritu collaborated with U.S. film producer Mary Parent, Mexican cinematographer Emmanuel Lubezki, and U.S.-based ILMxLAB engineers to document the testimonies of refugees and border patrol officers, which would then form the basis for state-of-the-art photo-realistic avatars to act out their harrowing encounters on the Southwest border.

The traveling museum installation *Carne y arena* has enjoyed tremendous success. González Iñárritu received a special Oscar in recognition of its depiction of immigration and its use of virtual reality to open "new doors of cinematic perception" (Miranda 2017). However, early critical attention has been cautious in acknowledging *Carne y arena* as a work that advocates for Mexican and Central American immigrants and refugees. In "Visceral reality in Alejandro González Iñárritu's *Carne y arena/Virtually Present, Physically Invisible*," Catherine Leen (2021) was one of the first to partially defend Iñárritu's VR project despite the negative critical responses that initially characterized *Carne y arena* as being yet another example of exploitative and elitist human rights art that commodifies distant suffering. While Leen does agree that the cost of hosting and the individualized viewing of the *Carne y arena* installation favors wealthy institutions and an elite Western audience, she insists that early criticism does not situate the VR centerpiece within the triptych mixed-media installation, thereby removing the important conceptual, affective, and historical context of the work. Leen aptly situates *Carne y arena* within a heterogenous collection of other innovative artistic productions that disrupted and expanded simplistic characterizations of the borderland. Second, she lauds the "haptic power of the piece" for its ability to generate intellectual empathy from audio-visual and tactile cues

despite its reliance on the violent trope of the borderland as an open wound (46). On the contrary, Rebecca Adelman (2019) warns that *Carne y arena* produces a "vexed form of empathy," and the author sees it as an expensive form of media consumption rather than as an example of a new artistic medium that is capable of demanding truth and justice (1093). Adelman explains it is difficult to "get one's bearings" in the *Carne y arena* simulation and she is generally disappointed with the holographic aesthetic of the photorealistic avatars as well as the rest of the mixed-media installation. She argues that it produces a unilateral empathy, which does not demand that the viewer, especially the U.S. citizen, take responsibility for the mistreatment of migrants (1100-1105). For example, Adelman reads the visitor comments at the end as primarily an exercise of expressing individual catharsis and praise to the director. Other critics have recognized that *Carne y arena* is prohibitively expensive for the public and that its promotion centers on the experience of a virtual reality spectacle, rather than depicting it as an authentic political call for truth and justice (Adelman 2019; Lim 2017; Robertson 2017; Sánchez 2018). In the Mexico City daily newspaper *Excélsior*, Luis Carlos Sánchez reveals the cost for the National Autonomous University of Mexico and the city to host *Carne y arena*. In total, it cost over 28,000,000 pesos (1.4 million USD), far exceeding any other exhibit ever presented at the University Cultural Center of Tlatelolco. Sánchez also questions whether the university and the city will benefit financially from investing in and hosting such an expensive exhibit (2018 n.p.). Dennis Lim's criticism makes no mention of the mixed media exhibit and instead focuses on the problematic ethics of incorporating *Carne y arena* into the 2017 Cannes Film Festival. Lim dismisses the exhibit as an indulgence for the "well-intentioned tone-deaf culturati" and does not see Iñárritu's cinematic aesthetic of violence as appropriate for this new artistic medium (2017 n.p.). Such negative responses center on a distrust of VR as a viable means of defending human rights—due to its cost, exclusiveness, inability to bridge the "uncanny valley" or the off-putting feeling when encountering human-like avatars—and an alleged lack of artistic mediation to guide viewers through the simulated experience. As I will carefully outline, *Carne y arena* provides extensive artistic mediation that utilizes the VR testimonial mode to complete the subversive and innovative removal of the conceptual, affective, and physical distance maintained by the borderland.

Outside of basic questions concerning the efficacy and the exclusivity of *Carne y arena*, it is also important to note the limitations that are inherent in viewing the exhibit. To protect intellectual property and for logistical reasons, the spectator

cannot take photographs or rewatch the virtual reality simulation. In April 2022, I saw *Carne y arena* twice, and it was on the second trip, with permission, that I was able to record in detail the diegetic events that unfold in the VR testimonial. Still, I found that the VR testimonial medium of *Carne y arena* posed a unique technological challenge to the spectator, requiring a different kind of critical engagement compared to other artistic mediums and museal spaces that easily allow for a careful viewing and extensive notetaking. The limited time and viewings allotted to the spectator to complete a close reading of *Carne y arena* evokes the broader ethical concerns memory scholars have expressed around engaging in the proliferation of digital archiving where everything can be stored yet there is little time to choose. This constraint, in turn, threatens the archival process of recall and the critical interventions necessary to make sense of the traumatic past (De Kosnick 2016; Benjamin 2022). Breaking from how the installation has been marketed and how it has been critically examined, this article does not analyze *Carne y arena* as a triptych installation, because this designation overlooks key elements of González Iñárritu's work. Specifically, previous critical reception has not fully considered the importance of the waiting room, the separate room that contains the artist's statement, and the changing room that precedes the final room with the personal accounts by the immigrants that participated in the VR testimony. I argue that there is substantial artistic mediation that occurs in these spaces which provides important context for the VR testimony. If we consider these rooms, we cannot consider *Carne y arena* as a triptych. Instead, I propose to view *Carne y arena* as a montage, borrowing the term from Georges Didi-Huberman, which can be defined as an unstable unity of shifting material objects and the entangled conflicts that they provoke. *Carne y arena* destabilizes the distance between the immigrant's testimony and the spectator's secondary witnessing in a performance that demands personal and collective accountability.

