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Observing the World without You: Automatic Walking and Death Meditation

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ABSTRACT:
This article discusses walking simulators and self-playing games in the context of the spiritual practice of death meditations. It explores states of mind that walking simulators may have the ability to provoke and how these can be furthered through automation. Although the focus is on potential benefits of a niche approach to game design, the article also discusses ways that this form of experimentation illuminates elements of mainstream games. The author discusses the process and design choices involved in creating their own self-playing walking simulator. Work is analysed in AAA and indie games, including *Death Stranding* and *Proteus,* as well as contemporary art, including the work of Ian Cheng, in the context of walking and death meditation. The article draws from game design theory and philosophy in exploring the arguments for specific experiential aspects of walking simulators and self-playing games. The benefits of games and other walking-focused artwork provoking meditations on death are argued from the perspectives of psychology and spirituality. It looks at the theme of death meditation from an individual as well as collective/environmental perspective.

KEY WORDS:
AI, automation, death, meditation, procedural, simulator, spirituality, walking.

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Introduction

One of the pleasures of walking can be moving through a space that exists regardless of us and will continue to exist when we are gone. Aside from the footprints we leave and the air we filter, we often leave little impact on the space we move through. If we choose, our engagement with the space can be primarily cognitive. If this is the case, then it mainly impacts us through the stimulation of thought and muscle, and through our perpetual, and possibly final (if we are not coming back to our starting point), locational displacement.

It is a meditative experience, and even if we are not consciously focused on our own death, can be a form of subtle death meditation. It is difficult to imagine our own consciousness ending, or the experiential aspects of a transition to an afterlife we may or may not believe in, but it is not difficult to imagine the world unaffected by our bodies moving through it. Walking, particularly a solitary walk in a forest or an anonymous one in a city, where our presence may go unacknowledged, can give us a sense of a world continuing to breath when we do not. However, like a ghost, our consciousness on a walk can remain a witness.

Death meditations can be a powerful form of release through surrender. A Buddhist meditation asks one to focus on the possibility of dying in the near future (Shonin & Van Gordon, 2014; Moon, 2019). A dervish of a Sufi order might chant Al-Mumit, "the One who gives death, the one who allows to die", one of the 99 names of Allah, as a way to focus on the limits of one's material existence (Al-Rawi, 2015, p. 229). Many forms of prayer and meditation, if not explicitly about death, bring one closer to its reality. In artistic tradition,

a memento mori reminds one of one's certain end. Studies have shown that people with a clear focus on their own death can better "live up to positive standards and beliefs" and "build positive relationships with friends, family, and loved ones" (Vail et al., 2012, p. 18), among other changes that arguably lead to a more meaningful life. Meditation, art (including games), and walking can bring this into focus for those whose life circumstances make it easy to forget our mortality.

A *walking simulator* is a form of videogame where a wandering form of exploration takes precedence over challenge-based mechanics. Originally a term of derision, it is now an acknowledged genre in both industry (as a common tag on the online game store Steam) and academic discourse. Kagen (2022) defines them as "exploratory, nonviolent video games without points, goals, or tasks, in which the undying, third-person player character (PC) wanders around a narratively rich space" (p. 10).

This article discusses walking simulators and death meditation, focusing in particular on what making a walking simulator autonomous potentially lends to this quality of the simulation. It will look at examples of walking simulators, self-playing games, as well as projects at the intersection of the two genres, and what specifically they lend to the powerful spiritual and psychological practice of death meditation. An original project will be discussed, and the article will detail its conceptual and technical development process. The article will explore the particular potential benefits of this unusual format, and how it may illuminate aspects of more common game approaches and genres.

Mental Spaces Created through Simulated Walking

In *Dear Esther* (The Chinese Room, 2012), one of the first works given the name walking simulator, the developers attempt to simulate the reflections and thought processes of someone in mourning by layering the audio of the player character reading letters to his wife, who is deceased, over the audiovisual and minimally interactive movement of the player's first-person perspective walk over a rocky island. The movement through the dramatic space provides a shifting backdrop for the narrative. There is very little for the player to do besides stroll through a somewhat limited environment and listen to the narrative.

