

100-Yen Apocalypse: Sensorial Experiences of Zombie Play in Japanese Game Centers

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Abstract

This article examines the relationship between players' exteroceptive senses and videogame systems in the setting of a public game center. I address the zombie arcade game *Left 4 Dead: Seizonshatachi* (Neilo 2014), drawing on field observations of the game *in situ* and at play in the physical environs of two Taito game centers, as well as my own researcher gameplay. I discuss the spatial and sensorial context of the game's intended play experience, composed of unsettling smellscape, variable lighting conditions, insistent noise pollution, and distraction by other customers. This play context is analysed as a space that mirrors the senses of disorder, contingency, and bodily vulnerability that lie at the heart of fictional zombie encounters. I contend that *Left 4 Dead: Seizonshatachi* and similar arcade experiences involving zombie texts accelerate the affective, narrative, and experiential tendencies of zombie media and intensify their impact for players.

Introduction

Encountering a zombie game in the context of a public videogame arcade offers players a powerful experience of the narrative and affective tendencies of the popular cultural zombie genre. The relationship between players' exteroceptive senses, the spatial context of their play activity, and the game system they engage with takes on distinct, under-explored characteristics in such a setting. Gameplay in a public setting is by nature a variable player experience in terms of configuration of equipment, controller devices, lighting, noise pollution, distraction from other customers, and more. The experience of immersing oneself in a zombie videogame while being unable to control these various aspects of the play context accelerates and intensifies the narrative and experiential conventions traditionally sought or deployed by zombie media.

Zombie, horror and survival horror arcade cabinets are commonplace in the ubiquitous game centers that dot Japan's cities. A number of such texts are well-known to patrons and scholars of these spaces, encompassing a range

of cabinet constructions and interface designs, with varied implications for the bodily and sensory experiences of their users. *The House of the Dead* (Sega AM1 1996) is perhaps most iconic, a 'rail shooter' in which players were invited to lay waste to zombie hordes by pointing and firing so-called 'light gun' replica weapons at the game cabinet's screen while their virtual avatars automatically moved along a predetermined route. More contemporary texts such as *Silent Hill: The Arcade* (Konami 2007) have continued the use of the light gun as player interface. *Zombie Revenge* (Sega 1999) pitted players against reanimated corpses by way of simple joysticks and buttons, while *The Typing of the Dead* (WOW Entertainment and Smilebit 1999) required two competing players to utilise computer keyboards to quickly type letters and phrases in order to destroy approaching zombies. Other texts, including *Dark Escape 4D* (Bandai Namco Entertainment 2012), position players within enclosed cabinets with multiple display screens, air cannons, motorized seats and surround sound.

*Left 4 Dead: Seizonshatachi*¹ (Neilo 2014) (hereafter referred to as *L4D:S*), meanwhile, is a first-person zombie shooter game which invites attention initially because it appears a poor fit for these arcades: it has unusual origins

¹ *Left 4 Dead: Seizonshatachi* translates to *Left 4 Dead: Survivors*, and is also referred to as *Left 4 Dead: Arcade*.



(a localised port of a popular American zombie game series), utilises an uncommon control interface (dispensing with typical joystick or replica weapon controls), and boasts no notable fan culture. Yet, at the same time, the game is exemplary of the distinct mode of embodied and sensorial experience the arcade zombie game, through its public exposure of play, is able to foster for players. Through my own research gameplay and observations of the physical environs in two game centers, I analyse *LAD:S* as text (including the physical game cabinet and its interface), and also address the spatial and social context of the game's intended play experience.

Playing with sense

Videogames, both in domestic and public settings, are sensorial and physical experiences. Players' bodies are engaged "in a set of relationships with material objects" that Jon Dovey and Helen Kennedy contend make gameplay a fundamentally "tactile and kinesthetic experience" (2006, 107). Torben Grodal gestures toward the significance of the senses to play in his oft-cited description of videogames as being "stories for eye, ear, and muscles," (2003) and to this list the other exteroceptors of the nose, mouth, and skin should be added. A growing body of literature has cautioned games studies researchers that to analyse videogame play in a contextual vacuum means to elide critical aspects informing the narrative, affective, social, and ludic nature of these experiences (i.e. Bogost 2006; Dovey and Kennedy 2006; Giddings 2009; Jayemanne 2017). Brendan Keogh proposes that in order to "adequately account for the embodied experience of videogame play we must start with the embodied and sensorial engagement" that players are imbricated in during play (2018, 12). To do so, researchers must appreciate that "we perceive our world through the different facets of our senses simultaneously, [and] we perceive the videogame not as audiovisuals detached from actions but as sight, sound, and touch simultaneously" (Keogh 2018, 117).