Immersive Witnessing and Performing VR Testimony

The established practice of testimonial literature and film has relied on first-hand accounts from survivors to retell a linear course of events with the aim of informing and, ideally, provoking a collective response from the audience in defense of human rights. Digital media and memory studies scholars argue that digitized testimonies have moved away from a traditional unidirectional retelling of individual accounts of survival towards a participatory and immersive witnessing where testimony is embedded in the recreation of the space, allowing for a digital return to

a traumatic origin (Walker 2012; Rettberg 2014; Simine and Ch'ng 2023). Virtual Reality testimony exemplifies this shift as it places the spectator in a performative role where the entire body responds to diegesis, offering an experience that Rose (2018a) has termed "storyliving." VR immersion allows for the user to "be there," to enter a digitally recreated memory in a corporal performance of witnessing that influences but does not break the linearity of storytelling. VR testimonial space approximates a real encounter with a historical specter, but it is still limited by the subjectivity of memory and the "disembodied eye" or the cinematic—bodyless—gaze that is produced within the simulation (Schlembach and Clewer 1992; Rose 2018a; Simine and Ch'ng 2023). Moreover, VR simulations produce a "framelessness" or "illusion of a non-mediated experience," meaning, while there are choices that a user may make, there is still mediation present through diegesis and the predetermined choices that the user may take as the retelling of trauma unfolds (Slater 2018; Slater et. al 2020; Simine and Ch'ng 2023). Interestingly, in approaching VR, critics have returned to the cinematic and mnemonic notion and practice of distancing, as there is an added tension that occurs within VR simulations where the settings are becoming more and more realistic, placing the viewer further away from the museal space and closer to the historical site of trauma. VR scholars have warned of the importance of maintaining the fourth wall that allows viewers to approximate but not be in a simulated distressing situation (Murray 2016; Simine and Ch'ng 2023). Thus, the goal of immersive witnessing is to foster ethical and intellectual engagement, not to simply replay a painful memory from an "improper distance," which might dishonor the traumatic past (Gregory 2016; Murray 2016; Nash 2018). Considering VR's close ties with videogaming, the threat of making collective trauma into spectacle is especially concerning. Still, recent scholarly activity has yet to explicitly define how close to the fourth wall is too close, in part because the VR memory market is rapidly developing and there is still open debate about whether VR testimony contributes to the broadening of human rights protections.

As an expensive form of digital archive, VR testimony is especially vulnerable, in agreement with Joanne Garde-Hansen (2011) and Oliver Grau (2013), of being coopted by powerful media and cultural institutions. These entities could fund VR testimony to curate a digital memory that exploits the naïve faith in the veracity of the testimonial image in order to justify their cultural and political hegemony over the past. Anne Hamker (2013) is skeptical that the VR user can adopt an intellectual distance to engage with the work creatively and critically because the

VR experience overwhelms the senses with image scale, color, motion, and sound. These sensations appeal to the visitor's immediate simple emotional reception, which does not necessarily build visual literacy and casts doubt about whether VR can be considered an artistic medium (220). Ainsley Sutherland (2016), in response to techno-utopian claims that VR is an empathy machine, states that VR testimonies that attempt to take an empathetic perspective can only mimic the superficial visual and haptic experience of witnessing a human rights violation rather than replicate the internal state of the witness. While this article cannot fully address the concerns of placing the user adjacent to human suffering, through a case study of a VR testimony, I will demonstrate how this innovative technology can place civil society in an active and participatory role that honors the traumatic past.

The importance of maintaining the *right distance* to foster critical thought has led scholars to consider how the immersiveness of VR testimonies—of being in the other's shoes—can produce empathy, compassion, and solidarity (Nash 2018; Gregory 2016; Segovia and Bailenson 2009). In addition to the body-swapping effect (wherein the participant enters the simulation as an avatar) as an affective technique, Martin Kemp (2013) explains how digital imagery is often handmade, which gives it a singular look, and oftentimes requires the spectator to participate in the artistic digital representation. The participant recognizes the authenticity of the digital simulation, sees the artist's brushstrokes or the simulation's imperfections, and contributes by imagining and suspending disbelief surrounding the diegesis, which in turn produces a "highly refined level of somatic empathy" (Kemp 2013, 391). The position that the spectator may take in VR testimonies and the emotional investment that this positioning can produce are both embodied and embedded. I will add that the imperfections of the simulated testimony help to maintain the fourth wall as it tacitly acknowledges its mimetic qualities. While it can be argued that *Carne y arena* is a large, expensive, and highly sophisticated installation, there are still technological and practical restrictions which provide us with visual and conceptual brushstrokes. In an interview, González Iñárritu confesses that VR technology has "incredible limitations that still exist…If I wanted 10 things, only four could be done" (Tapley 2017). *Carne y arena* contains noticeable imperfections which help to maintain the *right distance* as it is folded into a larger artistic strategy of destabilizing the privileged position taken by the spectator. I will explore how the mixed media installation *Carne y arena* sculpts a digital testimony that honors an ongoing transnational humanitarian crisis by placing the spectator within the brutality of the militarized southern border

of the United States, denying them a cathartic conclusion, and demanding personal and collective accountability.