One benefit of a walking simulator can be the potential to stimulate thought in a manner similar to a walk as they let their intuition guide them to various points on a landscape. However, gaming magazine *Rock Paper Shotgun*'s Alice and Pip argue that the narrative audio layer in *Dear Esther* suppresses the player's thoughts, making it more like listening to a 'radio drama' than a simulation of the act of taking a walk ("Alice and Pip", 2016). They believe that to push the player to add their thoughts to the experience, the player needs freedom from dialogue or narration, or at least gaps therein where they can project their own. In their view, it is the act of moving through space, allowing oneself to be pulled consciously or unconsciously toward points of interest, undistracted by potential consequences, that creates a space for players to safely insert their contemplations.

Key and Kanaga's (2013) *Proteus* creates this space silent of narrative authority. Its quality as a space of 'nature' is reinforced by the surprising and ever-changing procedural geology, flora, and fauna of the island environment. It also simulates a walk through time as the seasons change. The world can continue to exist after the game has ended, as a player can continue to revisit a 'completed' world by loading a screenshot (possibly

through its containing of the random seed that generates the world). This subtly allows us to appreciate the world as one that continues to exist without our actively playing the game. The changes in season show the passage of time, which implies a world where death exists, even if player death is not a mechanic. In addition, various unexplained sculptures, often found at the highest point of the island, may encourage spiritual reflection through association with magic or animist belief or ritual. Although filled with life that responds to the player, elements of this experience point to the possibility of walking simulator as death meditation.

Interaction here may be limited, but the player in these games is still actively controlling their presence in the world. What if player agency here were removed entirely? We will argue for ways in which making this simulation autonomous can enhance the qualities of death meditation.

Autonomous Gameplay

There are several ways to arrive at a game without a player in order to simulate a stroll through a world without us or self. The most obvious category of self-playing games is a traditional game, like *Super Mario Bros.* (Nintendo R&D4, 1985), where an artificial intelligence (AI) has been developed, often through machine learning, to control the player character in a way that successfully completes the level (Feng et al., 2024). The purpose of the original game was not to be self-playing, so that aspect of the experience is not reinforced through the game's theme. Creating an AI player character for an existing game is often used as simply a demonstration of AI ability (Togelius, 2019). However, sometimes it is used for the purposes of art and narrative, as is the case of Arcangel and Paper Rad's (2005) *Super Mario Movie*. As a poetic narrative created through a hacked Nintendo Entertainment System cartridge, Mario in this work is not so much programmed to play the game as it is to emphasize the contemplative text and fall or stroll through the glitchy environment. This environment might be read as decaying, existentialist, or simply Mario's mind unravelling. There is potential in using a self-playing hack or machine learning algorithm as a way to rhetorically engage with the original material.

Alternatively, many games are released that already contain some self-playing aspect embedded in them. Demo scenes run while the game 'waits' for the player to press start. A participant in a networked multiplayer game dies and loses control of their player character, and now watches the action through a floating, in-game camera that wanders the action. More and more cutscenes are played procedurally using game assets (though still linear and scripted). Idle games, and many strategy games, may include long spans where the player sits back and watches the action after making a few decisions.

Another direction autonomous gameplay can take is to create an original game where the main character is not playable. This is done via a group of tools and programming practices used to give non-playable characters (NPCs) AI. These may consist of finite state machines where certain factors dictate which state an NPC is in at a particular moment, such as walking or conversing. It can also include the use of pathfinding to traverse around obstacles, as well as strategic decision-making. Occasionally these may also incorporate machine learning.

Here we have examples that may fall into the category of autonomous walking simulators. In *Panoramical* (Ramallo & Kanaga, 2015), the player chooses a set of parameters with which to create a procedurally-generated environment that responds to the player's touch. While the player changes the environment, the view moves automatically through

the space. However, one could not call this an AI player character, as it only moves continuously in one direction without any simulation of decision-making.

Cheng's artwork from 2015, *Emissary in the squat of gods,* is a third-person walking simulator which he describes as a "video game that plays itself" (Clayton, 2017, para. 4). It involves constantly-changing, emergent AI characters. The world is governed by laws and its characters by motivations that Cheng wrote (Clayton, 2017), however the simulation is complex enough to be unpredictable. Cheng talks about the play between the 'meaningless simulation', akin to 'indifferent nature', and 'meaningful' prompts that have been programmed into character motivations to form a potential storyline.