The sensorial engagements that take place during play are notable because they are implicated in the cybernetic connection established between the player and the mechanical play object, wherein sensory output from the game machine is mediated into the circuitry and flow of the human-computer assemblage (Keogh 2018, 40). Examination of sense also calls attention to the *situated* reality of play – machine and player are not the only actors in the textual assemblage that comprises a play experience.

T.L. Taylor identifies the ways that players' surroundings are enlisted by videogames, noting how users and their bodies are situated in relation to:

...the input devices (keyboard, mouse, console controller, steering wheel and accelerator, microphone), the physical space (table, chair, sofa, floor), the visual space (television, monitor, the room around us), and the aural space (via headphones or speakers, but also in relation to the ambient sounds or voices of other people in the physical room). (2012, 37).

Consideration should extend to sensory input for the player that is both intended and embedded into the game text, as well as unanticipated and unpredictable intrusions from the immediate (physical) environmental context of play.

In arcades, the sensorial and environmental backdrop to play is notably different to the home environment. In place of the familiar comfort of home furnishings, the ability to focus on a singular display screen, and the sensory predictability of a context largely controlled by players, arcades offer multiplicity and instability: rows of screens, layers of sounds, competing smells, and fluctuating crowds of players that are likely to be socially unknown to one another. Game centers in Japan are, for patrons, familiar social spaces characterised by ongoing changes in their meaning and purpose as they are subjected to the varied and fluctuating desires players bring to the space (Pelletier-Gagnon 2019). Similarly, Samuel Tobin has remarked that while game cabinets are "central to the arcade as an organizing object for a range of social practices," only some of these practices "are limited to the interaction between players with game narratives, screens, and joysticks" (2016). The game center is a space containing bodies, noises, odors, and images that are gathered for unpredictable and shifting purposes.

The connection between the game center's environmental context and the experience of playing a zombie horror game may initially appear counterintuitive. In videogames, the fruitful sensory connection between the audience and text results in a "tangible and tactile power" for the horror genre, demonstrated and "measured by our quickened heartbeat, the sweat on our skin, and our silent shout" (McCrea 2009, 220). Bernard Perron contends that "the dreadful atmosphere at the heart of the horror genre asks for an ideal setting" and that "to play in a video arcade or in a public space [...] doesn't grant the person playing

the same ability to manage the setting as they do at home” (2018, 102). For many interactive horror examples, Perron’s condition for an ideal context is compelling. The bedroom or living room in the depths of night, with curtains drawn, provides an apt substrate for terrifying game experiences. Jump-scaries, psychological manipulations, and lonely travails through haunted virtual homes, for example, all benefit from the heavy, uninterrupted tension of a managed space. Cast in darkness and punctuated with violent, shocking, haunting imagery generated by a computing interface, the home space becomes itself defiled and haunted, adding affective weight to interactive horror. This is, of course, a sensation familiar to anybody with childhood memories of the unknowable threats posed by closets, dark corners, and the space under the bed.

Zombie media, while part of the broader horror genre, demand a different ideal context for reception. The social, political, cultural, biological, and hermeneutical dissolution that underpins zombie outbreaks and their apocalyptic impact suggests an optimal environment for player engagement might mirror that same chaos and decay. Zombie media, according to Allan Cameron, seek to convey the “collapse of sense and intentionality” the undead bring to their narrative worlds to such an extent that their very mediation “places a marked emphasis on chance and the contingent” (2012, 80). A state of *contingency*, a fixation of modernity that is transposed into film, electronic media, and digital media, is defined by Mary Ann Doane as one composed of “the ephemeral [and] chance – that which is beyond or resistant to meaning,” and whose appeal is “escape from the grasp of rationalisation and its system” (2002, 10). Dislocating zombie play from controlled domestic settings and situating it in public venues comprising competing sensory and physical forces leads to spaces in which the play experience might be rendered contingent and unstable. While frustrating and distracting to players, such disorder could also work to amplify players’ generic, narrative, and affective encounter with zombie media traditions.

Indeed, these contextual possibilities for discordance also reinforce one of the key experiential characteristics of the interactive horror: its modulation of player agency in the face of supernatural terrors. Tanya Krzywinska observes that in horror videogames players tend to oscillate between states of control and helplessness (2003), while Christian McCrea casts ludic horror as a fluid contest between player expressions of agency and control, which “well up from the player’s history of mastering games” and

a powerlessness caused by “monstrous apparitions of horror look[ing] to chip away at their confidence” (2009, 220). The ultimate result of this tension is the “crucial sense of being *out of control* that is inherent to the experience of horror” (Krzywinska 2003, 20). The arcade player’s control is diminished by the public nature of their play, a circumstance unlikely to be recreated at home. In light of the centrality of contingency to zombie media, I will explore the generation of a situated experience of such chaos and disorder for arcade players.

