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Of Dying Machines and Grievable Digital Lives — Framing War and Life in *NieR:Automata*

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Summary

War and death are common topics in popular culture. In war-themed digital games, reflections on armed conflict and its atrocities vary greatly, ranging from games that trivialize the consequences of killing and loss to ones that offer critical perspectives on the player's actions instead. In this paper we analyze the 2017 war-themed game NieR:Automata (Platinum Games) which revolves around an endless war between androids and other machines in a distant future. We focus on how the game reflects on war and death, showing that it discusses these topics in complex ways. At the beginning of the game, NieR: Automata illustrates how during war enemies are framed as "non-lives" that need to be exterminated. Gradually, however, the game questions these framings and depicts machines as lives that are vulnerable and that may be grieved for. While NieR: Automata at first applies genretypical frames of death and makes the reversibility of the latter explicit in ludic and narrative elements of the game, it later introduces permanent loss of protagonists, antagonists, and — in the end — also the save files. The game therefore discusses the vulnerable and hence grievable lives of machines, offering rich perspectives on life in war.

Keywords: NieR:Automata, war-themed games, war games, death, vulnerability, game-like realism, Japanese games, digital games

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Introduction

The year is 11945. Androids and machine life-forms engage in a fierce battle to decide whether Earth belongs to humankind or to invading aliens. Supported by high-tech weapons and war technology, two androids affiliated with the unit Yoruha¹ descend from their unit's space station to take part in the 14th machine war and protect the remaining humans, who have escaped to the moon. On her way to battle, one of them remarks: "We are caught in a continuous spiral where life and death repeat after each other. I wonder if this is a curse or punishment." (Platinum Games 2017: Chapter 1)

The digital game *NieR:Automata* is merely one example of the vast number of popculture works that reflect on war. In Japan, given its dual role during World War II as both aggressor and victim, war is a contentious but nevertheless prominent topic in popular culture such as manga or anime. Reflections on WWII, particularly, arise from a victim's perspective (Pellitteri 2009) but may also promote critical or antiwar messages to a broad audience (Penney 2007). Analysis of revisionist or nostalgic frames (She 2020) indicates, on the other hand, that the depiction of war — even if not implicitly referencing WWII or other historical events — is far from uncontroversial in Japan. Thus critical approaches to works dealing with the topic of "war" dissect how it is narrated, negotiated, and constructed in different societies. In this paper we aim at contributing to this understanding by exploring how war is framed and discussed in the Japanese war-themed game *NieR:Automata* developed by Platinum Games and released 2017.

Like other popular media formats, digital games can be considered cultural artifacts that on the one hand are produced in and thus shaped by certain societal contexts and on the other are received by audiences who may interpret their contents differently² depending on their own surroundings. Meaning-making revolving around a text thus needs to be understood as a complex communication process that is shared between producers, receivers, and a product. While focusing on only one of these aspects certainly has its limitations, in-depth analysis of a game itself reveals relevant results regarding these processes. The game text functions not only as a site for negotiation and reflects on society, but also "create[s] vocabulary to talk about such topics, [...] and make[s] certain experiences 'speakable'" (Schubert 2018: 162). The text can thus be regarded as a multilayered construct that plays a significant role in meaning-making processes. While it would certainly be an interesting approach to observe how *NieR:Automata*

¹ The game examined in this study was played in Japanese. All names not clearly distinguishable as English or other languages have been transcribed in Hepburn romanization, and all quotes from the game have been translated from Japanese by the authors themselves.

² As Hall (2019) pointed out, recipients of a media text may understand its messages differently than they were intended by the author/producer, and Jenkins (1992) explored how fans of pop-culture works may productively add personal meanings to them.

is perceived by other players, in this paper we decide to mainly focus on the game in question as a starting point for facilitating further potential research. As Lankoski and Björk argue, it may be "difficult to understand play or player behavior in a game if one does not know what constitutes the gameplay" (2015: 6).

Scholars have demonstrated how digital games can deploy powerful messages and ideas regarding everyday life, politics, and international relations. As Bogost (2007) notes in his writings about procedural rhetoric, political processes can be experienced in serious games such as September 12, but also in America's Army a game used by the US Army as a recruiting tool. He argues that games may show "how political structures operate, or how they fail to operate, or how they could or should operate" (Bogost 2007: 74). But even commercial games have been examined regarding their political potentials — for example by Roth (2017), who analyzed the popular Metal Gear Solid series among others. He sees high potential in moments of disruption resulting from unresolved conflicts in gameplay that "might stimulate our imagination of radical alternatives" (Roth 2017: 35). It is this very notion that digital games are "thought-provoking" as "spaces of political philosophy that engage with fundamental questions of how we may best live together" (Roth 2017: 1) that underlines the significance of examining how digital games deal with questions concerning war. In this sense, scrutinizing how war is constructed in digital games (Zagal 2017) can help unravel socially shaped lines of argumentation and offer entry points for critique.

Research regarding war-themed digital games has pointed out that war is often constructed in simplifying ways (e.g. Lackner 2014), which is also linked to trivializing and instrumentalizing presentations of "life" and "death" during gameplay. By contrast, NieR: Automata illustrates these concepts in complex ways and breaks with various conventions established in other war-themed games: while at first it frames enemies as obstacles through corresponding rules, game mechanics, and narrative dialogues, it increasingly questions these framings and sheds light on the various ways in which war dehumanizes enemies in order to fight them. At the same time, it discusses the emotional and mental consequences that haunt individuals involved in armed conflict and thus takes a critical stance against simplifying depictions of war. Most intriguingly, it applies these concepts in a posthuman environment in which war is nevertheless fought by robotic machines in the name of humankind. Intentionally exploring human concepts without actual humans present (Muncy 2018: n.p.), this game employs a setting permitting critical questions regarding conceptualizations of "life" and "death," practices framing individuals as "humans" or "enemies," and, subsequently, the meaning of "war" itself.

In this paper we will analyze how *NieR:Automata* reflects on war especially through its posthuman environment and how its messages are shaped by its qualities as a digital game. We first give a brief overview of approaches to the depiction of life, death, and war in digital games in order to understand how

NieR:Automata may be situated within the broader context. We then proceed to explain the overall plot of the game and how it has been discussed in previous research so far. Thereafter we analyze selected sequences from the game to explore in-depth how war is depicted in it as a whole. We focus on how certain individuals in the game are framed as enemies, and how these framings gradually break apart in the course of the game's progression. Further, we explore how the posthuman environment conditions the mode of warfare described in the game. Our findings show that the game disengages from human concepts concerning bodily vulnerability in war and introduces an approach defining the "data" inscribed in a body as primarily vulnerable. As we are going to show, these messages are transported not only narratively but also by inviting the player to experience concepts concerning "life" and "death" in the course of interacting with this digital game.

Framing life through death: War (in) games

Experiencing war and death in a playful way

With regard to the Arab-Israeli conflict, Butler defines war as a means of applying frames that "divid[e] populations into those who are grievable and those who are not" (2009: 38), emphasizing how what counts as life is dependent on these frames. When, however, lives are portrayed as being something other than life, they are framed as "ungrievable lives." These are "those that cannot be lost, and cannot be destroyed [...]; they are, ontologically, and from the start, already lost and destroyed, which means that when they are destroyed in war, nothing is destroyed" (Butler 2009: xix).