Walking can be an encounter with the indifference of nature. Sometimes this nature observes and responds to one's presence and movements, and often does not. One's own storyline is up for re-evaluation in the push of thoughts that come after leaving the routine of another activity to go for a stroll. It is a moment to clearly see one's own narrative in the context of the 'meaninglessness' of the environment through which one is strolling. Putting a storyline into the hands of an automaton may bring the story more fully into dialogue with chaos and meaninglessness.

It might strike some as perverse to take one of the least interactive forms of gameplay, the walking simulator, and eliminate all interaction. The power of the walking simulator is through the procedural replication of various aspects of walking, which usually involves at the very least some work or participation from the one experiencing it. In general, walking simulators afford players with the agency to explore, investigate, converse, and/or propel a narrative forward. Traditionally, some element of player choice has been a key element of a walking simulation.

A simulation never simulates all aspects of an experience (Salen Tekinbaş & Zimmerman, 2003), however, but highlights specific areas. As discussed earlier, one of the feelings one can experience on a walk is that of the world moving on without us. That area of the experience can be highlighted even more by the removal of agency from the player, and replacing their interface with a simple, peripatetic AI. When this is done, not only is the world moving on without us, but the representation of our material body is leaving us behind.

Could removal of the sense of agency allow the player to more clearly focus on another form of engagement? Salen Tekinbaş and Zimmerman (2003) list cognitive interactivity as a form of interaction that happens within the audience's head when engaging with a creative work. The game *Her Story* (Barlow, 2015) provides a good example of this. Here, gameplay involves the player sifting through fragmented video recordings of police interviews in an attempt to figure out what happened in the game's narrative. The player observes the actor's body language, tone, and whether the content of what she says matches our own mental map we have built so far of the events she is describing. We must decide which elements of her narrative to trust, what elements to disregard, and what elements to interpret non-literally as an unreliable narration that can still help us to get to the truth through our own interpretation. This all happens in our head as we watch videos. The main interaction is searching for new videos via keywords that the player guesses would be relevant based on clues that the interviewee drops. The gameplay hinges on the player mentally navigating ambiguity. One does not hear the questions spoken by the police interviewer and must infer the context from the interviewee's responses. This is an example of prioritizing cognitive engagement with limited interaction. Removing the audience's control over the player character entirely may allow for methods of further increasing their cognitive participation.

Fizek (2022) argues that "mediated distance" is "central to how we experience and make sense of games and play in computerized forms" (p. ix). She challenges the idea

that interactivity is "the pivotal concept necessary to understand digital media and video games" (p. xix). Newman (2002), in a claim that reinforces this position, states that the "pleasures of videogames are frequently enjoyed by those that commonsense might encourage us to consider as non-players – 'onlookers' that exert no direct control via the game controls" (p. 1). If so, what pleasures or benefits are they getting from the experience? Fizek's research places importance on our sense of the underlying systems at play rather than just the surface representations and reactions to our input. We imaginatively experience these systems through our cognitive interactions.

Fizek (2022) explains that the idea of "ambient actions" (p. 56) can shine a light on what players get from this type of distant engagement in games. Galloway (2006) writes of games that "settle into a moment of equilibrium" when left alone. This may consist of scheduled or AI-instigated events such as birds chirping, cars riding by, or an NPC repeating a task. He calls this an 'ambient state', and these discrete actions *ambience acts*. What this state does not have is action from the side of the player, and there is nothing outside of the player pushing the game state forward either, aside from changes in environmental audiovisuals. Time may pass, but if "the passage of time means anything at all, then the game is not in an ambient state" (Galloway, 2006, p. 10). These small actions, or 'micro-movements', are what distinguish this from a game pause. Fizek (2022) argues that not only do games produce "representational ambience", but "operational ambience (through algorithmic background operations)" (p. 35). The viewer experiences something differently when they know that it is a result of an underlying process, they are experiencing a moment of procedural creation (of action) rather than something that was fixed in stone by a human creator.

If one is using a walking simulator to stimulate thought, then focusing intensively on the aforementioned cognitive interactivity, with complex systems to imaginatively explore, may be of benefit. In the next section, the article will describe a project that puts walking simulation and self-playing game design in the service of death meditation.

