

## Article

# Futurity as an Effect of Playing *Horizon: Zero Dawn* (2017)

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**Abstract:** Futurity denotes the quality or state of being in the future. This article explores futurity as an effect of response, as an aesthetic experience of playing a narrative video game. In recent years, there has been a growing interest in the ways in which video games are engaged in ecocriticism as an aspect of cultural work invested in the future. In the presented reading of the 2017 video game *Horizon: Zero Dawn*, it is argued that the combination of the affect creating process of play, in combination with a posthumanist and postnatural plot, creates an experience of futurity, which challenges generic notions of linear temporal progress and of the conventional telos of dystopian fiction in a digital medium. The experience of the narrative video game *Horizon Zero Dawn* is presented as an example of an aesthetic experience that affords futurity as an effect of playing, interlinked with a reflection on the shape of the future in a posthumanist narrative.

**Keywords:** futurity; posthumanism; video games; affect; genre



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## 1. Introduction

Futurity enables us to imagine how to live beyond the present. It can be seen as a cultural capacity to actively shape and to take responsibility for the future. However, interlinked phenomena such as late capitalism, globalisation, digitalisation and the destruction of the ecological foundations of the planet have had a profound effect on the conceptualisation of time and on the capacity to envision an open future that both enables, but also demands, human agency. The flurry of dystopian and apocalyptic storyworlds that we find in fictional genres and media in the present, from novels and films like *The Road* (McCarthy 2006) or even *The Avengers* films (The Avengers 2012–2019) to television shows like *Black Mirror* (Black Mirror 2011) or video game series like *Fallout* (Fallout 1997) is testimony to the dominance of a strong secularized sense of end times. Our contemporary cultural imaginary seems to prevent the one thing for which the idea of an open future supposedly once stood—a collective strive towards actual, fundamental change towards the better.

In *The Female Complaint* (2008), Lauren Berlant introduced a notion that is relevant in the context of this article, which is interested in finding forms of non-dystopian futurity in popular cultures. This is the notion of “affective publics”. Berlant states that “publics are affective insofar as they don’t just respond to material interests but magnetize optimism about living and being connected to strangers in a kind of nebulous communitas” (Berlant 2008, p. xi). If my observations above about the shape of the collective imaginary in contemporary genres concerned with futurity are correct, the popular imaginary has not been able to “magnetize optimism about living” with multiple others, but rather gravitates towards a repetition of a narrative telos that ends in the loss of any notion of community in either algorithmized technoculture or in planetary destruction. This trend is observable in postapocalyptic narratives in which the survivor-protagonists have little function beyond a role of witnessing catastrophe. The generic narrative that emerges from these stories is in its basic structure one of a loss of agency. However, without any notion of agency there can be no notion of futurity, as we can, for example, see in the work of Hannah Arendt on futurity and freedom.

For Arendt, futurity is deeply connected to agency. In her essays published under the title *Between Past and Future* (Arendt 1961), she identifies freedom as connected to agency and the capacity to initiate newness. It is in the very idea of *agere*, of setting something in motion, in which “an experience in which being free and the capacity to begin something new coincide(s)” (166). To put it in simple words, the idea of freedom is unthinkable for her without the capacity to act for an open future. The question addressed here is in how far contemporary media genres are able to transgress the “cruel optimism” that seemingly prevents them from imagining an open future. As Berlant writes, “A relation of cruel optimism exists when something you desire is actually an obstacle to your flourishing” (Berlant 2011, p. 1). When patterns of desire and affective relations afforded by popular cultures prevent our flourishing in the sense of hindering us to imagine having agency for the future, where can affective publics find resources that break this spell? In this article, I argue that an example from contemporary digital media culture, the open-world video game *Horizon: Zero Dawn* (Horizon 2017), can be understood as enabling an aesthetic experience of posthuman futurity which is not dystopic, and that this affordance for futurity in an optimistic mode is deeply embedded both in its basic structure as a video game and in its narrative. I argue that the game *Horizon* enables a recovery of a sense of agency for a posthuman future that is based on affective experience. In other words, the game enables a recalibration of a posthuman kind of futurity that can be captured with the term for a very old, traditional emotion—hope. Recent monographs in literary and cultural studies have also called for a re-evaluation of the cultural capacity of hope to break the spell of cultural inertia (Gratton 2017; Wegner 2020). The return of hope as enabling a rethinking of futurity points to the urgency of re-imagining the present relation to futurity.

