The Infectious Aesthetic of Zombies: An Exploration of Zombie Narratives and Unit Operations of Zombies in Videogames

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ABSTRACT:
This document details the abstract for a study on zombie narratives and zombies as units and their translation from cinemas to interactive mediums. Focusing on modern zombie mythos and aesthetics as major influences in pop-culture; including videogames. The main goal of this study is to examine the applications of zombie units that have their narrative roots in traditional; non-ergodic media, in videogames; how they are applied, what are their patterns, and the allure of their pervasiveness.

KEY WORDS:
case studies, cinema, narrative, Romero, unit operations, videogames, zombie.

"Zombies to me don't represent anything in particular. They are a global disaster that people don't know how to deal with. Because we don't know how to deal with any of the shit."
Romero, A. George

Introduction

Zombies are one of the more pervasive tropes of modern pop-culture. In this paper, we ask the question why the zombie narrative is so infectious (pun intended) that it was able to successfully transition from folklore to cinema to videogames. However, we wish to look beyond simple appearances and investigate the mechanisms of zombie narratives. To do this, we employ Unit Operations, a unique framework, developed by Ian Bogost[1] for the analysis of media that utilises elements of both literary theory and computation. We chose Unit Operations as a methodological framework for our exploration of zombie narratives in videogames, for three main reasons. Firstly, the static view of a system-focused analysis would have discarded a lot of the nuance of the procedural nature of emerging narratives that could be manifested through the interactive narratives of many videogames. Secondly, the focus on encapsulated units of meaning and their instantiations lends itself better to the analysis of the recurring themes and patterns of zombie fiction beyond superficialities. Finally, unit operations are the "practical marriage of literary theory and computation";[2] an argument which can also be applied to ontologically describe videogames,[3][4][5] which makes Unit Operations uniquely well-fitted for the analysis of videogames.

We will focus on the units in zombie narratives, identifying two key concepts by investigating how the post-Romero cinematic zombie traditions are transferred to videogames. To give a complete picture, we first investigate the cinematic zombie and extract the operations of traditional zombie narratives. In the second half of the paper, we will present three case studies, dedicated to different aspects of zombie operations.

1   For more information, see: BOGOST, I.: *Unit Operations: An Approach to Videogame Criticism.* Cambridge, MA, London : The MIT Press, 2006.
2   BOGOST, I.: *Unit Operations: An Approach to Videogame Criticism.* Cambridge, MA, London : The MIT Press, 2006, p. 7.
3   For more information, see: LAUREL, B.: *Computers as Theatre.* Reading, MA : Addison-Wesley, 1991.
4   See also: NEWMAN, J.: *Videogames.* Abingdon : Routledge, 2004.
5   NEITZEL, B.: Narrativity in Computer Games. In RAESSENS, J., GOLDSTEIN, J. (eds.): *Handbook of Computer Game Studies.* Cambridge, MA, London : The MIT Press, 2005, p. 227.

Unit Operations

Unit Operations focuses on the examination of discrete 'units' of meaning, their assemblages and interrelations, and how they procedurally form the structure of a system or act as discrete systems themselves.[6] Units, as mentioned above, are discrete objects that carry meaning, and they "encompass the material manifestation of complex, abstract, or conceptual structures".[7] Units transform meaning by taking in one or more inputs and carrying out "purposeful actions"[8] or 'operations' on them. They might work as a singular cell or their interlocking relationships can form complex structures.[9] Unit operations focuses on the interplay of autonomous and discrete elements, which can take multiple configurations. In this view, complex structures emerge from the interaction of units in a procedural, bottom-up manner as opposed to system operations,[10] which examines complex structures as singular, static entities, made of smaller components in a top-down fashion. Units in unit operations follow the core concepts of object-oriented technology and comply with four main rules.[11] Those rules are abstraction, encapsulation, polymorphism, and their instances are governed by cascading inheritance. Summarized, abstraction means a disassociation of the type from the individual instances. Abstract units are blueprints or constructors, which are only expressed in instantiated units with concrete variables. Encapsulation means the autonomous and discrete nature of the object and the limited scope of its functions*. Polymorphism covers the configurable nature of each instance and allows for different unique objects to be created from one class constructor. Lastly, inheritance enables each unit to be a parent of a new object, inheriting its structure and attributes.