Butler's approach is based on observations in "real life," but nevertheless shows similarities to the depiction of life and death in digital games revolving around conflict. Death is a crucial part of gameplay not only in war-themed games: Digital games have found numerous ways to visualize the virtual death of the character that is controlled by the player — usually referred to as "player character" ranging from falling into an endless abyss in platform games such as Super Mario *Bros.* to receiving a deadly wound on the battlefield in shooter games. The death of the player character generally signals failure to fulfill the goals set by the game; however, screen death is seldom permanent and often results in the game taking the player back to the same in-game sequence to complete the battle again (and again, if they should fail once more). Even in games restricting the number of retries, the eventual "Game Over" screen does not represent the protagonist's irreversible death, but at most increases the difficulty of gameplay. Even though older games released in the 1980s or 1990s must be started completely anew at this point, the player character will magically come back to life as though nothing happened in the previous playthrough. This is certainly not only true for the player character, but all characters (including enemies) depicted in a given game. Whereas Butler

criticizes practices framing human lives as something other than life, player characters and enemies in digital games cannot be considered as "alive" — yet they are still described as "lives" subject to "death." They must be ungrievable lives, however, because when they are destroyed in-game, nothing is destroyed.

Death of the player character as such has been considered a highly instrumentalized function in digital gameplay. As Harrer notes, one's demise is "potentially hindering but never entirely threatening the player, [with] 'game over' [being] yet another moment in an infinite circuit of trial and error, subverting the meaning of death as end of life by using it as a sanctioning mechanism for ill-performed player interaction" (2013: 610). As regards massively multiplayer online games such as *World of Warcraft*, death has been defined as a form of temporary punishment that must yet be considered "a symbolic and cultural event" — not only fueling discussions among players about heroic ways of dying, but also functioning as a convenient strategy for quickly traveling to distant locations (Klastrup 2006). Death in digital games has been criticized as trivializing, as Frasca explains: "[It] is always just a minor detail: it can be fixed" (2000: 4). On another scale, games dealing essentially with loss — such as *That Dragon, Cancer* — offer unique experiences because they dismantle conventional gameplay patterns, most notably in the fact that "there is no win state" (Schott 2017: 8).

Regardless of the various depictions and functions of death, scholars have pointed out the possibilities that emerge from the ideas thereof deployed in digital games. Mukherjee sees the critique regarding digital death as grounded in an occidental bias and reframes it in the context of "reincarnation and immanent existence" (2009: 1), considering death as part of many different "actualizations within a virtuality of events" (2009: 2). For Azuma (2007: 1604-1609), the possibility to "multiply the characters' lives" or to "reset death" characterizes what he calls "game-like realism" (gēmu-teki riarizumu). In restarting the game again and again after each "death" of the player character, a variety of alternative versions of the game's narrative may be experienced (Azuma 2001: 115). Gallagher, too, calls for a refined look at digital games in this regard, in order to understand how they might contribute to a "revolution in the popular understanding of life and death" (2013: n.p.). As we can conclude from these considerations, digital death is a complex matter, spawning debates with ambiguous outcomes that are concerned with the question of how digital games frame life through the meaning they assign to death.

This becomes especially apparent in discussions regarding games focusing on war, which have attracted much scholarly attention in monographs, anthologies, and special issues (see Harrigan and Kirschenbaum 2016; Payne 2016; Pötzsch and Hammond 2016), mostly from a United States-oriented perspective and in relationship to their qualities as a military-focused form of entertainment. Keogh notes that military-themed shooters mostly reflect on war by deploying dichotomous worldviews, where "good" US soldiers fight "bad" guys on

battlefields without civilians, and violent acts have no consequences for those involved — what he describes as "simplistic, romantic, and jingoistic depictions of the modern, high-tech battlefield" (2013: 2). These games often feature what Allen calls "the unreal enemy," one deprived of ethnic or cultural markers, "anonymous yet potentially anyone" (2011: 52). Payne notes meanwhile how these narratives promote a "national mythology as the world's lone and righteous military superpower" (2016: 27). In many games, the distinction between the fighting party of the player and the enemy is clear-cut, suggesting that in defeating the latter, order is restored (Lackner 2014).

However such depictions have been questioned and indeed subverted in serious games such as *New York Defender* or *Kabul Kaboom* (Lee 2003), or even in mainstream shooter games like *Spec Ops: The Line* (Keogh 2013; Pötzsch 2017). While the first two make use of a procedural rhetoric stating that the games cannot be won (Lee 2003: n.p.), *Spec Ops: The Line* reflects on the protagonist's own activities in a war setting. It does so by framing them initially along the lines of conventions usually employed in military-themed shooters, only to critically question the protagonist's actions and to show the players something not often presented in war games: civilian deaths and the protagonist's mental decline (Keogh 2013). As Keogh puts it: "The player does what they have always done, but what they have always done is shown to be something quite horrible" (2013: 14).

In a similar way, Tsujita (2018) argues that some war games on secondary playthrough offer the possibility to play as the nation the player used to fight against in their first playthrough. He sees "inherent potential" (Tsujita 2018: 1935) in this mechanic, as the player's loyalty to a certain nation is challenged and places them in a double role as "patriot and traitor" (Tsujita 2018: 1994). Reflecting on *Counter-Strike*, Schäfer shows that the "anticipation (and in some instances irreversibility) of one's death and thus the experience of a dimensional structure of time" (2009: 123) is what makes these games "authentic" or "real." War in digital games is thus amenable to reframing via thoughtful variations in game mechanics and narrative construction.

As we can infer from these findings, many games focus on life, death, and war in simplifying and trivializing ways. Research has found, however, that these depictions are also critically examined and questioned in a number of other games. As we will see in the following section, their methods to this end can vary greatly in relationship to their sociocultural context.

War-themed games in Japan

When discussing portrayals of war in Japanese popular culture, we may consider WWII an event significantly influencing works that were created in the decades thereafter. Ōtsuka (2013) reflects on how death and war are illustrated in Japanese popular culture after WWII, examining Tezuka Osamu's manga. He shows how

the author, while using symbolic ways of expression typical of the medium, goes to great effort in drawing "dying bodies" (*shiniyuku shintai*) (Ōtsuka 2013: 2930–2933). Ōtsuka (2013: 2936–2942) links this emphasis on the consequences of war to Japan's experiences during WWII, which differentiates Tezuka's manga from many Hollywood or Disney productions where "bodies do not die" (*shinanai shintai*) or even Japanese pre-war manga, wherein death in war was concealed.

Another frequent aspect of dealing with war in Japanese popular culture is the need to clarify why the protagonists fight, and why war is necessary in the first place (Adachi 2015: 12). Adachi (2015: 13) has explored at length how preserving one's *kizuna* or "bond" to other people — and consequently to the nation or to humanity as a whole — seems to be the primary reason many characters in anime risk their lives and engage in war. This marks a strong contrast to narratives about prewar Japan, where such fighting did not need to be justified (Adachi 2015: 556–557). With robots, doomsday scenarios, and fears of nuclear disaster prominent in Japanese popular culture of the immediate postwar era, more recent narratives about war have dealt with ways to prevent or reverse tragedies or cope with loss meanwhile (Mori et al. 2020).