The trials of the present and the reflection of the past in the face of the planetary challenge of climate change indicate a necessity to develop an urgent and pressing capacity for futurity—meaning here, a capacity to imagine how to live beyond the present. This urgency is palpable in interventions of critical posthumanist cultural theorists such as Bruno Latour (2017) and Donna N. Haraway (2016) for example, who argue for a collective realisation that an actual, material future is now only possible at all when we shift our thinking towards a realm that goes far beyond the traditional concerns of cultural studies. In allegiance with Haraway and Latour, feminist posthumanist critics such as Rosi Braidotti (2013); Karen Barad (2003) and Cecilia Åsberg (2013) argue that we require a planetary and postnatural sense of allegiance and entanglement in order to develop a new ethics of the struggle for an open future. In the realm of popular media genres, a turn towards posthumanist concerns is observable. As Åsberg and Braidotti write,

The all-pervasive aspects of our technoscientific existence that there is no un-surveilled spot on this globe and no body unaltered by modern life, underpins what we may see as both our posthuman and postnatural condition. Presently, our collective imaginary manifested in popular cultures also complements a humanistic critique. (Åsberg and Braidotti 2018, p. 5)

Video games are a popular medium that partakes in this discourse, especially in the genres which have been called “green computer and video games” (Chang 2019; Chang and Parham 2017), and that explicitly align themselves with ecocriticism as an aspect of cultural work on the future. However, while many popular cultural products are able to incorporate a posthuman and postnatural perspective, their generic affordances appear to make them unable to envision the future beyond the dystopic mode. When, as Lauren Berlant has argued in her monograph *Cruel Optimism* (2011), “genres provide an affective expectation of the experience of watching something unfold, whether that thing is in art or in life” (6), then it can be argued that the shape of humanistic critique in popular genres is most visible as a return of the apocalyptic mode into the secularized contemporary present.

The game *Horizon* has already been the focus of attention of research in science fiction studies, focusing on the non-human characters of the game in a posthumanist context framed by animal studies (Fernández-Caro 2019) and in game studies (Condis 2020). Condis has criticised the capacity of the game to create actual ecological awareness

due to a friction between the ecocritical plot and the spectacular combat mechanics of gameplay, which would counteract the game's critical intervention. In Condis reading, the game remains in the thrall of "cruel optimism", a notion I wish to challenge here. Most closely related to my aims is Janine Tobeck and Donald Jellerson's reading of *Horizon* in comparison with William Gibson's novel *Pattern Recognition* (2003) as a reformulation of participatory aesthetics (2018). Tobeck's and Jellerson's concept of a post-apocalyptic notion of "caring about the past, present and future" (paper title), represented through the game experience, is connected to my aims here. The authors argue that this "caring" is created by the participatory, that is, interactive, elements of *Horizon*.

In the following, I will first outline how I understand the experience of futurity as an affective cultural activity that might first, be specifically productive in the cultural analysis of narrative video games, and second, enables the development of a posthuman imaginary that dares to hope for an open future. I will then apply this concept to an analysis of the game *Horizon*.