Unit operations offer a novel approach to examining recurring, encapsulated units of meaning in certain narratives that are resurfacing again and again across similar narratives. To be seen from the unit operations framework, narratives are built up from interlocking segments that are to be procedurally unveiled through progresses of their temporal sequences.[12] Because narratives are essentially "causal relationships of various sorts and effects",[13] their macro structures are highlighting interrelations of the very units that create them.

Zombie Operations and Units of Zombie Tales

The zombie mythos has long left its origins of Haitian folktales[14] and early cinema, with largely colonialist overtones.[15] Between the late 60s and 80s, George A. Romero redefined the pop-cultural understanding of zombies, filling the mythos and their creatures with new meaning. The prominent colonialism narratives of the early days were replaced by metaphors of radical socio-political changes in Western civilization, which presented zombies as suddenly emerging terrors with little to no background information of how they came to be and how to efficiently combat them,[16] Romero reverses the role of zombies from humans' slaves into humans' destroyers which are responsible for gradual collapses of known civilizations. These characteristics are carried onto post-Romero zombie fictions which employ zombies as ever-changing metaphors of constantly evolving threats to humanity. Although during this transition, the operations of zombies as well other units of their narratives were transformed drastically, the core function of the prototype constructor of zombie units that every instance inherits remains a highly transformative process that takes in another unit as a parameter. In most cases the argument, with which the unit is instantiated is a 'human object', at least in the narrative sense. Interestingly, while cascading inheritance often leads to polymorphism, where new instances take on unique features – especially in videogames –, the zombie prototype constructor erases differences between transformed units. Unique humans go in, uniform zombies come out. However, the transformation of an ordinary unit into a zombie, not only makes the unit part of a uniform mass, it also bastardises them and corrupts their original essence, putting them into opposition to the protagonist, or player character.

Heroes generally reserved some sense of will and/or morality from the world before the balance has been shifted to a wish to resolve the situation by reverting back to the previous status-quo. As Romero explains it, "there's this global change and there's one guy holding out saying, wait a minute, I'm still a human. He's wrong. [...] In a certain sense he's wrong but on the other hand, you've got to respect him for taking that position".[17] Originally, this was not a feasible path – especially in Romero's works –, although later tales show a certain kind of balance recreated. Although, transitioning from the early days of cinema, the instrumental nature of zombies remained, the parent of their units became blurry and often abstract. Mirroring the grand narrative themes of these tales that portrayed worlds out of balance,[18] [19] zombies themselves became small encapsulations of these patterns: fumbling, volatile, ever decaying but undying. The same contrast between early cinema and Romero is also apparent in the creators or originators of zombie units. While in early

6   See also: BOGOST, I.: *Unit Operations: An Approach to Videogame Criticism*. Cambridge, MA, London : The MIT Press, 2006.
7   BOGOST, I.: *Unit Operations: An Approach to Videogame Criticism*. Cambridge, MA, London : The MIT Press, 2006, p. 5.
8   Ibidem, p. 7.
9   For more information, see: VON NEUMANN, J.: *Theory of Self Reproducing Automata*. Champaign : University of Illinois Press, 1966.; BOGOST, I.: *Unit Operations: An Approach to Videogame Criticism*. Cambridge, MA, London : The MIT Press, 2006.
10   See also: LUHMANN, N.: *Social Systems*. Palo Alto, CA : Stanford University Press, 1995.; BOGOST, I.: *Unit Operations: An Approach to Videogame Criticism*. Cambridge, MA, London : The MIT Press, 2006.
11   BOGOST, I.: *Unit Operations: An Approach to Videogame Criticism*. Cambridge, MA, London : The MIT Press, 2006, p. 39
12   NEITZEL, B.: Narrativity in Computer Games. In RAESSENS, J., GOLDSTEIN, J. (eds.): *Handbook of Computer Game Studies*. Cambridge, MA, London : The MIT Press, 2005, p. 227.
13   MANDLER, J. M., JOHNSON, S.: Erzahlstruktur und Erinnerungsleitung. Eine Gramatik einfacher Geschichten. In HAUBRICHS, W. (ed.): *Erzahlforschung. Theorien, Modelle und Methoden der Narrativik*. Gotlingen : Vandenhoeche Ruprecht, 1978, p. 338.