Design Discussion

Night Walks (Oldenburg, 2023) is an autonomously-walking death meditation that we completed from 2022-2023. In it, the player is wandering lost in a semi-wilderness, on the edge of a once-inhabited environment. They go from area to area, trees, marsh, empty roads, in each place experiencing the world through their senses as well as their thoughts. They also sometimes encounter bodies on the ground. Sometimes they bury these bodies. Occasionally they encounter mounds where someone or thing has been buried. They are wandering at night and at the break of dawn they lie down to sleep, dream, and then die. The position where they died is uploaded to a server to potentially be found and buried by another instance/repetition of the software, another 'player'.

This project was partly inspired by *Lost person behavior* (Koester, 2008), a handbook for park rangers detailing the various psychologies and strategies of people who lose their orientation. While we initially contemplated an AI character who would simulate multiple lost person strategies, such as "route travelling", "direction sampling", or "discarded gear", we eventually chose to simulate only "random travelling", partially described here:

> Totally confused, and usually experiencing high emotional arousal, the lost person moves around randomly, following the path of least resistance, with no apparent purpose other than to find something or some place that looks familiar. (Koester, 2008, p. 53)

The project shares descriptive and visual elements with text adventures or interactive fiction, as well as the goalless exploration of walking simulators. However, there is no human player, as the main character, who is a non-playable character (NPC), is controlled entirely via code. The player character moves along a grid of procedurally-generated areas:

> You look at the sky and assume your next steps take you south.
> The ground slowly disappears.
> The moon is gone.
> You close your eyes and everything is clearer.
> But you can't do anything. (Oldenburg, 2023)

When the NPC enters an area, the software draws from a text file of descriptions matching the qualities of that area and the current world or environment state:

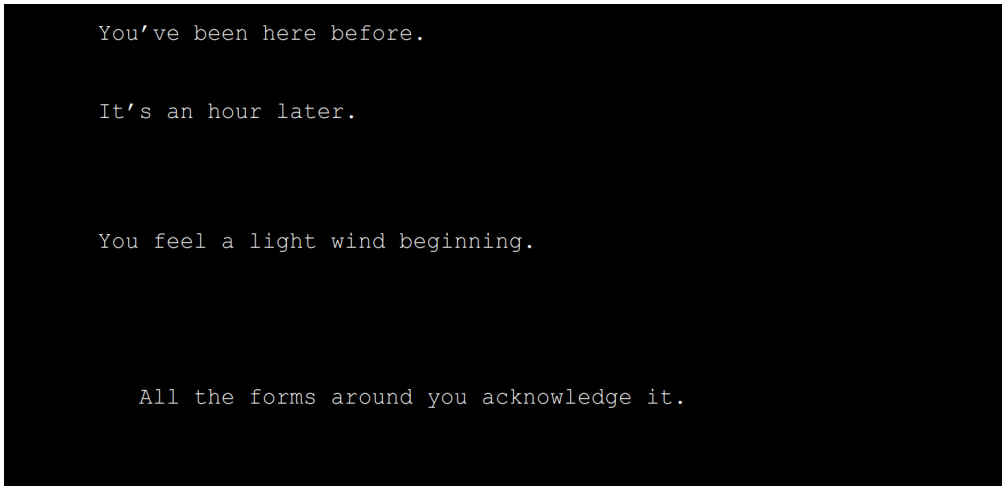
> You've entered a museum of growth.
> A strongly animal scent.
> A far hum.
> You touch a tree's eye scar.
> There's something sticky. (Oldenburg, 2023)

It pulls one description for each of four senses: sight, hearing, touch and smell. It also pulls a brief description of a thought (most descriptions are only one sentence), as well as descriptions of any events or encounters that might happen.

The software checks a server to see in what cell coordinates previous NPCs have died and are not yet buried. The textual description changes depending on the number of bodies in a particular cell. The NPC will randomly decide whether or not to bury one, and that decision is sent to the server. The software also checks the server to see how many bodies have been buried in each cell. A description is pulled from the text file and displayed depending on how many mounds are in a particular cell:

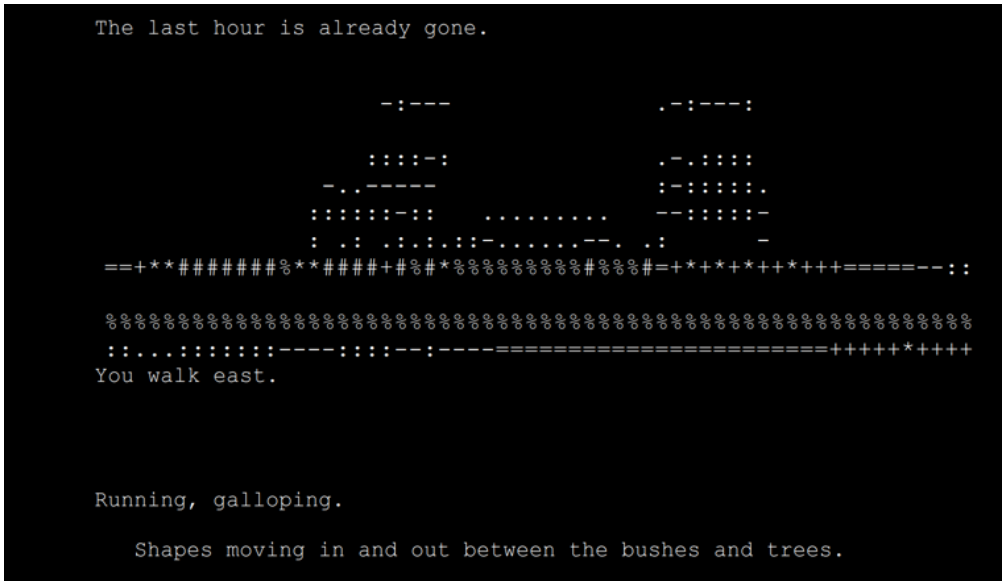
> The rain activates an unfamiliar landscape.
> You feel an evil hug over your whole body.
> You realize you've been walking in a dry streambed, not a trail.
> There are two bodies here.
> There are a couple of mounds of dirt here.
> You bring one of the bodies into a dark, living pit.
> Then you cover it. (Oldenburg, 2023)

Each piece of text is given a certain number of pauses. Every second, the narrative crawls up one line. Each pause results in a blank line inserted into the crawl. Game time also moves forward based on the seconds since the game started. The real-time playthrough lasts about ten minutes. In game time, play starts at 6 p.m. and ends at 6 a.m. Descriptions alert the audience to an hour passing, and the time of night is indicated by descriptions of the level of darkness (Picture 1). Weather is simulated through wind and rain semi-randomly beginning and ending, increasing and decreasing in force. The software draws from a text file of descriptions to indicate the current state of the world's weather.



Picture 1: Text from a Night Walks playthrough depicting time change and weather
Source: the author's screenshot from the game Night Walks (Oldenburg, 2023)

Initially, this project was connected to another separate project over the server. The other project was a visual auto-arranging scene. Similarly to this project, it also referenced climate chaos, as well as grief for the future. We drew on imagery that evoked those feelings. When the two projects were connected over the server, events in the other software triggered events in this software. These events were visualized through the display of ASCII art to which we had converted images from the other project (Picture 2). Now that the two projects are separated, we kept the ASCII images in to appear semi-randomly on a timer to serve to free-associatively illustrate the text.



Picture 2: Text from a Night Walks playthrough depicting abstract ASCII visuals
Source: the author's screenshot from the game Night Walks (Oldenburg, 2023)

As stated previously, at the end of the night, the NPC goes to sleep, dreams and dies, and their location is uploaded to the server. Then the software ends:

> Each dream gives birth to two more dreams.
> You can't wake until they're finished.
> You're a vine.
> You lose feeling, beginning with the top of your head. (Oldenburg, 2023)

If the NPC in this case can be said to have a goal, it is to pass time and arrive at death, so they can become a part of the networked system. Or perhaps they are searching for a way to avoid death. Games researcher Kagen (2022) writes that walking, or wandering, in games can be a form of "digression", a way to "cheat death" (p. 17), as no matter what the narrative end of a game is, the ending, itself, is a form of player death.

For this project, we created a relatively simple game engine in C++, using CURL for networking. The project only runs in a Linux terminal, and outputs directly to the command line. We created three text files for descriptions, one for area descriptions, one for events that happen locally and a third for events that happen over the network. The C++ software reads from these text files and interprets them based on keywords and symbols in the file. The following is one example from a data text file:

```
TEXT:You look through the slats of the bridge's boards at the shadow below.
PAUSE:2
AREA:bridge
SENSE:visual
---
```

As there is no player character, only a main NPC, the only decision a human makes is whether to run the software once or on a loop. This is done via two shell scripts we wrote, one of which restarts the software after it ends. For networking, we set up a virtual private server (VPS), on which we created a database using the open-source SQL software MariaDB. This is accessed and updated via PHP.