With specific reference to game centers, J r mie Pelletier-Gagnon identifies that it is essential to “investigate what is concretely happening in game centers between users, machines, and the space” in order to develop understandings of the effect of space on the behavior and experiences of players (2019, 30). I similarly aim to move beyond the game text as an isolated software object to consider, as Pelletier-Gagnon does, “the material conditions of the device itself and its connections to the surrounding agents of its environment” (2019, 30). Daniel Golding points out that “scholars have failed to sufficiently account for the played experience of videogames” because of a recurrent tendency to construct the user as having “full and unhindered vision” of a totalised ideal (2013, 30). An optimal view of videogames develops as a result of such analyses, wherein game texts are seen as stable, complete, and discrete, rather than as the unstable, inconsistent, and incomplete views actually experienced by players. Driven by developments in recent work in platform studies and media archeology, there is an increasing awareness within games studies of the significance of what it means to look ‘off screen,’ ‘inside games,’ as well as ‘around them,’ in analysis (Guins 2014, 7). Golding, similarly, urges consideration from the “low-level, ‘from-below’ viewpoint of the experiential tactics” and actions of players (2013, 42). In line with these approaches, I seek to develop a view – from the level of the player immersed in a game center environment – of the experience of zombie play as it occurs under multiple sensorial and physical pressures.

Left 4 Dead: Seizonshatachi’s arcade apocalypse

In order to explore the relationship between game center contexts and the contingent chaos zombie media strive to represent, I address *L4D:S* as a case study. This arcade game is an updated iteration of *Left 4 Dead 2* (Valve Corporation 2009) (hereafter referred to as *L4D2*), and an

example of the kind of transcultural products that are typical of the gaming market in Japan; a “hybrid encompassing a mixture of Japanese and American businesses and [...] cultures to a degree unseen in other media industries” (Consalvo 2006, 120). *L4D2* and *L4D:S* are both survival horror-themed first-person shooters, set in the midst of a zombie infection outbreak. The primary play mode of *L4D2* and the *only* play mode offered by *L4D:S* is a round-based setup, in which up to four cooperating game players take on the role of human survivors attempting to survive the gameworld’s apocalypse. Players are confronted by masses of generic non-player zombies, as well as by other more dangerous versions of the undead who boast powerful mutations to their undead bodies. Using an array of weapons, as well as virtual medicines and stimulants, players fight through the zombies and avoid – as the title of the game threatens – being *left for dead* by their teammates.



Figure 1: *Left 4 Dead: Seizonshatachi* cabinets at Taito Station, Namba, Osaka.

Where *L4D2* has been played on desktop and console platforms (including Microsoft Windows, Mac OS X and the Xbox 360), *L4D:S* has been redesigned for, and is only available in, Japanese game centers. The most notable

changes undergone by the game during redevelopment by Taito are evident in its physical form. The game is integrated into a large arcade cabinet, and its player control interface is dissimilar to both the original *L4D2* game (either played using a computer mouse and keyboard or an Xbox 360 controller) and other typical game cabinets (as noted earlier). *L4D:S* is controlled by a computer mouse and an accessory similar in appearance and function to the Nintendo Wii’s handheld ‘nunchuck’ controller. The ‘nunchuck’ commands avatar movement, while the mouse is utilised for interactions with objects and use of weapons.

Gameplay, level design and the narrative elements of *L4D2* are largely intact in *L4D:S*. Players are able to connect and multiplayer with up to four units in the same store and, between 2014 and 2017, Taito’s NESICA.net platform could connect users between different game centers (Left 4 Dead Wiki 2019). The most significant textual adjustment between the original game and its Taito version is that the playable avatar-characters have been recast. *L4D2*’s options for player avatars – a high school physical education teacher, an automotive mechanic, a professional con artist, and a television news production assistant – are, in their characterisation and dialogue, parodic of aspects of contemporary American culture. In *L4D:S* the recasting of these characters appears an effort at cultural localisation, with the original figures replaced by a Japanese schoolgirl, a male Japanese college student, a half-Japanese half-American tour guide, and an American army veteran-turned-bartender.