14   McINTOSH, S.: The evolution of the zombie: the monster that keeps coming back. In MCINTOSH, S., LEVERETTE, M. (eds.): *Zombie Culture: Autopsies of the Living Dead*. Lanham, MA : Scarecrow Press, 2008, p. 4.
15   OPATIĆ, D.: Zombies in Revolt: The Violent Revolution of American Cinematic Monster. In *Sic: A Journal of Literature, Culture & Literary Translation*, 2014, Vol. 2, No. 2, p. 3-4. [online]. [2018-03-12]. Available at: <https://www.sic-journal.org/ArticleView.aspx?aid=251>.
16   SCONCE, J.: Dead metaphors/undead allegories. In HUNT, L., LOCKYER, S., WILLIAMSON, M. (eds.): *Screening the Undead: Vampires and Zombies in Film and Television*. New York City : Palgrave Macmillan, 2014, p. 333.
17   McCONNELL, M.: *Interview: George A. Romero on Diary of the Dead*. *Cinema Blend*. [online]. [2018-03-12]. Available at: <cinemablend.com/new/Interview-George-Romero-Diary-Dead-7818.html>.
18   OPATIĆ, D.: Zombies in Revolt: The Violent Revolution of American Cinematic Monster. In *Sic: A Journal of Literature, Culture & Literary Translation*, 2014, Vol.2, No. 2, p. 14-15. [online]. [2018-03-12]. Available at: <https://www.sic-journal.org/ArticleView.aspx?aid=251>.
19   SCONCE, J.: Dead metaphors/undead allegories. In HUNT, L., LOCKYER, S., WILLIAMSON, M. (eds.): *Screening the Undead: Vampires and Zombies in Film and Television*. New York City : Palgrave Macmillan, 2014, p. 331-333.

tales most often a centralised will took control over zombies, often highlighting sexual exploitation and racial issues of the time;[20] Romero's zombies are born from a troubled equilibrium that encompasses whole societies.[21] In this sense, these creatures act more like a force of nature, showing the seams along which culture and society tears itself apart. As zombies went from separately created thralls to violent swarms,[22] their meaning also transformed from victims of evil to heralds of the all-consuming decay of society.

The originators across different stories are widely different and could serve different messages depending on their individual meanings. The point that connects them to a shared prototype is their immense power opposed to the protagonist and their root in a shifted equilibrium. Their parameters move along the lines of humanitarian and moral crises (like the rise of consumer capitalism, environmental destruction, or – in case of some early stories sexual – and societal exploitation) and they pass these parameters onto zombie units they instantiate as well. The originator of the zombies serves mainly as the "shit", which we can't handle – in Romero's words.[23] They manifest as a clash between what should be and what is. They can manifest as sole evil-doers to an abstract force of nature. On the fringe of the two types, we can observe disembodied manifestations of corporate greed, for example in *Resident Evil*,[24] where the exploitive will of mega-corporations leads to the release of a potent viral infection, which manifests as a more abstract punishment. On the technical side, this type manifests in unique software solutions, like the AI Director in *Left 4 Dead*,[25] which acts as a disembodied governing force, standing in as a mastermind behind the zombie horde in the gameplay, the abstract shifted equilibrium in the narrative, and the director in the pacing and dramaturgy of the composition of the larger narrative structure. The exact overarching or micro-narrative depends on the nature of the shift. For example, the endless hunger of the undead was expressed as a literal analogue for excessive consumption,[26] which – in the end – devours society itself. The loss of volition replaced by a hive-mind-like behaviour is a very strong element of all zombie units. As they act as instruments of their originators, their basic behavioural patterns are passed onto their constructor by their originators and occasionally cascade down through different zombie types.