## 2. The "Affective Arrangement" of Video Games

The interrelationship of games, aesthetic experience, and affect have to be considered to assess their dynamics in an experience of futurity afforded by the playing of a video game. Especially due to the visceral elements of gameplay, the aesthetic experience of video games also entails elements of aisthesis, a term that describes the sensual element of perception. Aisthesis denotes a form of making sense of representations that is connected to the affective dimension of reception: a kind of sensual knowledge that develops out of the visceral, embodied aspects of perception (Adler 2002). The interrelationship of the game experience, aisthesis and aesthetic response can be clarified by the dual meaning of the word sense: as a term that denotes an intuition, an embodied response, as well as a rational cognitive operation. It includes the meaning of sensation and impression. Aisthesis can be seen as closely aligned with the creation of affects in the way in which it is analysed in cultural affect studies (Massumi 2002, 2015). When we make sense of a video game's narrative, our sensual response—created by participatory mechanics—is as much involved in this process as our cognitive response. Both the affective, sensual response and the cognitive response are composite parts of aesthetic experience and response. Following Slaby et al. in this context, affects are not states that spontaneously happen in monadic, singular subjects. Rather, affects are bound to relations between different actors, and they can only be experienced and analysed in their relational setting: "affective relationality expresses the idea—prevalent especially in the emerging field of cultural affect studies—that affect is not a matter of individual states but of interactive dynamics between individuals in a setting" (Slaby et al. 2017, p. 6). I argue that it is not only interactive dynamics between individuals in a setting that create specific affective relations, but also the interactive dynamics between media and their recipients. In this context, the technological affordances of different media forms need to be taken into consideration, as technological and genre affordances construct different kinds of "affective arrangements" by which they position their recipients and their content toward each other. The idea of a constellation that is designed to create affect in the context of media arrangements can be illustrated by evoking the kind of technical design requirements by which different media evoke emotional reactions. In the case of film, for example, the two main levels on which the viewer experientially interacts with the medium are the narrative and the audio-visual interface, the action on the screen. In the case of video games, the arrangement includes the narrative, the interface, but also the rule system of the game's mechanics. Additionally, the technical infrastructures by which the player controls the virtual avatars and their action are also elements in their arrangement (Rusch 2008, p. 24). From this observation, it follows that different media have different technical affordances for the evocation of aesthetic response. Interactive digital narratives (IDNs) and video games change an important aspect of Berlant's notion of genre as a grid that shapes "the expectation of watching something unfold" (Berlant 2011, p. 6): because players are here unfolding something themselves, even if the narrative

is pre-scripted. Tobeck and Jellerson describe the function of the player in a narrative video game as “fulfilling” the narrative:

The idea that the player ‘fulfils’ the narrative conditions of the game thus seems an effective way to describe the relationship between player and story that avoids the suggestion that the player creates the narrative yet elicits its performative quality as a function of the medium—that which separates it from other forms of narrative art. (Tobeck and Jellerson 2018, p. 14)

Katherine Isbister, one of the most vocal advocates of the creation of emotion and empathy as an integral aspect of video game design, has argued for the fact that video games enable the emotional understanding of contexts in similar ways to literature (Isbister 2017), and that they enable players to make moral experiences. She also points to the pleasurable and empowering aspects of playing a heroic character in a video game. In her understanding, there are key features that make games different from other media concerning their affecting potential:

Specifically, two unique qualities, choice and flow, set games apart from other media in terms of potential for emotional impact. ( . . . ) At their heart, games differ from other media in one fundamental way: they offer players the chance to influence their own efforts. (Isbister 2017, p. 2)

The affective experience of the encounter with a fictional storyworld in the case of games involves the recipient in a way that creates a different affective, neurological response in comparison to other media: “To the human brain, playing a game is more like actually running a race than watching a film or reading a short story about a race” (Isbister 2017, p. 3). Gaming has a different effect on human neuro-chemistry than reading or watching. Rather than engaging immersion via the activation of mirror-neurons, which is supposedly a key effect of film-viewing (cf. Pisters 2013), the active involvement in game play immediately triggers the activation of the neurological reward system. In a more immediate way than reading or viewing, gaming involves players in highly affecting activity: by giving the player challenges and the agency to succeed or fail at these challenges. In this sense, video games are a very specific “affective arrangement” that lets players experience themselves as agential. In Isbister’s understanding, this will work especially well if the game includes an avatar, or “inhabitable protagonist” (Isbister 2017, p. 11). On visceral, cognitive, social and visual levels, the player can experience themselves as highly agential because they can develop visceral skills with the avatar (run very fast, or climb or even fly, abilities the player may not have in real life), on a cognitive level, the player has to build up abilities like being able to fight very well or think about where to strike the enemy first, on a social and visual level, through the avatar, the player might make the experience to look like a hero—unfazed, strong and proud, for example. However, it has to be cautioned that the question of actual agency in affective media arrangements is a highly problematic one. As Murray writes,

because of the vague and pervasive use of the term interactivity, the pleasure of agency in electronic environments is often confused with the mere ability ( . . . ) to click on a mouse. But activity alone is not agency. ( . . . ) The players’ actions have effects, but the actions are not chosen and the effects are not related to the players’ intentions. (Murray 2016, p. 161)

Confusing simulated agency in a digital environment with factual agency in the real world would indeed lead to a case of Berlant’s “cruel optimism”, in which what we desire harms ourselves (cf. Berlant 2011, p. 1). However, the fact of simulated agency in a fictional storyworld hardly leads to a false sense of agency in the real world, else all players would suffer from a pronounced Don Quixotian delusion. The acceptance of the specific fictional contract in interactive digital media means that within its simulated worlds, we accept our simulated agency which might evoke non-simulated effects of having agency within the arrangement between player and medium—such as the experience of futurity in moments of aporia and epiphany that are dominant tropes in IDNs generally, and in