Research methodology

Data collection for this study was conducted in two ways: a small field study in two game centers, and my own research gameplay. On 8 January 2018, and between 13-14 May 2018, I conducted observations of *L4D:S* arcade cabinets and their players at Taito Station Namba, in the Namba district of Osaka. On 10 January 2018, and on 26 May 2018, I made further observations of the game at Taito HEY (Hirose Entertainment Yard), in the Akihabara area of Tokyo. These observations were made in order to understand the sensorial and spatial context the game sits within, and how player bodies are engaged with the physical arcade unit while in play. I visited the sections of the respective arcades housing the *L4D:S* cabinets for around two hours at a time. I initially observed and photographed these cabinets when they were not in use, and then either played on other game cabinets surrounding the

machines, or sat at these without playing (inadvertently becoming one of the loitering ‘hangers’ Tobin, 2016, describes as an important, overlooked social actor in arcade spaces). This allowed the relevant cabinets of study to remain free for other patrons to engage with, and also ensured my presence as a researcher was not obvious. Where I witnessed gameplay of *L4D:S* I took written notes of user behavior, alongside general observations of the surrounding environment of the arcades.

The selection of these two research sites was informed firstly by a pragmatic concern: *L4D:S* is exclusive to game centers operated by Taito Corporation and, further, appears in only a select number of this company’s arcades. Both Taito Station Namba and Taito HEY are large and popular game centers, sitting in the heart of respective entertainment hubs in Osaka and Tokyo. Because of their significance and centrality in these local, urban cultures of play, I consider that these two sites are likely representative of the ideal arcade environments sought and constructed by Taito Corporation. Between the two sites there is also variation in the types of game cabinets deployed: the Namba center demonstrated a focus on recent and contemporary game machines, while approximately half the Akihabara space was dedicated to historically significant ‘retro’ texts. I approach this heterogeneity as a strength of the site selection, suggesting that patrons at each might have differing motivations and expectations for their visits, and providing for the possibility of differing engagements with *L4D:S*.

It must be acknowledged, however, that limiting the study to two sites likely introduced biases. Notably, the offering of historical cabinets at Akihabara’s Taito HEY attracts significant touristic patronage. In the case of a number of the players observed, their navigation of the space, familiarity with cultural conventions within arcades, and preferences for particular games and play styles are unlikely to be representative of all game center patrons across Japan. In selecting two popular urban arcades located in entertainment districts, I have also precluded observation of the smaller-scale game centers that are to be found in quieter neighborhoods and small towns. Because of their position in entertainment districts these sites are also likely to be trafficked by greater numbers of popular culture enthusiasts than might be found in other game centers. As such, this research speaks more particularly to the experience of zombie play in high-profile and popular arcade settings.

I also conducted gameplay of *L4D:S* myself at both study sites, in sessions conducted separately to the field observations. In these instances I used a combination of a written gameplay log during play (similar to the methodological tool described by Consalvo and Dutton, 2006), photography of the game screen using a mobile phone, and reflective notes written in the time immediately after play had concluded. Together, the two methodological approaches of field observation and auto-analytical play allow for analysis of the game as situated and played within a specific and distinct spatial context. These approaches also enable conclusions to be reached about the interrelationship between the game text (including its physical cabinet) and the sensory and spatial environment that surrounds it.

Undead smells, sights and sounds

Crossing the threshold into a game center results in an immediate assault on a number of the body’s sensory receivers, not least the olfactory nerves. As Simon Niedenthal explains, “the spaces in which we play are not neutral from an olfactory standpoint,” and irrespective of whether play is undertaken in either private or public environments, “the air is scented with any number of volatile elements” (2012, 103). In the domestic environment, ambient odors are unlikely to bear any significant continuity with the fiction of the games at play. There may be coincidental and unpredictable alignments between food, pet or human body odors encountered in the home, and the appearance of prepared foodstuffs, animals and human bodies in a game’s virtual diegesis, but such olfactory serendipity is likely to be temporary. Arcade environments, however, offer the opportunity to benefit in a more systematic manner from smell’s “peculiar power” to aid the construction of game experiences as full-sensory experiences (Niedenthal 2012, 102) and stimulate rapid, intuitive emotional and motivational responses from individuals (Porteous 1985, 359).

Drawing upon the disciplines of geography and environmental aesthetics, J. Douglas Porteous proposes the idea of “smellscapes” to describe the spatially ordered or location-specific impressions of odor one might encounter in urban environments (Porteous 1985). In my observations at the Namba and Akihabara sites, a number of individual elements could be identified as contributing to the smellscapes of a typical Taito arcade. These include cigarette smoke, as well as the acrid undertone that nicotine

leaves in carpet and wall coverings after years of exposure. As a base note underlying the smokers' contributions is the subtle odor generated by the computers and circuitry that power the game cabinets filling these spaces. As energy runs and heats its way through wiring, over circuit boards and through silicon chips, and as cooling fans whirl away to extract this heat from inside the bodies of the cabinets, the strangely recognisable smell of warm computing builds up over the course of a day. In the mix of this smellscape are also the aggregate aromas of the human bodies that fill a game center – sweat, body odor, and the drifting, lingering scent of deodorants and perfumes (which combine into an unpredictable profile that is at times encountered as sweet, and at others sharp and bitter).