With regard to digital games, Hutchinson (2019: 182–184) points out that militarythemed shooters are not as popular among Japanese players as they are in the US for example. While strategy games set in Japan's feudal era, such as *Nobunaga's Ambition* and *Sengoku Basara*, sell well on the Japanese market, games centered on WWII remain scarce due to Japan's role in that conflict:

"[L]osing" narratives simply don't make good games. [...]. We can also talk about the problem in terms of self-censorship, ideological conservatism, or possible compliance with governmental directives. Any scenario set in wartime Japan or the immediate postwar rebuilding period could not help but be political. (Hutchinson 2019: 190)

Japanese game developers therefore use a variety of strategies to talk about war. As Koski (2017) explains about the game *Valkyria Chronicles*, one such strategy may be to transfer the events of WWII to a fantasy world where the nation of Japan does not exist. As Hutchinson (2019) and Roth (2017) have argued, the *Metal Gear Solid* series deals in compelling ways with war, trauma, and the use of nuclear weapons, integrating real-life events into an overall fictitious plot. Similar to Koski's object of study, *Metal Gear Solid* is remarkable in the fact that Japan is "strangely absent from the visible sphere of action, a victim of history with no bearing on the contemporary political world" (Hutchinson 2019: 213).

War-themed games developed in Japan must therefore be examined in different ways than their US counterparts. While Payne has argued that fantasy war games are more difficult to "meaningfully connect with current events" (2016: 5), we acknowledge — alongside Hutchinson and Koski — that in the case of Japanese games this exact indefinability might be a space for fruitful counternarratives, ones liberated from governmental ideas and agendas.

The lives and deaths of androids and kikai seimeitai

In the following section we will explain how *NieR:Automata* makes use of its expressive potential, particularly as a digital game, by looking at it not solely as narration but also with regard to its ludic qualities. In order to respect the game's complexity, we chose the method of play proposed by Aarseth (2003) and acknowledge that this creates the reality of the researcher becoming part of the game text as a player (Keogh 2014: 17; Lammes 2007: 28; Jennings 2015: 10). As both authors are experienced with digital games, we were able to proceed in the game without difficulties; however, this also resulted in intensified immersion while playing. To ensure in-depth analysis we played the game together, placing one researcher in the role of the player and allowing immersive gameplay while the other observed the game events from the perspective of a viewer. Further, we used records of certain sequences and experimented with gameplay to reach a thorough understanding of the game at hand.

"A continuous spiral where life and death repeat after each other": Rewind mechanics and the plot of *NieR:Automata*

NieR:Automata (2017) is a role-playing game developed by Platinum Games, published by Square Enix, and designed by Yokoo Tarō, who is famous for using controversial protagonists and topics in his games. The game is the sequel to *NieR* (2010), with some of the latter's characters carrying over. *NieR:Automata* had high sales in Japan, becoming the twelfth-most successful game in the national console market in 2017 (Famitsū 2018: 400). Compared to Europe, where it ranks 69th (vgchartz 2021a), or the US, where it reached 66th place (vgchartz 2021b) among the bestselling console games of 2017, *NieR:Automata* was notably more popular in Japan. The world of *NieR:Automata* is narrated not only in the game but also through media-mix productions including for example a stage play explaining events that take place before the actual gameplay narration (Famitsū 2017b).

During gameplay, the player takes on the roles of three androids — 2B, 9S, and A2 — as player characters. The game makes great use of what Kleinman et al. label "designer controlled rewind" (2018: 3): After completing the first playthrough as 2B and reaching ending "A," players are taken back to the beginning of the story to play it again, but this time from the perspective of 9S. However, when the player again reaches the "end" of the game — this time called "B" — it is revealed that the first two playthroughs were merely an "extended prologue," as Greene (2020: 15) terms it. This extended prologue serves the purpose of explaining the events that now become playable in the roles of 9S and A2 and that will be concluded in endings "C," "D," and "E." *NieR:Automata* offers an additional 21 endings, ranging from "F" to "Z," that can be pursued during gameplay and usually result from the player acting differently than how the game tells them to (i.e. leaving the battlefield without fighting). Yokoo has used similar narrative styles in his other games, causing players "to question their actions across the whole game" (Greene 2020: 17).

War and ideas concerning life and death are a crucial part of the game's narrative. The overall plot revolves around an everlasting battle between androids and socalled kikai seimeitai ("machine life-forms") fighting in the name of humankind and of aliens respectively. While the protagonists 2B and 9S at first uncritically engage in war, they gradually start to question their roles as soldiers as they discover that humans and aliens have long been extinct. Yoruha's commander, whom 9S confronts about this conspiracy, explains that this lie is necessary for the war to go on: "No one can fight without reason. We need a God who deserves that we offer up our lives" (Platinum Games 2017: Chapter 9, route "B"). The de facto meaningless battles continue, leading to the permanent death of the kikai seimeitai Adam, whose brother Eve becomes infected with a so-called logical virus (ronri *uirusu*) while grieving for him. He becomes absorbed by the idea of destroying all androids. While Eve can be defeated by 2B and 9S, the spread of the virus shortly afterward leads to the destruction of the android's main base, Bunker, and to the permanent death of 2B. This, in turn, leads to the corruption of 9S, who seeks to destroy all kikai seimeitai as well as the deserted android A2, whom he wrongfully believes to be 2B's murderer. Depending on player decision-making, the plot of the game ends with either 9S and A2 killing each other, leading to the kikai seimeitai leaving Earth, or with A2 sacrificing herself in order to destroy the kikai seimeitai network and save 9S.

The game tells a rather gloomy story, with developer Yokoo attempting to demonstrate that humans "cannot flee from conflict and hate. That's why a videogame imitating the real world [*genjitsu sekai o mohō suru*] can only turn out like this" (Famitsū 2017a: n.p.). This view is also discussed in-game, as Adam utters the belief that "[t]he basic quality of being human is conflict [...]. Fighting, stealing, and killing each other. This is [what it means to be] human!" (Platinum Games 2017: Chapter 8). In showing the inevitability of loss and the meaninglessness of war in general, Yokoo questions mainstream depictions thereof in popular culture. He would remark in an interview that:

When I hear for example a story ending in a reunion with the heroine, kissing her after killing a hundred hostile soldiers, rather the protagonist seems utterly insane to me. I think that's why my works are said to be dark, because they are the results of me trying to portray the world the way it really is. (Famitsū 2017a: n.p.)

Previous research on the game states that defeating an enemy in *NieR:Automata* is designed to be simultaneously enjoyable (via the game mechanics) and guilt-provoking (Muncy 2018). During gameplay, expectations that players take for granted are often not fulfilled (Gerrish 2018: 4–5), subsequently leading to a feeling of unease. Due to this complexity, the game has been a frequent point of discussion in academia covering ethical (Jaćević 2017), formalist (Gerrish 2018),

postcolonial (She 2020), or theological perspectives (Bosman 2019), to name just a few. Among Japanese players, too, the game is frequently evaluated to have a "rich plot that is worth thinking about" (*kōsatsu shigai no aru nōkō sutōrī*) (Waito 2021: n.p.). Players note that they have been provoked to reflect on whether machines or androids are human (toratugumi293 2019), on the value of life (Genomu 2017), on what it means to live freely (Usagisan@Entamekigyōkikakuman 2021).