Of course, the meaning conveyed by these tales went through many iterations under – and after – Romero. Starting as a commentary on the ambiguity of the political climate of the era and the place of the individual against a pessimistic view on the masses, Romero kept transforming the dead, first into symbols of consumerism, and later to criticism of Ronald Reagan's administration during the waning days of the Cold War.[27] Post-Romero, plague-born zombies became the symbols of social devastation, breaking down everything modern society holds at a high value, from individualism to capitalist economies[28]

Plagues historically have been associated with trade routes and highly concentrated populations where the moral evils that infect the minds are mirrored through the decay of the environment.[29] In this sense postmodern zombies became both symbols of the oppressed, unmotivated masses, and the implosion of society itself under moral decay, consumerism, and capitalist exploitation, which causes its own demise.[30] Post-Romero zombie units speed up the unravelling of the world's balance around them. Outbreak-zombies will spread the plague, curse-zombies will expand the curse onto others and so on. However, they also speed up the tipping of the scales by accumulating and increasing the source of the shattered equilibrium. We will show later in the article how zombie-like units in *Dishonored*[31] spread and accelerate the moral decay of society.

In summary, zombies are largely uniform units that convey a moral and physical opposition to the protagonist. They take in other units as arguments and strip them of their unique features, further pushing the distance between the position of the protagonist and themselves. They accelerate the forces surrounding their conception. Their originators are manifesting as part of a corrupted order and project basic behaviours onto the zombie units. We can say that these two types of units; originators and zombies, are always interconnected, even though the former can take on abstract forms in the narrative.

Case Study 1: Zombie Operations in Resident Evil

In this section we are looking at Resident Evil[32] as an example of how zombie operations are manifested in videogames in the bounds of a classical outbreak narrative. Resident Evil is the first ever iteration of its namesake series and one of the most influential games in the survival horror genre. In Resident Evil, players can choose to play as either Chris Redfield or Jill Valentine at the beginning of the game, followed by exploration of a mysterious mansion filled with various zombified creatures. While its sequels are more action oriented, Resident Evil is strictly a survival horror game where resources are scarce in which constant direct confrontations with zombie units and other enemy AIs can put players in difficult situation. Zombies in Resident Evil are mostly similar in presentations to those of George A. Romero's works where zombies are portrayed as putrid and decaying slumbering yet very persistent single-minded creatures hell-bent on consuming living humans.[33] Their existence, on one hand, can be chalked up to corporate greed as their narrative originator is explicitly explained as a viral outbreak after experiments conducted by the Umbrella Corporation went south. This underlines zombies as critical devices of unchecked capitalism akin to how zombies in Dawn of the Dead are semiotically constructed as a criticism of consumerism.[34] On the other hand, zombies are also critical devices for an

20   McINTOSH, S.: The evolution of the zombie: the monster that keeps coming back. In MCINTOSH, S., LEVERETTE, M. (eds.): *Zombie Culture: Autopsies of the Living Dead.* Lanham, MA : Scarecrow Press, 2008, p. 5.
21   OPATIĆ, D.: Zombies in Revolt: The Violent Revolution of American Cinematic Monster. In *Sic: A Journal of Literature, Culture & Literary Translation*, 2014, Vol.2, No. 2, p. 4-5. [online]. [2018-03-12]. Available at: <https://www.sic-journal.org/ArticleView.aspx?aid=251>.
22   WEBB, J., BYRNAND, S.: Some kind of virus: the zombie as body and as trope. In *Body & Society,*2008, Vol. 14, No. 2, p. 83-86.
23   McCONNELL, M.: *Interview: George A. Romero on Diary of the Dead. Cinema Blend.* [online]. [2018-03-15]. Available at: <cinemablend.com/new/Interview-George-Romero-Diary-Dead-7818.html>.
24   CAPCOM: *Resident Evil (PlayStation version).* [digital game]. Osaka : Capcom, 1996.
25   VALVE SOUTH: *Left 4 Dead (Xbox version).* [digital game]. Belleuve, WA : Valve Corporation, 2008.
26   SCONCE, J.: Dead metaphors/undead allegories. In HUNT, L., LOCKYER, S., WILLIAMSON, M. (eds.): *Screening the Undead: Vampires and Zombies in Film and Television.* New York City : Palgrave Macmillan, 2014, p. 335.
27   OPATIĆ, D.: Zombies in Revolt: The Violent Revolution of American Cinematic Monster. In *Sic: A Journal of Literature, Culture & Literary Translation*, 2014, Vol.2, No. 2, p. 5. [online]. [2018-03-15]. Available at: <https://www.sic-journal.org/ArticleView.aspx?aid=251>.
28   BOLUK, S., LENZ, W.: Infection, media, and capitalism: From early modern plagues to postmodern zombies. In *Journal for Early Modern Cultural Studies*, 2010, Vol. 10, No. 2, p. 136-137.