Porteous also notes that the smellscapes we perceive are, by their nature, “non-continuous, fragmentary in space and episodic in time” (1985, 359), fluctuating with the arrival and disappearance of various transient and temporally bound aromatic influences. Other odor researchers have similarly urged attention be paid to these passing aromas, as the “subtle olfactory shifts from one hour, day or season to the next” might hold the key to identifying the “subjective importance” and “elusive significance that smells bestows upon the overall character” of an environment (Drobnick and Fisher 2008, 353). Depending on the time of day, one might also factor into the game center smellscape the presence of food and drinks on the breath – with previously imbibed sodas, beers and *sake* particularly continuing to make their olfactory mark as players' bodies breathe, talk, and digest. Foodstuffs (especially heated items) offer another temporary addition to the smellscape, as does cigarette smoke in the dense and stale form it takes on when emanating from the clothing of a regular smoker. Other notable fragmentary odors I identified at my research sites included the dampness of clothing on days with inclement weather, and the much less predictable encounters with flatulence and burping by other patrons.

Smells, by their nature, “cannot be readily contained, [rather] they escape and cross boundaries” to intermingle away from their sources (Classen, Howes, and Synnott 1994, 4). Inside an arcade, the result is perhaps indescribable, save for saying it's a unique blend of human, environmental and chemical smells. The smellscape of a game center is an ideal substrate for zombie play – an amalgam of the outputs of human tissue, not quite decomposed in nature, but certainly not fresh and coherent. The scent profile communicates a type of human half-life,

much as the figure of the zombie itself does. Smell can be evocative in ways that other senses are not, bypassing cognition and analysis en route to its affective and emotional impact for the individual. With this in mind, Niedenthal argues that scent boasts a powerful potential to “enhance the challenge-based and imaginative immersion of games” and its integration into play might outline new formal and narrative structures worth consideration (2012, 114).

In simple narrative terms, the zombie apocalypse would smell unpleasant, filled with decomposing human flesh, rotting produce, uncontrolled fires, and more noxious odors. In this sense, the arcade's smellscape acts as an extension of the zombie game text itself, and its nasal consumption might work to reinforce both interpretation and immersion for players. As Richard Stamelman observes, “many contradictory forces [...] coexist in a scent,” including “humanity and animality [and] beauty and corruption,” (2006, 299). The zombie is easily recalled by this description, mediating and oscillating as it does between the human and horrific, and corrupting so thoroughly our notions of human subjectivity. In the virtual world of *L4D:S*, players fight through corpses, reanimated in varying states of decay, bloat, and disease, and deploy virtual weapons that include thrown jars of zombie bile and explosives that burn through living, dead, and undead flesh alike. Play takes place within levels that include burning aircraft, fetid swamplands, and shopping malls full of spoiled goods. The unsettling olfactory backdrop of the game center unwittingly acts as a significant sensory trigger for players of this game.

The pattern of sensorial overload is repeated in analysis of the visual panoramas that players encounter in these Taito game centers. The eyes of a *L4D:S* player are subjected to a series of stimuli different in many ways to those the player of the game's predecessor, *L4D2*, might experience at home on their gaming console or personal computer. While home computing graphics are undoubtedly rich and engaging, and boast ever-increasing pixel densities and image resolutions in their display screens, the domestic technologies of play are typically modest by comparison to arcades. Players in the domestic setting most often engage with their technologies of play in focused ways: the well-worn, stereotypical images of users at play recall an individual sitting on a couch, or seated at a desk, directly facing a television screen computer monitor. The risk of distraction and interference with visibility of the display device is often anticipated and mitigated, with

curtains drawn and screens positioned away from competing media, light sources, and domestic actors.