*Horizon* specifically, as I will elaborate below. I argue that *Horizon* lets its players experience futurity by combining the design affordances of the ludic elements of game play with a narrative that engages the player in a postnatural, postapocalyptic story. In contrast to many other postapocalyptic narratives, *Horizon* affords an imaginary of an open future without denying the factuality of planetary catastrophe. This is made possible by letting recipients play the future. In contrast to Condis' reading, the mechanics of the game are not understood here as a 'wrong', because of escapist mechanics, but as a training ground for futurity precisely because they are affording an experience of simulated agency through its similarity to aesthetic affordances of the heroic (Falkenhayner et al. 2019).

### 3. Playing the Future in *Horizon: Zero Dawn*

*Horizon: Zero Dawn* by the Dutch developer Guerrilla Games, one of the largest European videogame production teams, was initially released for Sony's PlayStation 4 video game console system in February 2017. *Horizon* was not an independent production with an eye on art achievements, or small studio game, rather, it was the launch of a new storyworld with the potential for sequels. *Horizon* is an expensively produced action-adventure-roleplaying game, a genre that has a distinct closeness, due to its development out of the fantasy genre, to the narrative mode of the hero quest. Probably because of the familiarity of audiences with Hollywood action-adventure movies, which share this structural similarity with the hero quest, role playing action adventures have been highly popular with audiences and have seen elaborate narrative and aesthetic developments and innovations in "AAA" (or, "triple A") gaming (Lipkin 2013, p. 9). The genre is perceived, both by producers and recipients in the gaming business, as the vehicle to tell the 'big stories'. An "AAA" game is the category of videogame most closely equivalent to a Hollywood blockbuster in film business. Developed by large production firms with high budgets, recent years have seen a number of these games trying to push the limits of this still evolving genre in terms of technical prowess, playability, and story, in order to evolve into a media form that can reach a very large audience. The genre is key in attempts of the gaming industry to expand the market for these expensive products beyond original 'gamer' communities. *Horizon*, which is unusual for this genre because it was not part of a series when it was released, or any kind of established storyworld in either popular culture generally or the gaming genres, sold 7.6 million units in less than one year (Zuylen 2018), and has thus become one of the signature games of its host console, with the second instalment of the story, called *Forbidden West*, now in production to be exclusively released for PlayStation 5, presumably in 2021 (Farokhmanesh 2020). How can this game, that displays its existence as a commodity, and, additionally, a commodity that is instrumental in selling another commodity (its own technical infrastructure) be seen as a vehicle for the training of futurity, which was introduced above as a potentially innovative experience enabling to break the spell of cultural dystopian moods? In order to delineate this, I will first turn to the narrative itself. In a second step, regarding the interactive environment of the game, I will outline how the combined experience of playing the game with the immersion in its narrative backdrop affords an aesthetic experience of futurity. In the conclusion, I will come back to discussing the possible friction of the two contrasting modes of existence of *Horizon* as, first, a commodity of digital capitalism and second, as a storyworld of a postnatural future with an utopian impulse, asking if such a product can indeed innovate "that place where appetites find a shape in the predictable comforts of the good-life genres that a person and a world has seen fit to formulate" (Berlant 2011, p. 2).

At the very beginning of the game, you have neither an idea what the story is, nor where, nor who the little girl is that you are playing in a third-person perspective, meaning that this game is played in a dynamic back shot perspective. Conventional for the genre, the girl first explores a cave, in which she finds an odd kind of technology—an earpiece which provides her with augmented-reality information about her surroundings. Her surroundings, however, are nothing like what you would expect from her finding this advanced technology. Aloy, as we learn she is called (sounding, possibly not coincidentally,

similar to Eloi, one of the future races in H.G. Wells' science fiction classic *The Time Machine*, Wells 1895), lives in a world completely dominated by nature. Humans live in tribal societies, in cultures that seem to be mostly predicated on harshness, the confrontation with death, struggle and primal laws. The only 'high-culture' that Aloy encounters later in her travels has just overthrown a tyranny. Nevertheless, it becomes clear right from the start that in Aloy's world—as we later learn, it is the 31st century—humans or other organic species are not dominating this world any longer. Rather, it is massive, sentient machines resembling strong and wild animals that dominate the lives of the humans, and that are their greatest fear. Aloy is regarded, by her matriarchal society, as an outcast because she has no mother. Bit by bit, Aloy recovers meaning about "the old ones", a lost technologically advanced civilization of which only ruins remain. At the centre of the mystery is the figure of Elisabet Sobeck, a scientist from the distant past with 99% identical genetic make-up to Aloy, and a project she oversaw which was planned to save the world from destruction: "Zero Dawn".