Although the player actively engages in destroying or killing the machine lifeforms, research found that *NieR:Automata* offers no conclusion or relief as might be encountered in other games. Jaćević (2017: 14) explains that in playing the game, the player realizes that the world portrayed there is a "prison" from which they cannot escape. As has also been noted by others, the repetitive nature of the game is a comment on the disturbing nature of the circle of violence and the replaceability of bodies in wartime (Jaćević 2017: 2; Greene 2020: 20).

We thus can see that this game has sparked reflection among players and academics alike. As we may already conclude from this brief introduction to the events of the game, *NieR:Automata* discusses war in critical and profound ways. In the following sections we will explore these in greater detail by illustrating the concepts of life and death introduced in its posthuman environment.

"They don't have a heart": Framing enemies in NieR:Automata

As early as in its opening sequence (Platinum Games 2017: Chapter 1), NieR: Automata applies enemy frames to the mechanic kikai seimeitai that can be described as ones typical of digital games: As the android 2B descends to Earth to battle kikai seimeitai and collect information on their behavior, a briefing she receives from her operator reveals to the player that they will face a great number of enemies. As in many other games, kikai seimeitai are defined through rules and narration as enemies that need to be defeated to progress. The game's interface applies conventional information like health bars and numerative information on how the actions the player takes against them reduces their "life." While the alien life-forms against whom the war is actually directed remain relatively absent in the in-game descriptions, only to be revealed to have been wiped out by kikai seimeitai long ago, the game reflects deeply on the definition of the latter. In several dialogues between the androids 2B, 9S, their operator, and 2B's supporting computer Pod 042, they are termed as "enemies" (teki) who need to be "quickly eliminated" (sumiyaka na haijo), "simply defeated" (taoseba ii), or "annihilated" (senmetsu). Further, their mechanical qualities, framing them as nonhuman as well as nonlife, are described by expressions such as "destroy" (hakai) or "break down" (kowareru), as well as via the possibility to hack and control them. By calling them mainly by their function — "saws" (nokogiri) or "weapons" (heiki) that are produced in great numbers in factories — they are constructed in a heavily objectified way and also reduced to their purpose in play: a "target" (mokuhyō) not only for the android unit Yoruha, but also for the player too.

We can conclude that at the beginning of the game kikai seimeitai are framed as enemies in ways very conventional for digital games. However, 2B's fellow Yoruha units are framed in an equally instrumentalized manner. Before players take on the role of 2B as a third-person player character, they start Chapter 1 in control of a spaceship reminiscent of early shoot-'em-ups such as Space Invaders and also engage in a similar game style: kikai seimeitai appear on the screen and need to be shot before the player can proceed. It is particularly remarkable that 2B flies in a convoy of similar-looking spaceships devoid of any individuality. A short interface note indicates that the spaceships are assigned numbers, but without any previous knowledge of the game it would be difficult to recognize that those are actually the names of Yoruha soldiers like 2B. The idea that, in war, participants resemble not an individual but rather a number is further underlined by the fact that the player cannot move at the beginning of the game and will only find out which of the numerous spaceships they are in charge of once movement is allowed. This view is further outlined by 2B, who coolly remarks that when spaceships are shot, their occupants become "lost" (rosuto) units, explaining their function as soldiers rather than individuals. That this function is easily replaceable by other soldiers is powerfully demonstrated when the group's captain is defeated and 2B takes on her role.

These framings of individuals participating in war is reminiscent of Butler's theoretical Frames of War, in which she explains that during war a life may be "effectively transformed into an instrument, a target, or a number, or is effaced with only a trace remaining or none at all" (2009: ix-x). Life, in this sense, is not something merely objective, but rather constructed socially and framed continuously; therefore, life may exist that is not counted as such and consequently is addressed differently. Even though human, enemies may not be counted as life — rather as a threat, and thus not the same as the lives recognized through these frames. Intriguingly, in the world of NieR: Automata neither the protagonists nor their enemies are human and thus are easily reduced purely to their military functions. We can see that androids and *kikai seimeitai* are both depicted in ways in line with Butler's elaborated framework. They are not recognized as living beings — even though kikai seimeitai are called "life-forms" (seimeitai) — but rather as machines whose sole purpose is to destroy other machines. In this way the game states that in war not only enemies but all participants become numbers and instruments, regardless of the sides they take.

Since in *NieR:Automata* the protagonists' lives are not, as suggested by Butler in regard to "real world" conflicts, necessarily valued over those of their enemies, other frames are hence employed to differentiate between androids and *kikai seimeitai*. While obviously androids and *kikai seimeitai* are both machines, the androids of Yoruha continuously emphasize the nonhuman qualities of their enemies to frame them in a derisive way. Androids are visually nearly indistinguishable from humans, but *kikai seimeitai* are designed to look more like walking tin cans with eyes. Nevertheless, they adopt human behavior such as

founding kingdoms and religions, eating, or wearing clothes. Whenever *kikai seimeitai* engage in human behavior, the androids remind each other that they cannot be taken seriously; or, as 9S puts it: "Don't listen to them. They don't have a heart. They simply imitate human language. We should destroy them" (Platinum Games 2017: Chapter 3). They are constantly denied the ability to act like or even understand humans, thus framing their actions as meaningless.

On the other hand, androids seem to see themselves as legitimate successors to humankind. While various kikai seimeitai clearly state that they take an interest in human behavior, 2B and 9S repeatedly show concern that they look like androids or are "human-like, in other words android" (hito-gata tsumari andoroido) - at one point even asking: "Why are they imitating the way we look?" (Platinum Games 2017: Chapter 4). While 9S and 2B demonstrate that even androids cannot understand all facets of human behavior (for example showing astonishment in response to such things as rollercoasters in Chapter 4 or shopping malls in Chapter 6), humankind seems to serve as an ideal standard for androids — as suggested by the motto of Yoruha, "Glory to Mankind" (*jinrui ni eikō are*). Put differently, as formulated by Braidotti in her critique on humanism, "the human norm stands for normality, normalcy and normativity. It functions by transposing a specific mode of being human into a generalized standard, which acquires transcendent values as the human" (2013: 26). It does not come as a surprise, then, that Yoruha's androids see a particular threat in human-behaving kikai seimeitai. As enemies of humankind, they need to be framed as nonhuman and unable to participate in human lifestyles.

Kikai seimeitai are thus framed in two ways: machine-made entities and, more importantly, nonhuman enemies. It is intriguing that this framing is applied by beings that are equally machine-made and nonhuman, with androids and *kikai seimeitai* thus being similar groups that are at the same time actively framed as different from each other. It may not be surprising then that, as we show in the following section, the adequacy of the frames describing "enemies" and "war" is increasingly questioned by the protagonists as the game progresses.

"It can't go on like this": Challenging the frames of war

Butler (2009: 10) tells us that even though powerful, frames of war are subject to change and possibly also destruction as they are socially established and constantly rearranged. *NieR:Automata* provides several examples of how these frames of war that delineate the *kikai seimeitai* as nonhuman enemies are reframed and changed over time. While these frames are especially pronounced in the first section of the game, they are gradually challenged by the events taking place in later parts. Slowly, the framing processes are called into question by a number of characters featuring in the game.