29   Ibidem.
30   WEBB, J., BYRNAND, S.: Some kind of virus: the zombie as body and as trope. In *Body & Society*, 2008, Vol.14, No. 2, p. 89-95.
31   ARKANE STUDIOS: *Dishonored (PlayStation version).* [digital game]. Rockville, MA : Bethesda Softworks, 2012.
32   CAPCOM: *Resident Evil (PlayStation version).* [digital game]. Osaka : Capcom, 1996.
33   SCONCE, J.: Dead metaphors/undead allegories. In HUNT, L., LOCKYER, S., WILLIAMSON, M. (eds.): *Screening the Undead: Vampires and Zombies in Film and Television.* New York City : Palgrave Macmillan, 2014, p. 331. Softworks, 2012.
34   WEISE, M.: The rules of horror: procedural adaptation in Clock Tower, Resident Evil and Dead Rising. In PERRON, B. (ed.): *Horror video games: Essays on the fusion of fear and play.* Jefferson, New York City : McFarland & Co, 2009, p. 251-265.

extreme and twisted Darwinist view of Albert Wesker, a high officer of Umbrella Corporation, who posed as an officer within the S.T.A.R.S. Team and believes that zombies are superior organisms compared to humans and he intends to replace humans as the dominant organisms on earth with zombies. The oppositional interplay of modern zombie narratives between human protagonists and zombies is clearly seen throughout the game. Chris Redfield, Jill Valentine and most of S.T.A.R.S Team are law enforcement agents whose primary goals are to solve the hideous cases of cannibalistic homicides on the outskirts of Raccoon City and bring the balance back to the narrative equilibrium which is law and order. Redfield or Valentine are depicted as hardened and righteous law enforcers who continue to fight zombies despite experiencing discomfort and fear.

However, unlike zombies in cinema, being bitten by a zombie in RE, will not turn the protagonists into zombies. Although detail can be attributed to classic videogame health systems, as narratively zombies still possess their power to transform others, a shift can be observed between movies and videogames. Whereas cinema presents a binary distinction between a zombie and an unbitten protagonist, videogames adhere to other rules defined by game design and platform limitations, making the protagonists impervious to zombie bites' transformative power and distance games from previous iterations of the zombie mythos. This empowerment changes the dynamic of the zombies,[35] even if the narrative meaning is conserved and establishes the main difference between cinema and videogame zombies. Zombie units hit the same narrative beats from transforming and bastardising other units, to increasing the acceleration of the imbalance of their environment as Romero and post-Romero fiction, however the volition and power of the protagonists are increased and emphasised. This undercuts the fear of the unknown that is defining Romero's mythos and creates a disconnection between narrative and gameplay. However, this disjointed configuration seeped into other games and became the norm, as Resident Evil's presentations of zombie units, their operations, and their interrelations with other units became the proverbial blueprint for many videogame developers in developing their own zombie games.

Case Study 2: Zombie Originator in Left 4 Dead

In this section, we take a closer look of the aforementioned AI Director in Left 4 Dead[36] and observe how a zombie originator unit operates within a game. It is an entry which modernizes the zombie genre of videogames by combining sci-fi-horror elements with multiplayer first-person shooter conventions. Additionally, Left 4 Dead does away with much of the narrative gravity and merely simulates the iconography[37] of zombie cinema. In the story campaign of Left 4 Dead up to four players can play as a survivor and battling hordes of the Infecteds. These creatures function very much like zombies in Resident Evil, however – without much narrative framing – they are not more than "ubiquitous hostile agents without emotional resonance, merely a physical aporia", which means it

does nothing more than "ludifies a zombie film experience" without drawing much on the meaning of these narratives other than the thematic similarity[38][39] of the Infecteds' narrative presentation as threats for humanities which greatly outnumber living humans and gradually replace humans as the dominant entities on Earth. Nevertheless, just as with Resident Evil these themes are only preserved in the framing narratives as players are susceptible to the zombie virus. However, Left 4 Dead is a perfect candidate to examine the operation of an abstract zombie originator in action. Narratively, the game presents a vague outbreak story, largely depending on invoking established tropes. Although it is unclear if the background of the epidemic is an environmental, military, or moral crisis, the abstract originator is embodied by the AI Director.