A dominant aspect of this post-apocalyptic plot is that it takes the post-apocalypse seriously: we find out, other than we expected for an exceptionally large amount of playtime, that "Project Zero Dawn" was not about saving anything. Destruction of every organic structure by the machines was imminent, a fact, in the lifetime of Elisabet Sobeck. Nobody was saved. Everything and everybody died, all organic material on earth was destroyed. The elites of this advanced technological society knew it was inevitable and could not prevent the apocalypse from happening. This fictional assertion of complete destruction is not unusual for post-apocalyptic, dystopic stories that abound in popular cultures as well as contemporary literature. However, the protagonists of these stories are mostly survivors of apocalypse. The most common type is a plot in which a small group of isolated survivors wanders hopelessly through a dangerous, destroyed lifeworld—a set-up that one can find, for example, in the post-apocalyptic novel *Oryx and Crake* by Margaret Atwood (2003) or Cormac McCarthy's *The Road* (2006). Aloy is not a survivor. Rather, both she and her world are a new thing: everything she encounters, the beautiful landscape, the animal-machines, the humans, are the result of an advanced AI-system. "Zero Dawn" was a project to recreate and to repopulate earth after destruction via an interlocking set of AI programmes. Gaia, the programme that was responsible to recreate life on earth, did in fact work, even though her creator, Elisabet Sobeck, and her collaborators, could not have expected it. They could only hope Gaia would work and die. And Gaia did not work perfectly: while Gaia's many terraforming and breeding programmes repopulated earth, the sub-programme that was responsible for the archiving of human knowledge—Apollo, the cultural memory and history programme—was destroyed. Second humanity has grown up without knowledge of its past, which Aloy now recovers to save the future. Also, the fail-safe destruction programme Hades has gone haywire, threatening to destroy again what has been built up, and now for good. Aloy, the hero who recovers this knowledge, is a clone of Elisabet—the reason for her having no mother.

Typical for the open-world game genre, uncovering the full story is dependent on exploring and gathering bits and pieces of information. As Aarseth has outlined, interactive digital narratives rely on a form of aporia typical for "hypertexts":

In contrast to the aporias experienced in codex literature, where we are not able to make sense of a particular part even though we have access to the whole text, the hypertext aporia prevents us from making sense of the whole because we may not have access to a particular part. Aporia here becomes a trope, ( . . . ) rather than the usual transcendental resistance of the (absent) meaning of a difficult passage. (Aarseth 1997, p. 91)

The kind of aporia of a game like *Horizon* is thus of a different nature than the aporia in literature. To not know what is going on is a generic expectation of narrative video games; however, not many of them hold off the final revelation of meaning for such a sustained amount of playtime as *Horizon*, and few reveal the storyworld to be based so fundamentally on recasting the whole fictional world in which the players are operating

as being postnatural. The moment of epiphany, which is also a generic expectation in open world video games and IDNs, is therefore of a different quality in *Horizon*, because it rewrites the whole experience that the player has made in the game playing process up to the moment of finally receiving the clue to the puzzle of Aloy's existence and that of her world. This belated epiphany lets the player experience the open world map again on a different level.