At the beginning of route "B," the player temporarily switches player characters and begins playing a *kikai seimeitai* that tries to help its brother (*nii-chan*) who lies destroyed on the floor (Platinum Games 2017: Chapter 1, route "B"). In this short episode, the player performs the seemingly meaningless task of pouring oil over the dysfunctional body of the brother. In contrast to the control mechanics applied to the androids, enabling swift movement through the game world, the *kikai seimeitai*'s movements are unwieldy and clumsy, letting players interactively experience what the world looks and feels like from the other side. Here, *kikai seimeitai* are presented as beings in the game world that exceed the state of mere "target" and may be incorporated by the players as characters having distinct relationships and pursuing their own personal goals instead. Similar to what Tsujita (2018) emphasizes in his analysis of war games, by switching the perspective the game offers an alternative view on the game world through the eyes of the protagonist's enemies.

In the course of route "B," the perception of the *kikai seimeitai* is continuously challenged when 9S engages with several kinds of machines by hacking them. While the identities of the end bosses were encrypted in route "A," they now become readable as names of philosophers such as Hegel, Marx, or Engels and thus cease to be enumerable machines. Further, hacking enables 9S to listen to the thoughts of several *kikai seimeitai*, making a simple framing of the machines impossible. This leads to a constant reframing and ultimately to confusion for 9S. Rather than treating them as enemies, 9S begins to acknowledge that the machines are far more complex than he had initially thought.

The preliminary framing of kikai seimeitai as nonhuman machines is disrupted when the protagonists first encounter the kikai seimeitai Adam in Chapter 3: 9S and 2B stumble upon several kikai seimeitai that are imitating sexual intercourse and child-rearing. As the player arrives and engages in combat, they chant: "It can't go on like this" (kono mama ja dame) and gather together to form an enormous womb in the air. Rather than just engaging in combat, the machines seem to be interested in several other activities that culminate in the birth of Adam, a kikai seimeitai that has emerged from a machine-made womb. He looks like a human and even bleeds when attacked, thus resembling what humans would call a life: something that is born and may be hurt. The protagonists state that "this is a type we have not encountered until now" (*mita koto no nai taipu*) (Chapter 3), indicating that their perception of kikai seimeitai is subject to change. At this point the frames that made the machines appear as "simple enemies to be destroyed" need to be reconfigured, as they fail to recognize an individual who proves to be difficult to typecast (Flatscher and Pistrol 2018: 115). While 2B wonders whether Adam could be an android, 9S reaffirms himself that Adam is a kikai seimeitai and thus needs to be defeated. The confusion of the protagonists is based on how their enemy suddenly looks similar to them and may thus not be an enemy at all. This is further highlighted as Adam asks 2B and 9S why they fight him (*doshite tatakau?*), indicating that this life-form is not an enemy initially.

That androids and *kikai seimeitai* are practically "the same" is eventually proved to be true; as 9S finds out in Chapter 15, their cores are made from the same material. As early as in Chapter 8, Adam suggests to 9S that androids and *kikai seimeitai* show strong similarities to one another, causing 9S's mental and technical breakdown — visualized by the game in a manner reminiscent of a defective computer program. 9S clearly has difficulties with accepting the resemblances between androids and *kikai seimeitai*, although the absurdity of the frames applied to distinguish the two from each other is outlined throughout the dialogue sequences with Adam. Even 2B, who remains somewhat silent during gameplay, reflects at the end of route "A" on the nature of their enemies: "What is it that makes the *kikai seimeitai* different from us androids? We are both robots that have become able to have a will and feelings" (Platinum Games 2017: Chapter 10, route "A"). *Kikai seimeitai*, who would be framed as mere enemies deprived of any individuality at the beginning of the game, are hence gradually portrayed as complex individuals — and, indeed, recognized as such by the protagonists.

NieR:Automata discusses and dismantles its frames of war primarily via narrative means. The breaking of the frames is signaled by unforeseen events that indicate *kikai seimeitai* cannot be reduced to their enemy function in gameplay. In the first two routes, a space is established in which these environments may be discovered by the players without facing consequences affecting their later gameplay: androids as well as *kikai seimeitai* are explained to be immortal in the game, as their bodies can be reproduced and their memories reloaded from their respective networks. In the closing chapters of routes "A" and "B" — and especially during "C" and "D" — however, the game introduces alternative ways for machines to become vulnerable and thus mortal. As we will now discuss, by presenting machines whose data or bodies may be permanently destroyed the game opens up possibilities for surrounding characters and even the players to grieve over the loss of these machines. We argue that the concepts of "invulnerability" and "vulnerability" emphasize the presented views on life and death, and may be especially experienced through the game mechanics.

"Your present 'you' will not come back": Experiencing (in)vulnerability and the recognition of grievable lives

In the opening chapters of the game *kikai seimeitai* and androids are portrayed as damageable and defeatable, yet not mortal. Both are able to regain "life" from their networks and usually cannot die permanently when defeated in battle. In *NieR:Automata*, we thus find explanations for how the player character will come back to life after we see them die on the screen. This is presumably what causes 9S to engage in risky combat maneuvers to support 2B, resulting in severe wounds that reveal his inner workings of metal and wire (Chapter 1). The game shows the technical composition of his body explicitly, and therefore tones down the effect of him being hurt, emphasizing that 9S's body can be repaired and that his current

state will have no other consequences besides a loss of memory during the mission itself. At the end of the chapter, these circumstances allow 2B and 9S to accomplish their mission by blowing up the whole environment — including themselves. Overall, in the frames applied to androids and *kikai seimeitai* during the game's initial routes they appear to share not physical vulnerability but rather invulnerability — their deaths turn out to be nonpermanent, and thus they resemble lives that do not need to be grieved for. It seems that the androids' bodies indeed are "bodies that do not die" (Ōtsuka 2013: 2936–2942); when they are destroyed, "nothing is destroyed" (Butler 2009: xix).

During gameplay, players may experience this bodily invulnerability each time their health bars run completely empty. After "death," the android's body keeps lying on the same spot where it "died" and a new android body, resembling a new version of the player character, walks out of one of the transport facilities in the game. The game applies conventional frames of digital death as part of an "infinite circle of trial and error" (Harrer 2013: 610). Intriguingly, players may visit the dysfunctional body at the point of their previous "death" and can collect the chips they had plugged in at the time. These may be reused and applied to the "new" player character to customize its abilities. The body is thus described as a mere vessel to traverse the game world — a definition reminiscent of early descriptions of avatars in game studies (e.g. Newman 2002) — while the individuality of the character is based on the data that is inscribed in its body.

NieR:Automata actively invites the player to test the boundaries of the so-defined technical body. Further to the adjustments mentioned above, androids are also equipped with a so-called OS chip that controls the general functionality of the body. Like other chips it may be removed, leading to "Game Over" and to one of the many different narrative endings elaborated within the game. Thereby *NieR:Automata* makes the digital-game narrative style of offering multiple endings (Azuma 2007) apparent to the player. At this stage players may experiment with the technical vulnerability of the androids without facing consequences therefrom for the further development of the game.