The *AI Director* (AID) is a robust AI, which is tasked with handling the adaptive pacing of the game.[40] As a true originator unit, the AID is immensely powerful compared to the players, spawns and controls the zombie units, and creates and manages the conflict in the game. The major difference between the AID and other abstract originators in other media is that the AID is subservient to the player experience. It monitors player behaviour, estimates the emotional intensity and spawns Infected to keep the players interested and holds back the horde if the players get overwhelmed.[41] Nevertheless, the AID is also in the service of the imbalance narratively, being the silent force behind the zombie outbreak. Although it is not against the players in the same way as the world in zombie cinema, to create a compelling gameplay it still opposes the players in the same fashion, as the AID holds control over the game world and the Infected, while the players are empowered through their own volition. In the end, the AI Director of Left 4 Dead suffers from a similar issue as the zombies of Resident Evil. Due to the constraints of game design, players are disproportionately powerful, and instead of an unstoppable horde, they face manageable challenges. Despite these differences, however, these units still reserve their core function as they adhere to the central conflict of these games, often which have a shifted equilibrium at their heart of their background stories in the same vein as more traditional zombie narratives.

Case Study 3: The Many Faces of Zombies in Dishonored

In this section we will examine two main enemy groups in Dishonored,[42] the zombie-like weepers and the city watch and look at their differences and shared functions. We will highlight the similarities between the two groups and examine their discrete units. We will show that the two groups – although aesthetically very different – work along the same lines, and the encapsulated meaning and disposition of their units are not that different. The forefront narrative of Dishonored is centred around political scheming and betrayal, focusing on Corvo Attano, a former Lord Protector to an Empress, who is assassinated,

35   HUNT, N.: A Utilitarian Antagonist: The Zombie in Popular Video Game. In HUBNER, L., LEANING, M., MANNING, P. (eds.): *The Zombie Renaissance in Popular Culture.* Houndmills : Palgrave Macmillan, 2015, p. 109-110.
36   VALVE SOUTH: *Left 4 Dead (Xbox version).* [digital game]. Belleuve, WA : Valve Corporation, 2008.
37   BACKE, H. J., AARSETH, E.: Ludic Zombies: An Examination of Zombieism in Games. In *DiGRA Conference Proceedings, Finland. Pittsburgh, PA :* DiGRA, Carnegie Mellon University's ETC Press, 2013, p. 8. [online]. [2018-03-17]. Available at: <http://homes.lmc.gatech.edu/~cpearce3/DiGRA13/papers/paper_405.pdf>.

38   OPATIĆ, D.: Zombies in Revolt: The Violent Revolution of American Cinematic Monster. In *Sic: A Journal of Literature, Culture & Literary Translation*, 2014, Vol. 2, No. 2. p. 3-6. [online]. [2018-03-20]. Available at: <https://www.sic-journal.org/ArticleView.aspx?aid=251>.
39   SCONCE, J.: Dead metaphors/undead allegories. In HUNT, L., LOCKYER, S., WILLIAMSON, M. (eds.): *Screening the Undead: Vampires and Zombies in Film and Television.* New York City : Palgrave Macmillan, 2014, p. 331-335.
40   BOOTH, M.: *The AI Systems of Left 4 Dead.* 2009. [online]. [2018-03-20]. Available at: <http://www.valvesoftware.com/publications/2009/ai_systems_of_l4d_mike_booth.pdf>.
41   Ibidem.
42   ARKANE STUDIOS: *Dishonored (PlayStation version).* [digital game]. Rockville, MA : Bethesda Softworks LLC, 2012.