Poster

The installation begins in a dimly lit waiting room where a small group of participants wait to be led one by one to the entrance. Although *Carne y arena* is designed to be experienced collectively at the beginning and end, it is mostly an individual experience. The poster for the installation titled "Alejandro G. Iñárritu CARNE Y ARENA (Virtually present, Physically invisible)" is lit in warm tones, and a soft, mournful soundtrack fills the waiting room with the sounds of a synthesized organ and the occasional clang of a metallic object. The poster superimposes over a desert landscape a diagram of a red, transparent heart composed from a topography map of the southwest U.S.-Mexico border. The countries are labeled "U.S." and "T.H.E.M." and are separated by a dotted line labeled "barrier to entry" that wanders vertically across the right atrium up to divide the aortic arch of the heart. There is a smaller dotted line that wanders horizontally through both countries, further suggesting the porous nature of the borderland. The topographical features of rivers and changes in elevation evoke small veins and, from up close, one can see that some are labeled in English and some in Spanish: "refugees," "illegal aliens," "teachers and educators," "artists," "activists," "opportunity," "dreamers," "citizens," "refugiados," "inmigrantes," "Patriots," "Countrymen," "Doctors," and "Gay and transgender." Many of these labels repeat on both sides of the border and there is no linguistic separation; thus, English and Spanish can be found on both sides. The poster foreshadows to the participant the belated timing of individual and collective trauma, its refusal to be located, and its spectral qualities that allow trauma to (re)appear at any given time or place (Caruth 1995). By visually depicting the (im)material processes and consequences of labor exploitation, in the form of a horrific medical procedure on a vital organ known to symbolize love, the poster testifies against a political reality that allows for the separation of the heart from the body, of a hegemonic U.S. and a marginalized and mislabeled "them." Catherine Leen (2021) connects Gloria Anzaldúa's observation of the trope of "herida que no cicatriza" in borderland artistic productions to explain how the image of the mislabeled heart in *Carne y arena* alludes to the decades of negative political rhetoric in the United States that attempts to justify the criminalization and exploitation of forced migration from Spanish-speaking countries (40, 49-50). However, I will add, the blood that courses across the border

becomes a vital sign of hope as it evokes a sanguine desire for unity. It is an emotional plea to understand the stranger by questioning the distance between inside and outside, and it alludes to the impossibility of completely isolating societies from each other.

The Fence

At the entrance of *Carne y arena* is a piece of border fence from Naco, Arizona, and a plaque that explains in English and Spanish that this metal fence is connected to another historic trauma: the same material was used as portable landing mats for helicopters during the Vietnam War. Thus, González Iñárritu establishes a surprising material connection between two transnational traumas, both of which are examples of the abusive presence of U.S. imperialist power. The plaque goes on to explain that this metal fencing was replaced in 2016 by a taller twenty-foot-high steel wall. This vestige of war and of measures to prevent immigration, now absurd trash devoid of meaning or use, is cut out and presented to the spectator as a kind of anachronistic hieroglyph that deconstructs our preconceived notions of what it meant and means to police the movement of bodies. While *Carne y arena* is meant for a broad international audience, it carries a particular emotional weight for United States citizens by approximating our implication in the historic and ongoing barbaric policies that inflict pain and suffering onto the Mexican and Central American immigrant and refugee families. It is this perspective that I hope to illuminate in this piece. To enter the installation is to enter another world, another time, to make the invisible refugee and immigrant appear, and in doing so, we, the U.S. citizenry, must be ready for the affective labor involved in *U.S.* approaching *them*. This artistic strategy of temporal, spatial, and conceptual distancing evokes the cinematic practices González Iñárritu incorporated to depict the borderland. Furthermore, I interpret the inscription that accompanies the border fence as an epitaph and the installation as a mobile tomb for both the survivors and the countless missing victims that have been lost in the desert. A 2017 report by the National Human Rights Commission in Mexico estimated that hundreds of thousands of citizens fleeing armed conflict in Central America and Mexico became internally displaced. Approximately 80 percent of the women and girls that trek across Mexico to get to the U.S. border are raped. Since 2006, roughly 120,000 migrants have disappeared while moving through Mexico to get to the United States. The 2017 Forensic Institute of Pima County, Arizona, states that around 2,816 human remains of suspected undocumented border crossers have been recovered

since 2000. The horrific statistics of death, abductions, and rape have led Mexican writer Valeria Luiselli to characterize the borderland as a "common grave" (2017, 29). If this positioning of the temporal and spatial suffering of the immigrant starts as an abstraction, a faceless body, a conceptual call for empathy, the installation goes on to make human suffering visible, starting with the following room that contains the artist's statement.