In later chapters, however, Adam begins to problematize that, under these circumstances, machines cannot experience the relationship between life and death in the same way as humans do. As he explains: "Data that perpetuates without limitations cannot really experience life. It cannot understand the concept of death" (Platinum Games 2017: Chapter 8). It is this very notion that causes him to disconnect from the *kikai seimeitai* network in order to experience what permanent death feels like when he is killed by 2B. Here, the game discusses how the robots portrayed in the plot so far are not granted the status of actual living beings as they cannot die. It also shows how death that is permanent is different from the common depiction in digital games of bodies that cannot die. Similar to what others have

noted, it is this break with the conventional frames of life and death that makes it possible to affect the players (Azuma 2007; Schäfer 2009).³

In breaking this cycle of death and rebirth, *NieR:Automata* reconfigures Adam as a vulnerable and mortal being whose death will lead to his brother Eve grieving for him. Butler (2006) shows that life which cannot be grieved for is not framed as "life." Mourning means accepting that one will be changed by the loss of the other (Butler 2006: 21), indicating that the lost life has been recognized as one that is grievable. In this sense, by transitioning to being mortal Adam's death will now affect other characters, leading to the recognition of him as someone who indeed was alive.

Vulnerability, death, and subsequent grieving become experiences that affect the player characters and therefore gameplay directly with the destruction of Bunker at the beginning of routes "C" and "D." When 2B is infected with the logical virus, in a last quest players will navigate her through the game world to find a place to die permanently without infecting any other androids. The interface and control mechanics give clear information that 2B is becoming more and more corrupted by the virus. A small panel indicates the infection's progress in percentages; with the worsening of her status, 2B loses several abilities as a player character — including the ability to move rapidly, attack or defend herself, and, eventually, to see and hear the game world properly. Her decline is starkly contrasted with the hints her assistant machine Pod 042 gives her in his typical manner, such as the suggestion to take a vaccine, back up her data to Bunker, or heal herself. Such options usually possible in many similar digital games — can no longer be taken up here, as Bunker — the server that enabled a digital-game frame on war — has been destroyed. When 2B finally encounters A2 and asks the latter to kill her, 2B's subsequent death — like Adam's — is permanent. Through these changes in the handling of the player character 2B, players experience the vulnerability and the subsequent permanent death in a painstakingly longsome way compared to the previous nonpermanent deaths.

The game further uses visual techniques to underline differences between mortal and immortal beings in the game world. Because androids and *kikai seimeitai* usually do not bleed during gameplay, it comes as something of a surprise when Adam, Eve, 2B, and 9S are shown shedding red blood in their respective death sequences. Blood — and with it, the violence of war — is used as a marker to signal how the characters' lives have now become vulnerable and erasable. The body ceases to be a machine and becomes mortal, in the sense that now it is exposed to others — who can potentially inflict lethal damage upon it. The red blood signifies the transition from a damageable to a vulnerable body — the transition to life. When 2B and Adam die permanently, lives are lost. In a similar way to how Tezuka managed to show dying bodies after WWII in his manga

³ Especially in the case of 2B's permanent death later in the game, some players reflected on their emotional reactions (toragumi293 2019).

(Ōtsuka 2013), *NieR:Automata* uses blood to show that this is a body that may be killed — and thus is a living body.

Butler conceptualizes bodily vulnerability as a common ground for life:

The body implies mortality, vulnerability, agency: the skin and the flesh expose us to the gaze of others, but also to touch, and to violence, and bodies put us at risk of becoming the agency and instrument of all these as well [...]. The body has its invariably public dimension. Constituted as a social phenomenon in the public sphere, my body is and is not mine. (2006: 26)

Rather than bodily vulnerability, however, *NieR:Automata* illustrates how data plays a central role in the discussion of life and death. At the end of routes "A" and "B," it is revealed that 9S has become infected with the logical virus and must be killed for the safety of all other androids. Because he now carries that virus, he cannot upload his current memories to Bunker and will be reloaded from an older file. As he tries to comfort 2B with the prospect of reunion, she remarks: "But that way, your present 'you' will not come back" (Platinum Games 2017: Chapter 10). In grieving over the data that will be lost, the vulnerability of 9S is recognized by his companion.

While being exposed to physical violence has little consequence for the androids' lives — even if their bodies are destroyed —, the digital data may be affected by others in the game. When the networks and databases fail to function or are intentionally shut down, the lives of androids and *kikai seimeitai* become vulnerable. In this way *NieR:Automata* discusses a concept of life that is directly linked not to the body but rather to the digital mind of the characters. Players may experience this data-based vulnerability in the final ending, "E." At this point in the game, players are given the opportunity to fight the end credits in a scene resembling fixed shoot-'em-ups such as *Space Invaders*. Here, the names of those involved in the production of the game shoot bullets at the player, who now controls a cursor rather than a character. This task proves to be impossible to be fulfilled by the player alone. Consequently, they are offered the opportunity to receive help from other players. At this very end of the game, the player is invited to upload their own gameplay data in order to assist other players in "beating the credits."

This, however, happens at the cost of deleting their own save files, thus resetting the game completely. In this very sequence the game allows players to relate to each other as human beings rather than as machine characters and offers interactive methods to act responsibly toward each other. Players have to confirm their decision to delete the data several times before their input is executed, further emphasizing the significance of their decision. As Yokoo himself explains, his own experience of losing save files as a child inspired him to make a game about this aspect: "I was so sad, but my parents didn't understand. So I thought of a game [...] through which anyone in this world would understand the frustration [of losing save files in a game]" (Famitsū 2017c: n.p.). Put differently, the game discusses the loss of data not only in its intradiegetic narration but also offers an extradiegetic experience by making the player lose their save files.

NieR:Automata explores vulnerability as a condition to recognize grievable lives in a posthuman environment in a number of ways. First, through the game mechanics, players may experience (but also experiment with) the bodily invulnerability that is common to most digital games. Second, the game uses permanent death and red blood as signifiers that individuals have become lives that may be genuinely lost. Third, and most importantly, what is lost in the game is not necessarily the physical bodies of the androids or machines but rather the data that can never be restored once gone.

However, especially in the course of ending "E," NieR: Automata also elaborates the power of its game-like realism and reminds the player of their human bias in theorizing concepts of life and death. In a way, the deletion of the game's data starts the game anew and thus reestablishes the cycle that constitutes the game-like realism in the first place. Additionally the "beating of the credits" narratively happens for the sole purpose of the resurrection of 2B, 9S, and A2, as their supporting computers Pod 042 and Pod 153 together with the player may decide that they want to find a way for them to survive. After accomplishing the mission the player will be confronted with a dialogue sequence taking place between Pod 042 and Pod 153, regardless of whether they decide to sacrifice their data or not. In this scene Pod 153, in a manner reminiscent of 2B's opening remarks, posits: "They are caught in a continuous spiral where life and death repeat after each other. However, to struggle within this cycle is the meaning of 'being alive.' That's how 'we' think about it" (Platinum Games 2017: Chapter 18). In its very last sequences NieR: Automata therefore establishes an understanding of "game-like life" that may be recognized as such by in-game characters. It is us humans who failed to understand that 2B, 9S, and A2 were already considered to be alive before we experienced their permanent death.