and her rule is upended by her Spymaster. The player follows the dishonoured Corvo in his quest to avenge the Empress and restore balance to the empire. However, the background unravels a classically outbreak-style zombie tale, where growing environmental concerns, decaying morals, and bad political decisions lead to a world out of balance and the wake of a zombie-plague. The parallel tales of the Rat Plague and the rise of the Spymaster to power, becoming the Lord Regent, provide two distinct zombie-like units. The weepers are presented as prototypical outbreak style zombies. Just as discussed before, they convert human units into zombies with uniform characteristics. The bastardisation of the original units can be observed through impaired speech and impulsiveness. The classical loss of volition and unravelling of society puts the weepers into stark opposition with the protagonist, Corvo. Individual units accelerate the crisis by spreading the plague, while the narrative background points towards an abstract originator in an environmental punishment or cleansing fire. The Rat Plague – as other plague narratives before[43] – symbolises the corruption of society at large. Weepers are shown to come from different social classes, and the moral choices of the player affect the spread of the disease and the "age of industry", which lead to the rise of society is built on the mistreatment of environmental resources and animal cruelty. One of the central themes of the game, whale hunting is alluded to as a strong contender for another reason behind the zombie plague. The contrast between the industrialised city and the – mostly written – recollections of Pandyssia, a faraway paradise provides the same global tension, for which Romero zombie tales are famous. However, the role of morality is also expressed in the game's mechanics. If the player; as Corvo, chooses to set out on a vicious and bloody vendetta, the plague spreads faster, spawning more rats and weepers along the way.

However, weepers are not the only thing that is affected by the morality of the player's actions. Corvo's protégée, Emily, the child empress, also mirrors the player's choices. Getting increasingly bloodthirsty or balanced based on Corvo's body count. Similarly, the rebel officers devolve into a small-scale war between themselves if the player chooses the "high chaos" route through the game. Nevertheless, the player's choices only reflect the schism between the old status-quo and the new – albeit unravelling – world order. Although the main storyline presents a disturbed world, the zombie themes here are not as overt as in case of the weepers. However, it presents a unique instance of a zombie-like unit. Much like the Rat Plague, the putsch-government is also the manifestation of moral decay. In contrast to the mistreatment of the environment, which is seemingly tied to the plague, the new Lord Regent heralds a social crisis, in which masses are exploited, living in poverty, dying of disease and violence, while the rich reap the rewards of the industrial revolution. His pawns, the City Watch, acts much like zombies, at loss of volition, distorted into a caricature of a police-force perpetuating violence and corruption. Similar to weepers, they come from colourful backgrounds, but they go through a transformation when instantiated and become alike. The uniform is a great aesthetic tell-tale of their transformation, mirroring the clenched posture and putrid blood that signifies weepers. In terms of furthering the imbalance, while weepers stick with a classical outbreak-narrative and spreading the plague, watchmen are subtler. Through different inquiries and scripted events, we can learn how the whole City Watch is rotting from the inside, not just taking in prisoners, thieves, and thugs as members, but corrupting all officers, and pushing them to abuse their powers, plunging the city more into chaos

Interestingly, the two zombie-like units share a common originator. Similar to Resident Evil, the plague is a manifestation of the greed and short-sightedness of an elite group

trying to grab power. The Umbrella Corporation creates the T-Virus, while the putsch-government spreads the plague in secret in Dishonored. In both cases, the weaponization of natural artefacts spins out of hand. All the while, the Lord Regent orchestrates the main conflict of the game, exercising immense control over people, taking the volition of the soldiers, who "will follow his orders to the end". The unquestioned loyalty of the watchmen to their new master – against their former brother-in-arms, Corvo – fits perfectly into the same operations we see in zombie units and their originators. The disposition of these units towards our hero is also mirroring the weepers. While they represent the consequences of a world shifting out of its environmental balance, the corrupted watchmen patrolling the run-down streets are signifying the upheaval of moral and political balance. In both cases, Corvo has all the knowledge and volition to act in line with a morally righteous path, while the opposing units are mindlessly trying to kill the protagonist and assimilate new recruits, while executing the will of their originator, which was passed onto them as a parameter. Dishonored instantiates different units (weepers and city watchmen) from the same prototype constructor. These units have the same functions, accounting for polymorphism, and they interact with the hero unit and their respective originator about the same way. We demonstrated that their place in the larger narrative, and the meaning conveyed by their interplay mirror each other and creates greater narrative arcs that play on the same strings. Essentially both weepers and city watchmen are zombies. We argue that the watchmen of Dishonored are not alone in videogames and in fact many videogame enemies are acting as zombie-like units. They often take something familiar and strip them from their volition, often granting them a uniform look, and put them under the spell of a central agent or narrative theme acting as the originator unit for these enemies.