The Artist's Statement

The first room contains the artist's statement in English and Spanish. There, González Iñárritu explains that the purpose of the project is for visitors to see, feel, hear, and *experience* the haunting digital recreation of the testimonies of many Mexican and Central American immigrants and refugees. González Iñárritu explains that this re-creation involved the very immigrants and refugees that he interviewed. The clothing that they wear in the reenactment are the same pieces they were wearing while attempting to cross the border. González Iñárritu also explains his interest in VR technology as an audiovisual medium that cannot be reduced to a cinematic experience, claiming that no two visits will be the same. González Iñárritu thanks Lubezki and ILMxLAB for their technical expertise in archiving these testimonies using photo-realistic avatars. The artist's statement serves as a mark of authenticity and trustworthiness, two key tenets that Martin Kemp (2013) identifies as central to building visual literacy. In addition, it makes clear that *Carne y arena* is a mobile archive, a "virtual museum" (Grau 2013) designed to destabilize the distance between immigrant and citizen—namely Central American refugees and United States citizens. This is achieved through a temporal and spatial performance in which the spectator enters a living space of testimony and becomes a participant where, for a brief moment, the citizen performs the experience of forced migration.

The Icebox

After the viewer is presented with a conceptual and historic context for the installation through text, image, and sound, they enter a detention room or, as commonly referred to on the border, an icebox. The name is derived from the federal agency Immigration and Customs Enforcement (I.C.E.), which is responsible for hunting down undocumented immigrants, and it also refers to the cold temperatures of the holding cells where captured immigrant adults and children are detained. The transition is jarring; the low light of the room featuring the artist's statement suddenly

gives way to harsh incandescent lighting with a drone that sounds through inconspicuous speakers. The brutality of the industrial-style lighting is matched by the cold temperature, the metal aluminum seating, abundant use of concrete, the sterile white walls, the red lettering of commands written in English and Spanish, and a red light designed to dictate the spectator's movement into the next room. Strewn across the room are the shoes of men, women, and children for all types of recreational occasions: high heels, work boots, a child's soccer cleats, a little girl's sneaker. Catherine Leen notes that the display of shoes establishes another anachronistic and haunting connection with the Auschwitz Museum in Poland that includes a collection of shoes and other personal belongings from the victims of the Holocaust (2021, 44). In the icebox room, the participant has no idea whether these people are dead or alive; instead, the shoes serve as material evidence of the estimated 6,000 disappeared migrants and the many survivors that remain traumatized from crossing the desert border (Ruiz 2017, n.p.). The participant is told to remove their shoes and socks and to place their belongings into a metal box. Only then does the red-light flash and provide the participant the chance to move to the next room. I argue that it is here where the spectator becomes a participant in a highly performative act where the individual must partially shed themself of citizenship. In agreement with Georges Didi-Huberman (2018), this action of removing one's shoes produces a distancing or alterity, an interplay of differences where the faraway "them" is here, and it is the participant whose "U.S." status is in question.[2] The participant can now see "them," what is left of "them," in what evokes a morgue that will indefinitely store the shoes, the little material evidence that remains of the disappeared, in a refrigerated room. To lose one's shoes is both the loss of citizenship (Who am I?), the loss of a sense of place (Where am I?), and it is also the loss of a critical piece of clothing necessary to survive the desert. The participant's *flesh* moves from an industrial space of labor exploitation, a non-place designed to identify and restrict the stranger's body, to the next room where *carne* will meet *arena* as the participant's feet touch the desert sand. The participant's skin is now primed to make, record, and share a new impression of the other.

[2] Didi-Huberman (2018) states that alterity, like the notions of distancing and montage, is a concept that can be seen in various forms of art: film, theater, epic poetry, writing, narration, and theory (56).

VR Experience

The virtual reality experience grounds the contextual framework of the installation in an emotional performance of witnessing the surrender of a group of migrants to border patrol agents. The six-and-a-half-minute simulation begins at night where a migrant smuggler or *coyote* threatens the group to keep walking or risk being caught. One woman is injured, and the others are exhausted. While they rest, they are promptly identified by a helicopter with a spotlight, and a team of militarized border patrol agents appear, holding up the group at gunpoint as they attempt to locate the *coyote* in charge of their movements and assess whether the members of the group pose a threat. While the VR-simulated apprehension continues, the wind generated by the helicopter on a low pass is simulated by a large fan located at the top left corner of the room. The agents disregard the woman with the injured leg and interrogate the group in Spanish and English. Out of fear, no one identifies the *coyote*. The agents question one young man who only speaks Mayan. Suddenly, a digital specter appears, producing a cicada-like sound and floating across to the injured woman. As the specter takes shape, the desert and everything else quickly fade to black. An illustrated family dinner table appears, along with the woman on one side and an exhausted, unresponsive boy slumped at the opposite end of the table. He has a flashlight in his hand that sends light across the table. The woman sings a hymn in an Indigenous language that is difficult to discern. Clay figures of pale complexion appear, one walking away from her towards the middle of the table, sinking with every step. On the other side clay figures begin to fall overboard a makeshift boat, disappearing into the liquid table. The nightmare abruptly ends with a jump cut to the desert in the middle of the day only to be abruptly brought back with a second jump cut to the nocturnal scene of apprehension. While the agents separate men and women to load them into the SUVs, they notice that one migrant speaks perfect English, and the agents demand to know how come he speaks English so well. He explains that he is a U.S.-educated attorney and was born and raised in the United States, which he considers to be his home. It is at this point that the border patrol agent now confronts the spectator at gunpoint, demanding that the participant get on their knees and keep their hands up. The apprehension abruptly ends with a final jump cut, with the participant still in a position to be apprehended, but now in the desert on a beautiful morning. The simulation ends with a coda where sounds of the desert can be heard and a plastic bag floats, suspended in the air. The remains of the injured woman, with a yellow towel and white shoes, hang next to a mesquite tree.