Based on my observations at Taito Station Namba and HEY Akihabara, the *L4D:S* player is subjected to a considerably more flamboyant and multilayered series of optical inputs. The game's physical cabinet is, in common with most machines inside a game center, bright, colorful, and visually intense, in flashes, strobes, and pulses. Light and color emit from a centrally positioned display screen, through which three-dimensional graphics are shown in precisely the same manner as they would on a home computer playing *L4D2*. Computer-generated imagery of avatars, zombies, and the virtual environment fill this screen, making it the primary point of focus for players. However, this screen only accounts for approximately one-third of the visible surface of the game cabinet.² The top third of the cabinet and its visible area is accounted for by two lightbox signs – one being an illuminated representation of the *L4D:S* logo, with vivid green, red and white colors. Above this the second lightbox displays a cartoon-style illustration of a scene from the game, in more muted colors and tones, as well as a series of brightly lit written exclamations in Japanese. Both lightboxes are plastered with an array of stickers and notices, presumably placed by arcade staff, competing for attention with the content they sit above. The lower third of the visible plane is the 'desk' section of the cabinet, which is a flat, vertical worktop section of the machine allowing the mouse controller to be manipulated, and for the 'nunchuck' to rest on when not in use. This panel is optically active, issuing different combinations of light and color in response to particular game events. Finally, large transparent plastic shields are mounted on either side of the cabinet at head height, and these light up in bright colors in response to game activity. For example, when the player's avatar is sustaining damage and injuries, the shields light up red with each 'hit' from an attacking zombie.

The aggregate effect is a noisy, competing arrangement of visual triggers, clamoring for the player's attention as multiply located colors, lights, and intensities fluctuate alongside gameplay within the game's virtual environment. While Geoffrey Rockwell and Keiji Amano identify that parlors housing pachinko machines (Japan's iconic 'legal' gambling machine game) "have large and

glittery entrances inviting you into a space of play unlike the [videogame] arcades" (2015, 161), the interior of a game center, in fact, hosts similar largesse and glitter to that of its pachinko counterparts. The *L4D:S* cabinet, for example, is not alone in mounting challenges to players' capacity to focus their optical sense. Either side of the player, and in front of, and behind them are dozens more game cabinets – each with their own combinations of vivid distraction. At both research sites, *L4D:S* was co-located with a variety of game cabinet types: gun, card-based, multiplayer online battle arena (MOBA), and gambling games. Part of the labor of videogame arcade employees has been addressed as governing players' attention such that they are "of the correct disposition, namely focused into the space of the game" (Tobin 2016). And yet the spatial layout and environmental context of game centers suggest that distraction and visual overload, both of which are more than capable of uncoupling players from their focus within a gamespace, are in fact the sensory norm.

Sonically, the ambient setting of a game center follows a similar pattern to the two exteroceptive dimensions I have already explored: a cacophonous mix of disparate human and mechanical sounds. I observed (or rather, heard) the composition of the ambient soundscapes of the research sites to include the various sound effects, pieces of dialogue, and musical soundtracks of the many game cabinets on the same floor as *L4D:S*. Further, the soundscapes mixed in the mechanical noises of buttons hit on game cabinets, of the activation of plastic triggers on replica light guns as they were fired and reloaded, human feet stomping on dance mats for games such as *Dance Dance Revolution*, as well as the harsh sound of flying metal in coin games. Layered into this were also human aural elements, including the interjections of shouts, loud conversations between patrons, occasional singing, more frequently laughter, and the distinctive 'snapping' sound of cellphones capturing photographs. In the Namba Taito Station research site, the *L4D:S* cabinets were positioned on the periphery of the floor's layout – close to the escalator connecting levels, and allowing another tide of sound to bleed upward, in ebbs and flows, from the numerous game cabinets located on the floor below.

While the game cabinets each feature over-ear headphones (in addition to making ports available for

² This estimate excludes the featureless base of the cabinet, which performs no textual or interface function for players. A lip protrudes

from the 'desk' of the cabinet, obscuring the bottom section of the machine from players' views.

patrons to connect their own headphone accessories) to allow for sonically isolated play, I did not observe these in use by players. This was not representative of these arcades' play cultures generally: at both research sites I witnessed players connecting personal headphones to a number of other game cabinets (especially for music games). In the next section I reflect on the seeming use of this game by some players as a means to fill in time while awaiting the availability of other cabinets. Perhaps, for some, remaining engaged in the aural chaos of the arcade despite the availability of headphones makes for quicker movement from one machine to another. Willfully playing in an unpleasant sonic context might also reflect this game's (un)popularity and the taste of its patrons: interested enough to play, but not to make the effort required to utilise peripheral accessories. Whatever the motivation, all players I observed made a deliberate choice to engage with the game in a way that degrades the fidelity of its audiovisual experience. Users place themselves at the sensorial mercy of the arcade experience – a tacit endorsement, perhaps, of the distinct experience provided by public exposure for zombie texts.