It is probably no coincidence that as we became more aware of how dire our predicament is as a civilization and a species due to our ongoing environmental catastrophe, we began to remove the player's interactive agency from the games we were making. A series of games that was fully interactive eventually was mostly not, to the point where we stopped calling some of them games. This may be mirroring the process that we are going through as a species, as, through the passage of time, we continually lose agency to correct our path (although it is not completely lost). In a way, we are looking at the possibility of a collective death, either through extinction or loss of a way of life (Wallace-Wells, 2019).

Death Meditation beyond the Individual

There is an aspect of death that persistent networked data storage can emphasize, and that is death of individuality, or ego. In this section, the article will look at this and how it also reinforces qualities experienced in self-playing walking simulators.

In *Night Walks* (Oldenburg, 2023), the player character is walking locally, moving from cell to cell, which the audience sees. Part of the player character is also walking over the network, as its own space, through the distribution of bodies and burials. The persistent qualities of data storage in a network space are like a well-trodden path, indentations on which form portraits of other virtual walkers, like ghosts. In their article "Walking and worlding", Jørgensen (2022) says "trails remind us of those who have gone before us; they are incomplete traces of a past that we can't fully know" (p. 192). Encounters with other asynchronous players, or representations thereof, create a sense of a world before and after the current play session.

A recent popular game with walking simulator elements that explores asynchronous connections between players is *Death Stranding* (Kojima Productions, 2019). Although it takes place in a post-apocalyptic world reclaimed by nature, something my own project also hints at, its purpose is less to meditate on one's own solitary being in the world and death, and is more focused on the goal of making things work between remaining humans. One is not encountering other dead players and choosing what to do with their bodies, but encountering functional tools that other players left to share.

Despite these differences, both simulate the characteristic of physical walking that involves experiencing a space asynchronously with others, through encountering their remnants and/or leaving your own. Mortensen and Navarro-Remesal (2019), in their article "Asynchronous transgressions" discuss this interconnectedness:

> In asynchronous play, the player discovers the traces of others in her play; she is connected to – and partly depends on – others. These games highlight how players can influence others while not even virtually meeting them. Unlike massively multiplayer online games, these games lack a strong notion of "shared space" and social interaction, and any "visit" can potentially end the self-sufficiency of playing. Indirect appearances of other players highlight the liminal nature of games when these other players are perceived as trespassing on a personal play session, whether the intention was to transgress on the single player's experiences or not. (Mortensen & Navarro-Remesal, 2019, p. 8)

An apparently single-player game (or one that simulates a single player) that is interrupted by the presence of other players might have a more alarming impact on the player's sense of self than a traditional multiplayer game could have. Initially, one assumes that one is alone, the hero of a personal world, and then the reality of other beings intrudes. This could help a designer push a player to contemplate the Buddhist concept of *interbeing*, which poet and writer Rebecca Tamás, reflecting on the writings of Clarice Lispector, describes as a

> form of existence [that] does not totally annihilate the experience of self, but it destroys the idea of the self as an individual, independent monad. In this way of seeing, all beings/things are relations, existent only in their links to other beings, processes and forms. (Tamás, 2020, p. 38)

Bringing this back to death meditation, walking through networked space can bring to mind annihilation of the self as an individual. The individual dies and becomes a piece of shared data or a web of relationships. A similar process happens in physical death as our bodies continue to be used by the environment without our agency.

Emergent Post-player Life

Games have an inherent potential to remind us that we are part of a larger system. Vahlo (2017) states that a game "is unable to produce meanings in and of itself", that it

"belongs to the environment" (para. 9). He describes the relationship between the player and game as "mutual and not unlike that found in adaptive living systems" (para. 11). His work engages with Barrett (2015) in discussion of how an organism adapts due to environmental pressure, and these adaptations then change the environment. However, the possibilities for change are less restricted on the side of the player than they generally are on the side of the game. Take away the game and the player will still change in response to other aspects of the environment. Take away the player and the game will have far fewer influences upon its systems.