Conclusion

NieR:Automata explores several aspects typical of digital games revolving around the topic of war. Death is a prominent theme that can be experienced in both ludic and narrative elements of the game. Bodies are replaceable and collectible, but memories and data, once lost, cannot be reconfigured easily. In the course of the game, the consequences of death change from a restart at one of the saving points to a change in protagonists or even the ultimate eradication of data. It is thus not merely a hindrance to the progression of the game or a ludic aspect to make war a trivial consideration, but rather an object of discussion that can be assessed from different angles during gameplay.

In this respect, *NieR:Automata* differs from many war-themed games that fail to depict the complexity of war. Certainly, the game is not able to provide a full picture of the latter; in showing how the framing of enemies operates in a combat

setting, it nevertheless provides a critical perspective on war. Even though fighting is experienced as a playful challenge, as in many other such games, the narrative structure evokes feelings of unease. Enemies cannot be declared as such anymore, and the reason to even engage in war disappears, leaving behind a mess of destruction and confusion. Thoroughly stripping away the many layers of "frames of war," the game reveals horrifying aspects thereof (such as trauma and mourning) that most games do not explore.

NieR:Automata shares features typical of Japanese war-themed games. For one, references to wars throughout Japan's history are vague at best. While many dates in the game explain that the current war between androids and *kikai seimeitai* is set exactly 10,000 years after 1945, Japan and its role in WWII is not a subject of discussion. In addition, the player first experiences the game from the perspective of a victim trying to reconquer their lost homeland.

We cannot — at least without difficulties — argue that *NieR:Automata* critically engages with Japan's wartime history. However what we can say is that this game takes a critical stance against simplistic depictions of war in popular culture, and especially in digital games. It initially applies a game-like realism in its game mechanics and at the narrative level by employing a posthuman setting as well. By destroying this ludic frame on war and introducing the possibility of permanent death, however, *NieR:Automata* enables reflection on the atrocities of war.

Thereby grievable lives may be recognized as such in a setting in which that is initially not the case. In this game, players encounter life and its vulnerability in the form of digital data. The loss thereof signifies a "digital vulnerability" that is not only part of the narrative structure but may be experienced by the players themselves in finishing the game and deleting their save files. However, by returning to game-like realism in ending "E," even the deaths that were first perceived as permanent are reframed as not so at the end of the game. Considering Pod 153's notion of "game-like life," we cannot help but come to the conclusion, then, that *NieR:Automata* uses concrete methods to make us human players understand that even in game worlds we may encounter grievable *life* — and, thus, rich viewpoints on the value of life in war.

References

- Aarseth, Espen (2003): "Playing Research: Methodological Approaches to Game Analysis", Paper, spilforskning.dk Conference 2003, August 28–29
- Adachi, Kayu (2015): "Nihon no manga, anime ni okeru 'tatakai' no hyōshō" (The representation of 'war' in Japanese manga and anime), PhD thesis, Gakushūin Daigaku
- Allen, Robertson (2011): "The Unreal Enemy of America's Army", in: *Games and Culture*, 6, 1: 38–60, doi: 10.1177/1555412010377321
- Azuma, Hiroki (2001): *Dōbutsuka suru posutomodan. Otaku kara mita nihon shakai* (Otaku: Japan's database animals). Tōkyō: Kōdansha

- (2007): *Gēmu-teki riarizumu no tanshō. Dōbutsuka suru posutomodan 2* (The emergence of a game-like realism. Japan's database animals 2). Tōkyo: Kōdansha, Kindle
- Bogost, Ian (2007): Persuasive Games. The Expressive Power of Videogames. Cambridge: MIT Press
- Bosman, Frank G. (2019): Gaming and the Divine. A New Systematic Theology of Video Games. London: Routledge, doi: 10.4324/9780429507892
- Braidotti, Rosi (2013): The Posthuman. Cambridge: Polity
- Butler, Judith (2006): Precarious Life: The Powers of Mourning and Violence. London: Verso
- (2009): Frames of War: When Is Life Grievable? London: Verso
- Famitsū (2017a): "'Mechakucha ni shite shimae' Yokoo Tarō-shi Shingapōru keynote ripōto" ("Make it messed-up" Report on Yokoo Tarō's keynote in Singapore), https://www.famitsu.com/news/201710/15144064.html (accessed: 2020-11-22)
- (2017b): "NieR:Automata' to doitsu no sekaikan de joen sareru 'ongakugeki Yoruha Ver 1.2', 'Butai shonen Yoruha Ver 1.0' chiketto senko yoyaku ga 10-gatsu 25-nichi yori sutāto" (Pre-reservation starts for tickets for 'Music theatre Yoruha Ver 1.2', 'Stage Yoruha-boy Ver 1.0' performed in the same world as 'NieR:Automata'), https://www.famitsu.com/news/201710/24144640.html (accessed: 2021-07-12)
- (2017c): "Shingaporu no 'NieR:Automata' fan wa emīru o risutora? GameStart 2017 ibento repoto" (The fans of 'NieR:Automata' in Singapore want Emil to be retired? GameStart 2017 event report), https://www.famitsu.com/news/201710/17144185.html (accessed: 2021-07-12)

- (2018): Famitsū gēmu hakusho (Famitsū White Book on Games). Tōkyō: Gz Burein

- Flatscher, Matthias; Pistrol, Florian (2018): "Zur Normativität in Anerkennungsverhältnissen. Politiken der Anerkennung bei Honneth und Butler", in: Posselt, Gerald; Schönwälder-Kuntze, Tatjana; Seitz, Sergej (eds.): Judith Butlers Philosophie des Politischen. Bielefeld: transcript, 99–124, doi: 10.14361/9783839438466-005
- Frasca, Gonzalo (2000): "Ephemeral Games: Is It Barbaric to Design Videogames after Auschwitz?", in: Eskelinen, Markku; Koskimaa, Raine (eds.): *Cybertext Yearbook 2000*. Jyväskylä: The Research Unit for Contemporary Culture
- Gallagher, Rob (2013): "Playing With Death", in: *The New Inquiry*, August 15, https://thenewinquiry.com/playing-with-death/ (accessed: 2020-11-22)
- Genomu (2017): "Nīa Ōtomata, kuria kansō. Hito no teigi to wa" (Impressions after finishing NieR:Automata. What is the definition of a person), https://kikigamesommelier.blog.fc2.com/blog-entry-164.html (accessed: 2021-07-12)
- Gerrish, Grace (2018): "NieR (De)Automata: Defamiliarization and the Poetic Revolution of NieR: Automata", Paper, DiGRA 2018
- Greene, Christopher (2020): "Infinite Incomplete Cycles: Musical and Narrative Transformation in Nier and Nier: Automata", MA thesis, Tufts University
- Hall, Stuart (2019): "Encoding and Decoding in the Television Discourse", in: Morley, David (ed.): Essential Essays Volume 1: Foundations of Cultural Studies. Durham: Duke University Press, 258–276