Bodies and boundaries

The bodily comportment required by the *public* setting of a game center also feeds into the affective and thematic operation of the zombie genre. As one rushes to survive to the end of a level, as the play time that 100-yen coins have purchased from the machine ticks down, and as one's body moves in physical motion around the game cabinet, the risk of unintended physical encounter with others increases. Arcade cabinets often enlist the capacity of player bodies for motion immediately, for example by positioning their users in standing positions, or deploying controllers that can be held and moved freely around the space in front of the machine. Game centers are often spaces of familiarity and homeliness for patrons, within which "players tend to feel empowered and comfortable enough to be more vocal and physically demonstrative in their play style, accentuating their movements" (Pelletier-Gagnon 2019, 35). As patrons become more comfortable, their initial bodily enlistment is heightened by the combination of sensations of immersion, excitement, and enthusiasm, and movement becomes freer, more gestural, and more mobile. The boundaries of the 'text' of an arcade game are thus not limited to the software code being executed in the underlying computer processing units, nor to what is visible

on the central display screen, and not even to the immediate physical 'footprint' of the game cabinet.

The virtual gamespace and the game text extends to incorporate the zone of physical occupation that the players' bodies roam around. A key question this raises is whether this environmental stimulation of potentially excessive physicality might contribute to the sense of sensorial overload experienced by players. At both research sites, the vast majority of players I witnessed playing *L4D:S* chose not to sit on the barstool-style seats provided with each cabinet, opting instead to push the seats to one side and stand during play. This meant that the bodies of this game's players were freer to move than if seated, and more prone to bouts of gestural excess. At HEY, in Akihabara, I witnessed a tendency among non-Japanese players (possibly tourists or visitors) to accidentally 'bump' into one another while playing the game together, at machines side-by-side. At the same location I witnessed a single instance of a player deliberately physically interfering with the mouse of another player (evidently a friend) in a moment of jocular nuisance. At both sites the potential for distraction caused by the physical nature of engagement with arcade machines took on one particularly fascinating form: players engaged with *L4D:S* but using their standing position to actively look at and monitor other machines in use by other patrons. On three occasions I witnessed this half-hearted, distracted mode of play at HEY, Akihabara, and twice at Taito Station, Namba. In each of these instances, once the player appeared to observe their desired machine becoming available for use, they would continue to play only until their avatar's death, or the expiry of the time they had purchased, and promptly leave the machine. In these examples, players seem to be firmly inviting distraction into their play context by consciously dividing their attention between the game's diegesis and their surrounding environment.

Meanwhile, the Taito Station in Namba featured an environmental difference to that of HEY, as I have already mentioned – the positioning of the game cabinets immediately near an escalator leading up from the floors below. At this location I observed three collisions between users engaged in their play of *L4D:S* and other patrons who had alighted from the escalator and were distracted, seemingly scanning the floor to identify the machines they sought to play. As Henrik Smed Nielsen observes of the experience of playing a tennis game on the Nintendo Wii console, accidental collision with other players or observers means that "my physical body and the surrounding objects

are brought to my attention,” but that these “these decoupling discrepancies might be enjoyable” (2010, 35). Such pleasure might come in part from attempting to naturalise the unnatural relation between the game, one’s own body, and any other bodies around by incorporating it into the narrative experience of the game at play.

Contingency and vulnerability

The sensory context of *LAD:S* combines as an ideal generic backdrop for its players. The zombie genre draws heavily in its mediation on *contingency*, a condition that brings unpredictability and chance into previously stable experiences of the world (Dastur 2000, 179), and wherein media technologies allow for the audiences to experience the “irruption of chance and the ephemeral” (Cameron 2012, 80). James Ash notes that the contingent nature of unrecognisable events is relative to the understanding individuals have of entities or processes, and so “contingency is that which cannot be pinned down by any process that attempts to pin it down” (2010, 660). Players of *LAD:S* benefit thematically and sensorially from the imposition of the unpredictable and often unknowable aggregate noises, smells, jostling bodies, and light pollution that game centers host. The representation of states of collapsed sense and intentionality in contingent events is critical to zombie media, and for audiences, the “fear and fascination provoked by the figure of the zombie are channeled through a type of second-order cinephilia that is focused on the instability and contingency” of mediated images (Cameron 2012, 82). This is echoed in an earlier argument made by Noël Carroll, that encounters with ugliness, disorder, and disgust are critical to audiences’ fascination with horror genres more broadly (1990, 41).