As detailed previously, VR testimony is embedded and embodied, allowing for a witnessing of trauma that is not dependent on the survivor's retelling of what happened. *Carne y arena* complicates what it means to stand at the *right distance* from testimony. On one hand, the simulation adopts a cinematic gaze that utilizes tactile cues to enhance the impression of "being there" but not to the extent that the viewer becomes disoriented and unable to discern the scene from a real apprehension. Further, the artist's brushstrokes are clearly visible, the photo-realistic avatars lose their veracity and become more painted and pixelated than uncanny simulacra as they approach. The nightmare and jump cuts serve as clear diegetic markers that are initiated outside the participant's control. However, there is an approximation that occurs simultaneously: the viewer imagines and performs their own loss of citizenship, which makes them one of the apprehended. It is this becoming-other—with one's body being labeled, located, and positioned as a stranger—that momentarily destabilizes the "fourth wall" and provokes an emotional corporal performance of a loss of citizenship that is not resolved in the immediate witnessing of the short VR simulation; rather it denies catharsis by demanding that the spectator take in and ruminate on its spectral qualities.

While the icebox alludes to the (im)material brutality of immigration policies that deny basic human rights in order to exploit people, the borderland room transports the participant to a traumatic origin, a haunting space that lives in the periphery of U.S. citizens' collective imagination. The poster of *Carne y arena* reminds us, the U.S. citizenry, that the borderland is both naturally and artificially an inhospitable place. Similar to his films, González Iñárritu imagines the borderland as a local and global specter that traumatizes and destroys families and, in doing so, severs societal bonds between communities. Sara Ahmed, in *The Cultural Politics of Emotion* (2015), explains how feelings are embedded into words, figures, and bodies, and argues that these feelings provide a historical justification to position certain bodies in certain places. The figure of the stranger is a carefully crafted body that the citizenry is taught to fear, so as to justify the inhumane state-sponsored tactics of exclusion and violence directed at the stranger's body and the restricted space in which it resides. González Iñárritu destabilizes the proximity and distance between the two bodies, that of the citizen transformed into stranger and vice versa, that share a common border. This reorients and invites us to form a "contingent attachment of pain," thus destabilizing the us/them paradigm and teaching us to attach feelings of empathy onto the immigrants' bodies (Ahmed 2015). Ahmed states that the work that

is required to feel compassion, or feelings-in-common, can be attained in virtual plazas or digitized communal spaces, an observation that I interpret as including the VR artistic medium. Indeed, *Carne y arena* provides a different alignment of bodies using montage to destabilize time and place, in turn challenging the participant, now temporarily stripped of their citizenship, to question what it means to witness the cruel practices through which forced migration is criminalized.

In an interview, González Iñárritu states that virtual reality can "change the landscape of museums and galleries, because you can go into the mind of an artist" (Tapley 2017). Additionally, when differentiating between cinematic diegesis and VR narration, González Iñárritu insists that VR technology breaks the "dictatorship of the frame" by giving the spectator an opportunity to determine how narration is experienced (Leen 2021). Thus, González Iñárritu distinguishes VR storytelling from the testimonial power of film as a medium that opens a personal space for the viewer to peer into the mind of the artist, and consequently, allows the viewer freedom of movement, as choice is connected to one's location in the retelling of testimony. Catherine Leen (2021) observes how "carefully calibrated sound" acts as temporal markers of diegesis, contributing to feelings of anxiety and vulnerability from the viewer. For example, not only does the sound of the helicopter signal the beginning of the apprehension, but it is also a sound associated with war (Leen 2021, 47). Additionally, I will add that the appearance of the helicopter as war machine provides a sonorous, tactile, and phantasmal return to the metallic border fence, the mobile tomb with epitaph, that marks the entry to *Carne y arena*.

While Leen's observations offer insight into how diegetic and non-diegetic sounds keep narration intact during the virtual reality simulation, I observe a use of distancing that is both a deliberate cinematic technique to provoke a destabilization of the us/them dichotomy and a unique trait of VR simulation that marks an important distinction between film and VR art. That is, the VR-simulated apprehension evokes the subjective and chaotic nature of witnessing a traumatic event unfold in real time. The participant produces a "frameless testimony" from unexpected angles and distances that have not been deliberately framed by a documentary filmmaker, misses important details that are out of view, and feels overwhelmed by the amount of audio-visual information that is provided. This chaos approximates how trauma is experienced first-hand rather than a viewer watching a two-dimensional filmic representation of trauma. I argue that VR testimony produces a kind of digital skin over a museal space evoking the cranium. *Carne y arena* serves as

what Didi-Huberman (2016) refers to in sculpture as a skull site: a site of intense ontological questioning meant to destabilize the comfortable distance between us and them, of what is interior and exterior. In the simulation, this is exemplified by a digital effect that occurs if the participant accidentally passes through a digital avatar, momentarily revealing the avatar's red, beating heart. The avatar's interiority is magically revealed when the participant is standing in the right coordinates at the right time in the desert sand. To gaze into the avatar is to look within ourselves, how our bodies work; it is a unity that seems impossible and yet the participant sees the heart, hears it, sees the blood course through the body. The allegorical return to the heart is revealed by chance, provoked by the chaos of the main narration where the participant accidentally steps into a body, momentarily becoming that body, taking the position of immigrant, orienting our performance towards knowledge. Thus, I see this technological limitation or brushstroke (of the avatars not recognizing you and the physical space you reside in) as capable of providing meaning and, in that way, complementing the creative thrust of *Carne y arena*.