McErlean has described the hunt for the moment of epiphany as the most pleasurable aspect of the experience of IDNs: "Initially there is too much information as the reader tries to identify patterns. The pleasure peaks when the pattern is realised ( . . . ). (It) ends when the reader tires of repeating screen cycles" (McErlean 2018, 11). In many open-world video games, the player reveals quite early on what or who their avatars are and what their task is, then basing the actual time of gaming on the fulfilment of this task, as it is the case in the *Assassin's Creed* series (Assassin's Creed 2007). In *Horizon*, not only is the search for meaning elaborately drawn out, but it also entails a meta-realisation about the world of the game. The affective impact and surprise of this meta-realisation forms the basis of the aesthetic experience of futurity enabled by the ludic elements and the environment of the game. This impact is created by the intimate relationship that the player has up to then formed with the comparatively fleshed-out side characters and their different cultures, but even more so with the scenery. *Horizon* basks its players in the experience of sublime landscapes of mountain rises, canyons, hills, rivers, meadows of high-waving grass used for stealth, the visceral rendering of rain or the realistically audible sound of crunching snow underfoot. As the main storyline is constantly deferred by side-tasks of fighting and hunting down overwhelming machine characters with a steep learning curve, the ludic elements of hiding, hunting, climbing and so on take on a life of their own independent from the plot. While Tobeck and Jellerson see exactly this kind of activity as an aspect of the participatory aesthetics of the game, Condis has argued that the spectacularity of the fight scenes would counteract its ecocritical message. However, it can also be argued that the immersion experienced in the combat scenes can act as a training ground for agency in a deeply threatening situation, which would experientially reconnect mechanics and plot as a training ground for futurity. An equally immersive, technological sublime aesthetics is employed for the underground breeding or installation grounds of the machines and the ruins of the lost civilization, relying on dark sharp angles remindful of the polygons that make up the basic shape of digital image rendering, and masses of glowing intertwined cables, which are sites of discovery in the game.

The moment of epiphany that consists in realising the postnatural, fundamentally constructed existence of the beautiful and overwhelming nature as being of the same kind as the techno-sublime of the underground mazes reconnects the ludic experiences made in the game with the critical posthumanist message of its story. Due to the visceral experiences of gameplay, the postnatural is experienced as material and situated. The intradiegetic fact that Aloy's world is the creation of a terraforming system unsettles post-Romantic notions of 'nature' or the 'natural', which have consistently been evoked in the game due to its sublime aesthetics. To cite the title of a classic of ecocriticism, Aloy's world is an "ecology without nature" (Morton 2007). The artificially created sublime landscape on the diegetic level mirrors the questions about the agent of creation of this world—is it Elisabet Sobeck or is it Gaia, the AI programme. The actual adrenaline filled playing action of the gaming, geared at affective reactions of the player, mirrors the experience upon recovering the narrative: a story of immanent destruction and hope for survival that thoroughly undoes divisions of modern and premodern, of artificial and natural, and of individual or collective agency. Simultaneously, the revelation about the postnatural world in the game includes a meta-comment that reflects the postnatural activity of the human player in the artificial world created for them by the game and its technical infrastructure—iconified within the game by the polygon shapes of the world's underground technological bases.

It is the combination of affective, bodily experience that the game enables as an "affective arrangement" of human player and technologically created storyworld with the

philosophical reflection enabled by the problems its narrative showcases that gives *Horizon* the potential to afford the player to experience futurity in a time when technological advancement and the destruction of the planet are the main entangled concerns of our present. Therefore, a game like *Horizon*, that engages the player both physically and affectively, as well as cognitively, can be seen as a training ground for a kind of affecting imaginary that asserts a future despite catastrophe. In the context of the generic expectations of IDNs as mentioned above in the quote by McErlean, it is significant that *Horizon* affords its players to sense the future not while they are searching for the moment of epiphany, but afterwards. In this way similar to the effects of reading response, it appears in micro-instances, though not so much of narrative, but of the most profane aspects of game play. That this is the case can be explained by an experience I had while playing the DC extension to the game, *Frozen Wilds*.

As the title indicates, this extension is set in a particularly cold, snowy region of the game's world map. As it is an extension and most of its quests require an advanced skill level, it is designed to be played after having completed the main mission and with that, already having revealed the main storyline and the postnatural existence of the storyworld. One night playing I found myself walking through the snowy landscape with no aim but to refill Aloy's store of herbs that are used in the game mechanics to boost the avatar's health. As I heard Aloy's footsteps in the snow that I walked through with her, I realised that I could not remember the last time I actually walked through real snow, to which it probably needs to be added that I live in the Black Forest, where snow used to be common, but in recent years is not anymore. This caused a strong affective reaction towards the simulated sound of hearing footsteps in the snow, that might have been nostalgia in the face of climate change but felt more like a desire for future snow to exist. The special quality of this desire as a micro-instance of the experience of futurity via, or across, the experience of nostalgia can be explained if we look at nostalgia in the polytemporal way suggested by Svetlana Boym. Different from the shattering postmodern numbness as which nostalgia appears in analyses of the postmodern or late capitalist condition (cf. Jameson 1992; Fisher 2009), Boym encourages a reflection on nostalgic moods as a productive force, as a feeling that can be prospective as much as retrospective: "nostalgia is not always about the past; it can be retrospective as much as prospective. Fantasies of the past determined by needs of the present have a direct impact on realities of the future" (Boyman 2001, p. xvi).