Between smell, sight, sound, and touch, the player of a *LAD:S* is effectively under assault by contingent sensory entities. Arcade odors combine to form an unknowable amalgam, punctuated and permeated by a range of unpredictable, temporally bound aromas. The soundscape similarly combines a constant unrecognisable drone formed by hundreds of competing sonic sources with the punctuation of random and possibly startling sounds. Significant optical effort is required for players’ eyes to remain focused on the frame of play against a backdrop of unpredictable and insistently shining sources. Meanwhile, other patrons’ bodies carry with them the constant threat of interference with the player and their area of physical occupation. The arcade environment *itself* takes on what

has previously been identified in relation to zombie cinema as “the mediated image’s capacity for embodying non-sense” (Cameron 2012, 80). Four key sensory inputs – sight, sound, smell, and (bodily) touch – sit outside the control of both the user and the game text itself, but feed directly in real-time into the shifting textual construction of the game, and into the user’s experience of play. Ahead of play sessions the specific characteristics of each of these sensory panoramas are incalculable for players, as the particular combination of sounds, smells, sights, and bodies will fluctuate and coalesce in different ways from moment to moment. The “marked emphasis on chance and the contingent” situated at the heart of other zombie media (Cameron 2012, 80) is embedded unavoidably in the play experience *LAD:S* as it is played in game centers.

Sensorial assault for players of *LAD:S* not only creates a backdrop of contingent sensory triggers, but also leads to something akin to *bodily vulnerability* for the player, a phenomenon which is “becoming an increasingly important part of contemporary media processes” (Knudsen and Stage 2015, 1). While Knudsen and Stage’s argument primarily considers the mediation or representation of such vulnerability, particularly of bodies in states of death and decay, it readily translates to the embodied setting of play and sense. Knudsen and Stage note that the media presence of the vulnerable body allows “experiences of ‘feeling like’ the suffering body by producing affective experiences of shared vulnerability” (2015, 3). This becomes literal for the player of *LAD:S*, with their perceptual capacities disrupted by a combined onslaught of unpleasant odor, intrusive sounds, distracting light pollution, and bodily entanglement. Experiencing this form of bodily vulnerability creates an affective alignment with the virtual bodies of ingame avatars, which are themselves under attack by images of the vulnerability and dissolution of the human form in the form of zombies. As a biological and metaphysically impossible bodily form, the figure of the zombie has long been understood as a particular embodiment of the specter of death that highlights the vulnerability of human bodies (Lanzendörfer 2018, 73), and for players whose senses are under environmental pressure, a degree of vulnerability and bodily instability is introduced. Videogame play itself could be considered a process of zombification for players, because of the ways it renders accessible an experience of instability, fragmentation, and disembodiment of players’ senses of self (Kirkland 2016, 231), and this idea takes on heightened significance in light of the media phenomenon of bodily vulnerability. Smells, sounds, and sights are types

of the “immaterial processes and exchanges” that evoke particular atmospheres of vulnerability and aversion, which are part of user experiences of mediated bodily vulnerability (Knudsen and Stage 2015, 11).

Conclusion

Zombie narratives depend to such a considerable extent on the collapse of sense and intentionality borne of contingent entities and processes that the medium’s “perception itself becomes infected, and is transformed into a kind of magical, contagious contact” (Shaviro 1993, 25). In this study I have argued that the arcade game cabinet and its surrounding spatial context are what bear this infection and impart upon play an element of media decay and incoherence.

This research is an initial study of the arcade-specific experience of zombie play, and as such has obvious limitations. I earlier acknowledged the constraints presented by my two chosen research sites, and future analysis of the embodied and sensorial nature of zombie play should expand to include a wider variety of public videogaming settings (within Japan, and also in other significant arcade cultures internationally). In doing so, the impact of differing socio-cultural, economic and political contexts on users’ bodies, senses and interpretations might be illustrated. I have also noted that zombie videogames make up a significant part of the textual milieu of arcade centers. In light of the significance of cabinet design, interface accessories and the physical layouts of play spaces to shaping sense during horror experiences, further study should engage with the range of control interfaces offered by the various zombie and horror texts that populate arcades.

As a starting point for further analysis of the publicly played zombie videogame, I have shown that the game center experience of *Left 4 Dead: Seizonshatachi* appears as a distinct and accelerated expression of key tendencies within the genre. A figurative and literal cacophony of both consistent, ambient sensory panoramas, and unpredictable, specific eruptions of odor, sound, visual stimuli, and physical interaction combine to inflect the play experience with disorder and breakdown. This sensory context both threatens and enacts bodily vulnerability for players. It also threatens and enacts experiences of rupture and disunity in the play experience that mirror and intensify the user’s experience of the instabilities that lie at the heart of the

zombie apocalypse represented onscreen in *Left 4 Dead: Seizonshatachi*.

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