The corporeal performance of body-swapping between participant and avatar mirrors the spectral distance that the body has vis-à-vis landscape. In *The Eye of History: When Images Take Position* (2018), Georges Didi-Huberman details how distancing sharpens our gaze or brings us to see an image as a question of knowledge, allowing us to maintain a critical view on how history is made of images. Distancing dislocates understanding and in doing so creates more understanding. The division that distancing creates can provoke the uncanny by assuming the aesthetic position of strange or foreign (Didi-Huberman 2018, 62). *Carne y arena* destabilizes the distance between the conceptual and material objects of pain and a digital skin that participants temporarily wear, unleashing first-hand terror and guilt at witnessing what we, U.S. nationals, do to them, what we can do to ourselves.

As mentioned above, the simulation utilizes a series of cinematic jump cuts to interrupt the comfortable flow of diegesis and allow for the participant to be alone with the desert. The desert is experienced through a real, physical connection of feeling the sand underfoot and a digital mirage of a three-dimensional audio-visual recording of the borderland landscape. The brief jump cuts bring us back to the same place in the desert but at different times of the day. Martin Lefebvre reminds us, in his introductory chapter to *Landscape and Film* (2006), that filmed landscape can evoke a minor narrative that is independent of diegesis. These meditative pauses during which landscape appears are characterized by Lefebvre as *temps morts*. González

Iñárritu leads us to experience the desert landscape not just as a setting in which to relive the trauma of border-crossing into the United States, but as a communal digital burial site capable of seeing the institutionalized cruelty of borderland politics.

In "Expanded Fields: Postdictatorship and the Landscape" (2012), Jens Andermann conceives of landscape, including the desert landscape, as a deterritorializing space capable of inspiring mnemonic practices that offer an improvised shelter, or "a mobile space of itinerant work of mourning," for the survivors of state-sponsored terrorism (178). Andermann describes a creative tension between the natural indifference of landscape towards human suffering, on the one hand, and, on the other, civil societies' need to preserve and protect memory through the curation of landscape (167). Landscape and museal space in *Carne y arena* kindle this creative and ethical tension. The simulated desert landscape is both a non-human expanse of natural space crafted from natural forces well beyond intelligibility as well as the site where the journey of returning to a recreated site of trauma serves as a performance of individual affect and collective mourning. This is exemplified by the final jump cut. The jump cuts of *Carne y arena* provide an uncanny entanglement within a single space: at night it becomes a space in which to experience the terror of being captured by border patrol agents; but during the day, the participant is given temporary refuge, a space of meditation, a space that evokes a longing for a new, peaceful life. The final jump cut places body with corpse and the desert becomes a site of collective mourning. González Iñárritu explains that he included the yellow towel and white shoes as a homage to the tragic story that inspired *Carne y arena*. While filming *Babel,* González Iñárritu overheard a testimony about a mother who broke her ankle while attempting to cross the border. She urged her eleven-year-old son to leave with the group. The son obeys and gives her a bottle of water and a little towel with yellow squares to cool her face. He is soon apprehended and tries in vain to get the border patrol agents to look for his mother. They ignore him, deport him, and it is only out of luck, three days later in Oaxaca, that a radio station allows for the son and father's pleas to be heard. Shortly after, a mass search finds the skeletal remains of the woman, along with her white shoes and the towel under a mesquite tree (Miranda 2017, 4). Through the unstable unity of shifting (im)material objects, *Carne y arena* moves from an abstract transnational historic plea for the protection of immigrants' rights to a memorial for this woman and her family that is left in ruins. González Iñárritu strategically leaves us with no names, just a digital specter and a digitally recreated unmarked tomb in the Arizona desert.

Final Room

After removing the VR backpack and headset, the participant walks through the sand to the exit. It is in a small metallic room that the participant is given their citizenship back. With shoes on, the participant is free to enter the final room where, together, other participants collectively read the testimonies of the people who have recreated their own experiences crossing the border, evoking a return to the documentary picture that will record personal memories of trauma (Grau 2013, Garde-Hansen 2011). In my Dallas visits, the final room is dimly lit with the series of eight portraits contained in eight black boxes with eight LED screens. A plaque explains that these are the "actual people you just encountered in the virtual space. They reenacted their personal border crossings to create the narrative you just experienced." The final section of *Carne y arena* establishes a documentary distance. The score of the waiting room can be heard as each portrait offers the same documentary style close-up, eye-level shot of Lina, Manuel, Luis, Carmen, Amar, Jon, Jessica and Francisco. As the silent short footage of their faces burns in and out, their written testimonies are displayed in Spanish and English. A red button allows for the participant to switch between languages. The inclusion of Jon, a border patrol agent, who recalls the trauma of seeing immigrants die of dehydration and heat exhaustion, explicitly connects their suffering with ours. Interestingly, the testimonies and the strategic techniques typical of the documentary style are placed at the end, not at the beginning, allowing for a displacement of testimonial time and distance (i.e. montage). Indeed, the exhibit shares a common artistic tendency with González Iñárritu's films, which utilize filmic conclusions as a means to produce a temporal, spatial, and conceptual unity out of the multiple narratives.