Conclusion

Although the software and platform limitations make a lot of videogame enemies act like zombies or zombie-like entities,[44] we argue that this connection goes deeper than the superficial similarities of deadpan characters controlled by simple behaviour trees. We identified two major unit prototypes in zombie narratives. Firstly, the zombie unit itself, which functions as an embodiment of a broken status-quo, which leads to the unravelling of the world order. Zombies take and twist other units, stripping them of volition and unique characteristics, while escalating the circumstances that give birth to them in the first place. Secondly, the zombie originator unit, which acts as a catalyst and manifestation of the cause behind the aforementioned breakdown. Originators instantiate new zombie units and impose a central will over them. Even though a lot of originators could be identified by person, a lot of them are abstract. The heart of the zombie unit and their originators is the twisting of familiar into uncanny and the conflict born from a shifted equilibrium that creates such an easily perceived and compelling narrative, which makes many "the player against the world" stories zombie tales as a modern myth[45] in the end.

We presented three case studies, in which we examined different aspects of how these units operate in videogame narratives. First, we observed a classical outbreak narrative in Resident Evil, then looked at how an abstract originator could be realised through the AI Director of Left 4 Dead. Finally, we turned to Dishonored and examined two different

43   BOLUK, S., LENZ, W.: Infection, media, and capitalism: From early modern plagues to postmodern zombies. In *Journal for Early Modern Cultural Studies*, 2010, Vol. 10, No. 2, p. 128-134.

44   HUNT, N.: A: Utilitarian Antagonist: The Zombie in Popular Video Game. In HUBNER, L., LEANING, M., MANNING, P. (eds.): *The Zombie Renaissance in Popular Culture.* Houndmills : Palgrave Macmillan, 2015, p. 115.
45   For more information, see: DELEUZE, G., GUATTARI, F.: *Anti-Oedipus: Capitalism and Schizophrenia.* Minneapolis : University of Minnesota Press, 1984.

enemy types and how they embody zombie-like units in similar ways, despite their aesthetic differences. We argue that a large majority of videogames today operate with the same units as zombies in fiction, even if we move beyond superficial and easily recognisable features, like virus that infects Mavericks in *Megaman X*,[46] or the turning of woodland creatures into machines in *Sonic the Hedgehog*.[47] We demonstrated through Dishonored how non-zombie antagonists act as zombies, not just in action, but as a narrative unit, and with close inspection, other videogame antagonists can be classified as zombie-like units as well. *Shin Sangokumusou*[48] or *Assassin's Creed*[49] are perhaps good examples of videogames which do not feature zombies, however, they do feature a uniformed mass of soldiers, who are clearly made up from the populus, and are almost completely subservient to a morally corrupt power, which have risen from the shift of a geo-political equilibrium.

Ultimately, many antagonist units function as antitheses to protagonists in their quest to restore the balance of narratives' setting, however not all manifest as the consequences of a world already in peril. Hidden zombies in videogame narratives might have been born from platform limitations, where these kinds of scenarios were easier to establish to explain the relatively empty or lifeless gamespace[50] but the current pervasiveness of zombie-like entities, their originators, and the narratives their interactions form - especially in AAA games - can be chalked up to genre conventions with increasing probability. It is not to say, however, that we advocate the end of zombie-like videogame characters, but we would like to shine some light on the interestingly common roots of many contemporary games. We are not here to herald the doom of unique takes in games, but as far as unseen consequences go, the over reliance on zombie-like narrative units has already infected videogames.

Endnotes

* In computer programming encapsulation generally refers to the restrictedness of the access to the components of discrete objects. The functions of the object can be invoked as methods of the unit, but its components are hidden from other objects.

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46   CAPCOM: *Megaman X (SNES version)*. [digital game]. Osaka : Capcom, 1993.
47   SONIC TEAM: *Sonic the Hedgehog (Sega Mega Drive version)*. [digital game]. Tokyo : Sega, 1991.
48   OMEGA FORCE: *Shin Sangokumusou (PlayStation version)*. [digital game]. Yokohama : Koei, 2000.
49   UBISOFT MONTREAL: *Assassin's Creed (Xbox version)*. [digital game]. Rennes : Ubisoft, 2007.
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