- Harrer, Sabine (2013): "From Losing to Loss: Exploring the Expressive Capacities of Videogames Beyond Death as Failure", in: *Culture Unbound*, 5, 4: 607–620, doi: 10.3384/cu.2000.1525.135607
- Harrigan, Pat; Kirschenbaum, Matthew G. (2016): Zones of Control: Perspectives on Wargaming. Cambridge: MIT Press
- Hutchinson, Rachel (2019): Japanese Culture Through Videogames. London: Routledge
- Jaćević, Milan (2017): ""This. Cannot. Continue." Ludoethical Tension in NieR: Automata", Paper, Krakow, The Philosophy of Computer Games Conference
- Jenkins, Henry (1992): *Textual Poachers: Television Fans & Participatory Culture*. New York and London: Routledge
- Jennings, Stephanie C. (2015): "Passion as Method: Subjectivity in Video Games Criticism", in: *Journal of Games Criticism*, 2, 1: 1–18
- Keogh, Brendan (2013): "Spec Ops: The Line's Conventional Subversion of the Military Shooter", Paper, DiGRA 2013
- (2014): "Across Worlds and Bodies: Criticism in the Age of Video Games", in: Journal of Games Criticism, 1, 1: 1–26
- Klastrup, Lisbeth (2006): "Death Matters: Understanding Gameworld Experiences", Paper, Hollywood, International Conference on Advances in Computer Entertainment Technology, June 14–16
- Kleinman, Erica; Carstensdottir, Elin; El-Nasr, Magy Seif (2018): "Going Forward by Going Back: Re-defining Rewind Mechanics in Narrative Games", Paper, Malmö, FDG 2018, August 7–10
- Koski, Johannes (2017): "Reflections of History: Representations of the Second World War in Valkyria Chronicles", in: *Rethinking History* 21, 3: 394–414, doi: 10.1080/13642529.2016.1256625
- Lackner, Thomas (2014): Computerspiel und Lebenswelt: Kulturanthropologische Perspektiven. Bielefeld: transcript
- Lammes, Sybille (2007): "Approaching Game-Studies: Towards Reflexive Methodology of Games as Situated Cultures", Paper, DiGRA 2007
- Lankoski, Petri; Björk, Staffan (2015): "Introduction", in: Lankoski, Petri; Björk, Staffan (eds.): *Game research methods: An overview*. ETC Press: 1–8
- Lee, Shuen-shing (2003): "'I Lose, Therefore I Think': A Search for Contemplation amid Wars of Push-Button Glare", in: *Game Studies: The International Journal of Computer Game Research*, 3, 2, http://www.gamestudies.org/0302/lee/ (accessed: 2021-08-17)
- Mori, Toshie; Mori, Shigeyuki; Kinoshita, Masahiro (2020): "Shin'ya anime no torauma kozo. Saishū senso no kakyoku wa kaihi sareru no ka" (How anime has been reading war trauma: Traumatic constructions of late night shows), in: Kokoro no kiki to rinsho no chi, 21: 19–29
- Mukherjee, Souvik (2009): "Remembering How You Died': Memory, Death and Temporality in Videogames", Paper, DiGRA 2009
- Muncy, Julie (2018): "Behind the Mask with Yoko Taro, Videogames' Most Interesting Designer", in: *Wired*, April 13, https://www.wired.com/story/yoko-taro-nier-automata/ (accessed: 2020-11-22)

- Newman, James (2002): "The Myth of the Ergodic Videogame: Some Thoughts on Player-Character Relationships in Videogames", in: *Game Studies: The International Journal* of Computer Game Research, 2, 1, http://www.gamestudies.org/0102/newman/ (accessed: 2021-04-30)
- Ōtsuka, Eiji (2013): Kyarakutā shōsetsu no tsukurikata (How to write a character novel). Tōkyō: Kōdansha, Kindle
- Payne, Matthew Thomas (2016): *Playing War: Military Video Games After 9/11*. New York: New York University Press
- Pellitteri, Marco (2009): "Nippon ex Machina: Japanese Postwar Identity in Robot Anime and the Case of 'UFO Robo Grendizer'", in: *Mechademia*, 4: 275–288
- Penney, Matthew (2007): "War Fantasy' and Reality 'War as Entertainment' and Counter-narratives in Japanese Popular Culture", in: *Japanese Studies*, 27, 1: 35–52, doi: 10.1080/10371390701268638
- Platinum Games (2017): NieR: Automata. Tōkyō: Square Enix
- Pötzsch, Holger (2017): "Selective Realism: Filtering Experiences of War and Violence in First- and Third-Person Shooters", in: *Games and Culture*, 12, 2: 156–178, doi: 10.1177/1555412015587802
- Pötzsch, Holger; Hammond, Philip (2016): "Special Issue War/Game: Studying Relations Between Violent Conflict, Games, and Play", in: *Game Studies: The International Journal of Computer Game Research*, 16, 2, http://gamestudies.org/1602/articles/potzschhammond (accessed: 2021-08-17)
- Roth, Martin (2017): Thought-Provoking Play: Political Philosophies in Science Fictional Videogame Spaces from Japan. Pittsburgh: ETC Press
- Schäfer, Fabian (2009): "'Ludic Philosophy': Subjectivity, Choice and Virtual Death in Digital Media", in: *Digital Culture & Education*, 1, 2: 116–128
- Schott, Gareth (2017): "That Dragon, Cancer: Contemplating Life and Death in a Medium that Has Frequently Trivialized Both", Paper, DiGRA 2017
- Schubert, Stefan (2018): "Videospiele als Populärkultur: Narrativität, Interaktivität und kulturelle Arbeit in Heavy Rain", in: Christoph Hust (ed.): *Digitale Spiele: Interdisziplinäre Perspektiven zu Diskursfeldern, Inszenierung und Musik.* Bielefeld: transcript
- She, Yasheng (2020): "Melancholic Vortex and Postwar Pacifism in NieR:Automata", in: *Replaying Japan*, 2: 147–155
- Toratugumi293 (2019): "Inochi mo nai no ni, koroshiau. Nīa: Ōtomata kansō sono1" (They kill each other even though they are not alive. Impressions on NieR:Automata 1), https://toratugumi.hatenablog.jp/entry/2019/03/01/151422 (accessed: 2021-07-12)
- Tsujita, Masanori (2018): "Sensō gēmu wa wareware ni nani o motarasu ka: Shiriasu gēmu to puropaganda o koete" (War games and the possibility of gamic subjectivity: beyond serious games and propaganda), in: *Genron*, 9: 80–92, Kindle
- Usagisan@Entamekigyōkikakuman (2021): "Kansō: Nīa Ōtomata o kuria shitara ningen rashiku aritai to omotta" (Impressions: I thought I want to be more like a human after having finished NieR:Automata), https://note.com/usagisanzoo/n/n1481d8e90741 (accessed: 2021-07-12)

- Vgchartz (2021a): "Europe Yearly Chart: The year's top-selling games at retail ranked by unit sales. 2017", https://www.vgchartz.com/yearly/2017/Europe/ (accessed: 2021-07-13)
- (2021b): "USA Yearly Chart: The year's top-selling games at retail ranked by unit sales. 2017", https://www.vgchartz.com/yearly/2017/USA/ (accessed: 2021-07-13)
- Waito (2021): "'Nīa Ōtomata' kansō, hyōka netabare nashi. Utsukushiku sutareta sekai ga hirogaru ōpun wārudo gēmu" (NieR:Automata. Impressions and comments without spoilers. An open-world game with a beautifully abandoned world), https://gameannaijo.com/nierautomata review/ (accessed: 2021-07-12)
- Zagal, José, P. (2017): "War Ethics: A Framework for Analyzing Videogames", Paper, DiGRA 2017