Montage in *Carne y arena* serves as a multi-media notion and practice to illustrate the unevenness of not only how VR testimony distributes memories (Simine and Ch'ng 2023), but, I argue, it also reveals the instability of VR as a distancing device. This leads us to a question that is slightly modified from the question that initiated this article: *should* VR testimonial art place the viewer's feet into the shoes of others? Without giving a definitive answer, *Carne y arena* explores an uncomfortable approximation to the audiovisual, tactile, and affective elements that comprise the fourth wall. It refuses a cathartic conclusion by momentarily removing the participant's privileged position as citizen and, as the participant leaves the final room of the installation with their citizenship now fully restored, it makes it clear that to have citizenship in a place that is hostile to the figure of the stranger is to be an

implicated subject, a secondary witness who cannot walk away from the brutality of U.S. immigration policies towards Mexican and Central American refugees (Rothberg 2019; Popescu 2015; Lothe et. al 2012; LaCapra 2014; Arnold-de Simine and Ch'ng 2023). After the participant leaves the installation, there is one final uncanny performance that destabilizes the distance sustaining the reality/digital simulation paradigm. In the comfort of their home, the participant eventually takes a shower; looking down they see the grains of desert sand stream off their body into the drain, a reminder of the horrors just recently witnessed. Like the faceless animation of migrants that fall into the abyss of the family dinner table in the VR simulation, we witness as flesh and sand, temporarily united, are separated and disappear through an indifferent urban infrastructure of water and pipes.

Works Cited

Adelman, Rebecca A. 2019. "Immersion and Immiseration: Alejandro González Iñárritu's *Carne y arena*." *American Quarterly* 71(4): 1093-1109.

Ahmed, Sara. 2015. *The Cultural Politics of Emotion,* 2nd edition. New York City: Routledge.

Andermann, Jens. 2012. "Expanded Fields: Postdictatorship and the Landscape." *Journal of Latin American Cultural Studies: Travesías* 21(2): 165-187.

Bastens, Jan, Ortwin de Graef and Silvana Mandolessi. 2020. *Digital Reason: A Guide to Meaning, Medium, and Community in a Modern World.* Leuven, Belgium: Leuven University Press.

Benjamin, Elizabeth. 2022. "(Web)sites of Memory: National Nostalgias in the Transnational Age." In *The Memorial Museum in the Digital Age*, edited by Victoria Grace Walden. Brighton, UK: Reframe.

Caruth, C. 1995. *Trauma: Explorations in Memory.* Baltimore, MD: John Hopkins University Press.

De la Peña, Nonny. 2015. "The future of news? Virtual Reality." *TEDWomen*. https://www.ted.com/talks/nonny_de_la_pena_the_future_of_news_virtual_reality?subtitle=en. Accessed 20 July 2022.

De Kosnick, Abigail. 2016. *Rogue Archives: Digital Cultural Memory and Media Fandom* Boston: MIT Press.

Deleyto, Celestino and Maria del Mar Azcona. 2010. *Alejandro González Iñárritu*. Champaign, IL: University of Illinois Press.

Didi-Huberman, Georges. 2016. *Being a Skull: Site, Contact, Thought, Sculpture*. Translated by Drew S. Burk. Minneapolis: Univocal.

___. 2018. *The Eye of History: When Images Take Positions*. Translated by Shane B Lillis. Cambridge: MIT Press.

Freeman, Lindsey A., Benjamin Nienass, and Rachel Daniell. 2014. *Silence, Screen, and Spectacle: Rethinking Social Memory in the Age of Information*. New York: Berghahn.

Friedman, Elisabeth Jay. 2017. *Interpreting the Internet: Feminist and Queer Counterpublics in Latin America.* University of California Press.

Garde-Hansen, J. 2011. *Media and Memory*. Edinburgh: Edinburgh University Press.

Grau, Oliver, Dolores Steinman, Thomas Veigl, et al. 2013. *Imagery in the 21st Century*. Cambridge, MA: MIT Press.

Gregory, S. 2016. "Immersive Witnessing: From Empathy and Outrage to Action." *Witness Blog* (Nov. 16): Retrieved June 23, 2023: https://blog.witness.org/2016/08/immersive-witnessing-from-empathy-and-outrage-to-action/.

Kemp, Martin. 2013. "In and Out of Time: Is There Anything New under the Cyber-Sun?" In *Imagery in the 21st Century*, edited by Oliver Grau, Dolores Steinman, Thomas Veigl, et al. Cambridge, MA: MIT Press.

LaCapra, Dominick. 2014. *Writing History, Writing Trauma*. Baltimore, MD: Johns Hopkins University Press.