In this manner, when I am affected by the simulated sound of footsteps in the snow and reflect on this as a nostalgic feeling, I turn to the past in a way that is connected to a need of the present, transforming this retrospective desire into demands for the future.

#### 4. Conclusions

*Horizon: Zero Dawn* addresses the unease about the present and the fear of the future that current challenges of climate catastrophe bring about. *Horizon* is investing—and fittingly so, as a product of a digital medium—in an undoing of lineages and origins, in which artificial intelligence, both in its most dangerous as well as in its most hopeful expressions, is a force that prompts us to finally let go of divisions of the natural and the unnatural, the modern and the primitive, in order to hope for survival on a planetary scale. It undoes the linearity of the modern 'myth of progress' not in a regressive manner, a post-Romantic longing for a purer past, but it prompts the player to face the consequences of the destructive developments of this myth and relegates concerns of modern progress to the side-lines of a history that is now about planetary survival. At the same time, the magnitude of scientific achievements is not denied. The game experience and its narrative acknowledge the possibility of apocalypse, but do not see this as a reason to let go of asserting the future as potentially open.

This mode of existence of the game's storyworld as enabling futurity appears to stand in contrast to its materiality as a high-value commodity of the same logic of late capitalism that is having harmful effects on the cultural capacity to imagine and desire an open future. The paradoxical friction between this cultural product's affecting appeal as

a training ground for futurity in times of catastrophe cannot be resolved by pointing out the affordances of this game—or of the game genre in general—for simultaneous affective immersion and reflection, which I did in the discussion of activity and agency in interactive digital fictions above. In fact, it is the exact same features of the game that enable futurity in the way discussed that are also its most generic ones in the context of the algorithmized, digital surveillance capitalism of the present of which it is a product. This is an economy that increasingly feeds on and manipulates emotions, desires and feelings by nudging its users to perform actions the algorithms present to them as agency. Just as McErlean quoted above states, activity—and also interactivity—is not the same as agency, and the experience of simulated snow is no substitute for real snow. This observation returns the optimism that *Horizon* can affectively evoke to a bounded structure of attachment that Berlant defines as “cruel”:

Whatever the experience of optimism is in particular, then, the affective structure of an optimistic attachment involves a sustaining inclination to return to the scene of fantasy that enables you to expect that this time, nearness to this thing will help you or a world to become different in just the right way. But, again, optimism is cruel when the object/scene that ignites a sense of possibility actually makes it impossible to attain the expansive transformation for which a person or a people risks striving; and, doubly, it is cruel insofar as the very pleasures of being inside a relation have become sustaining regardless of the content of the relation, such that a person or a world finds itself bound to a situation of profound threat that is, at the same time, profoundly confirming. (Berlant 2011, p. 2, *Italics in original*)

Similar to Boym’s move to use nostalgia as a practice that engages with the past to acknowledge responsibility for the present, and with that, also for the future, a less binary conception of what makes “expansive transformation” possible or impossible might unshackle our affective agency from the constraints of “cruel optimism”. Playing a video game will not let the user attain an expansive transformation—but neither will reading a novel or poetry. However, making the affective experiences that fictional forms afford does give the recipient a resource for the capacity to at all develop an imaginary for transformation, even if the fantasy itself and the recipient, in indulging in the fantasy, are simultaneously confirming the “profound threat” that they are both a part of. Dismissal of cultural creativity on the grounds of its embeddedness in the same economies it critiques is, in my opinion, not feasible as a productive strategy when one wishes to regard how an “affective public” of end-time technoculture can at all be imagined to start to evolve the cultural capacity to tackle immanent catastrophe; especially in a time in which modernity is self-destructing. The experience of futurity in playing a video game might be a micro-step towards the evolvment of a cultural capacity that does not stop with the reflection of cruelty, but in making the “cruel optimism” of the contemporary situation productive, takes the risk to hope for the future.

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