Landsberg, Alison. 2004. *Prosthetic Memory: The Transformation of American Remembrance in the Age of Mass Culture*. New York: Columbia University Press.

Leen, Catherine. 2021. "Visceral reality in Alejandro González Iñárritu's Carne y arena/Virtually Present, Physically Invisible (2017)." *Studies in Spanish & Latin American Cinemas* 18(1): 37-55.

Lefevbre, Martin. 2006. "Between Setting and Landscape in the Cinema." In *Film and Landscape*, edited by Martin Lefevbre, 19-60. New York: Routledge.

Lim, D. 2017. "Squared circle." *Artforum*, 5 June. https://www.artforum.com/columns/dennis-lim-at-the-70th-cannes-film-festival-234474/. Accessed 12 August 2022.

Lothe, J., S.R. Suleiman, and J. Phelan. 2012. *After Testimony: The Ethics and Aesthetics of Holocaust Narrative for the Future.* Columbus, OH: The Ohio State University Press.

Luiselli, Valeria. 2017. *Tell Me How It Ends: An Essay in Forty Questions*. Minneapolis: Coffee House Press.

Milk, C. 2015. "How virtual reality can create the ultimate empathy machine." Ted Talks, 22 April, https://www.ted.com/talks/chris_milk_how_virtual_reality_can_create_the_ultimate_empathy_machine?subtitle=en. Accessed 15 July 2022.

Miranda, C. 2017. "How a migrant woman's death influenced Alejandro Iñárritu's Oscar-winning VR project *Carne y arena*." *Los Angeles Times*, 28 November. https://www.latimes.com/entertainment/arts/miranda/la-et-cam-alejandro-inarritu-lacma-20171127-htmlstory.html. Accessed 20 July 2022.

Nash, K. 2018. "Virtual Reality Witness: Exploring the Ethics of Mediate Presence." *Studies in Documentary Film* 12(2): 119-131.

Pima County: Office of the Medical Examiner Annual Report 2017. https://content.civicplus.com/api/assets/38e9bf76-b474-4867-a1b9-cffffbac2f79?cache=1800. Accessed 11 December 2024.

Popescu, D.I. 2015. "Introduction: Memory and Imagination in the Post-witness Era." In *Revisitng Holocaust Representation in the Post-Witness Era*, edited by T. Schult and D.I. Popescu, 1-7 . London: Palgrave Macmillan.

Raessens, Joost. 2019. "Virtually Present, Physically Invisible: Alejandro G. Iñárritu's Mixed Reality Installation *Carne y arena*." *Television & New Media* 20(6): 634-648.

Robertson, A. 2017. "VR was sold as an 'empathy machine' but some artists are getting sick of it." *The Verge*, 3 May, https://www.theverge.com/2017/5/3/15524404/tribeca-film-festival-2017-vr-empathy-machine-backlash. Accessed 20 July 2022.

Rose, Mandy. 2018a. "Technologies of Seeing and Technologies of Corporeality: Currents in Nonfiction Virtual Reality." *World Records* 1(1): 1-11.

___. 2018b. "The immersive turn: Hype and hope in the emergence of virtual reality as a nonfiction platform." *Studies in Documentary Film* 12(1): 1–18.

Rothberg, Michael. 2019. *The Implicated Subject: Beyond Victims and Perpetrators*. Stanford: Stanford University Press.

Ruiz, C. 2017. "Iñárritu's VR project brings terrifying experiences of migrants and refugees to life." *The Art Newspaper*, 5 June. https://www.theartnewspaper.com/2017/06/05/inarritus-vr-project-

brings-terrifying-experiences-of-migrants-and-refugees-to-life. Accessed 14 July 2022.

Sánchez, L. C. 2018. "*Carne y arena* de González Iñárritu costó $28,527,677". *Excelsior*, 15 January. https://www.excelsior.com.mx/expresiones/2018/01/15/1213711/. Accessed 1 October 2018.

Simine, Silke Arnold de and Eugene Ch'ng. 2023. "Distributed Remembering: Virtual Reality Testimonies and Immersive Witnessing." In *The Palgrave Handbook to Testimony and Culture*, edited by Sara Jones and Roger Woods. Cham, Switzerland: Palgrave Macmillan.

Sutherland, Ainsley. 2016. "The Limits of Virtuality: Debugging the Empathy Machine." https://docubase.mit.edu/lab/case-studies/the-limits-of-virtual-reality-debugging-the-empathy-machine/. Accessed 10 July 2022.

Tapley, K. 2017. "Alejandro G. Iñárritu on *Carne y arena* and the academy's movie museum." *Variety*, 14 November. http://variety.com/2017/film/awards/alejandro-inarritu-carne-y-arena-academy-museum-inter-view-1202610586/. Accessed 31 August 2018.

Thompson, A. 2017. "Why González Iñárritu is the director who finally got VR Right-Cannes 2017." *IndieWire*, 20 May. https://www.indiewire.com/features/general/alejandro-gonzalez-inarritu-carne-y-arena-cannes-vr-1201819096/. Accessed 20 August 2018.

Walden, V.G. 2019. "What is 'Virtual Holocaust Memory'?" *Memory Studies*: 1-13.