It would seem that a self-playing game is missing this dialogue between human and machine, player and environment. However, making a game play autonomously can also remind us that we are part of a larger, interconnected system, and not just individual heroes making things happen. Because it needs an audience to view and participate cognitively in order to make meaning, an autonomously-playing game does not exist to its full capacity without audience participation.

One potential metaphor for the removal of player agency is, again, that of the world without us. By removing a player from the game, we are simulating removing an organism from the environment. We are no longer present and affecting moment-to-moment change, but still observing and making meaning. In *Night Walks* (Oldenburg, 2023), the final act of the NPC makes them a part of the environment. It is a cycle of experiencing the environment (and possibly being changed by it), then changing it through one's own death and burial.

Jones (2023), in discussing the current neglected state of ecofeminist artist Harriet Feigenbaum's sculpture *Erosion and sedimentation plan for red ash and coal silt area* (*Willow rings*), installed in 1985, writes of the "aesthetic of regeneration". This is "a perception of a certain type of beauty found in the surprising incarnation of life as it emerges from neglect, or death" (Jones, 2023, para. 6). One sees this approached often in post-apocalyptic work, like *The Last of Us Part I* (Naughty Dog, 2023), for example, in lush scenes of former zoo animals roaming a re-wilded cityscape. Jones states, "regeneration is invisible only to the eye trained to ignore non-human agency" (Jones, 2023). If this is true, then training one to appreciate non-human agency can help one develop an aesthetic of regeneration. This aesthetic may both help people appreciate parts of the world that have been reclaimed by non-human entities, and also inspire humans to push for more parts of our world to be reclaimed as such. Some argue that the latter is a necessary approach to our climate predicament (Vettese, 2022).

Life emerging from neglect sounds much like the life of an autonomous game emerging from the neglect of a player. An AI character is a non-human entity upon which we project agency. One wonders if an audience appreciating the agency of an AI could be being subtly trained to appreciate other non-human agency as well. Through cognitive engagement with the AI agents and the systems within which it "lives", one may be doing a valuable part of the development of one's aesthetic of regeneration. This aesthetic is by definition imagining a world without us, at least in certain parts, and thus a form of death meditation. This, however, is a collective, rather than individual, death.

Simulating the emergence of life is difficult. Writing in her manifesto on what she calls "Rambunctious games", Chang (2020) writes that "game worlds ought to surprise us" (p. 73), and "should suggest the power of nonhuman agency" (p. 72). The title of her article comes from Marris's (2013) term and book title *Rambunctious garden*, which describes humans riding an unruly 'post-wild' natural world in the Anthropocene. Chang cites Shinkle (2007) as arguing that currently, with its "restrictions on movement … the gamescape bears more resemblance to a landscape garden than it does to real space" (Shinkle, 2007, as cited in Chang, 2020, para. 6). And even then, it is not subject to the underlying

natural processes to which a real-world landscape garden is subjected (Chang, 2020). Given the technical limitations on fully-simulating these processes, it might be the case that designers need to push more purposefully on the imagination of the player or viewer. How can a game provoke a player to enter these spaces cognitively; for instance, the infinite detail found in dirt? Strategic use of *distance* (between the player and the game, by removing agency), as well as removal of concrete visuals (replacing with abstraction), may serve this purpose. Fizek (2022) explains:

> Perhaps one of the most interesting critical remarks related to the widely accepted view of interactivity as something unique to digital media, hypertext, and video games is that of *ellipsis*. In the cognitive sense, all preceding media are interactive, asking readers, viewers, or listeners to fill in the missing information. (Fizek, 2022, p. 8)

Eco (1994) talks about literature as an art form that, by necessity, "asks the reader to fill in a whole series of gaps" (Eco, 1994, as cited in Fizek, 2022, p. 9). It is within (the neglect inherent in) these gaps that (regenerated) life grows. Of course, a gap only provokes growth as good as its seed, or the context surrounding it.

In *Night Walks* (Oldenburg, 2023), there is cognitive interaction that requires a viewer to fill in the narrative gaps, as well as an element of what Pfaller (2017), as well as Žižek (1997), refer to as *interpassivity*, which Žižek describes as "believing or enjoying through the other" (p. 111). Just as interaction transfers action from the player to the game, interpassivity transfers the player's passivity (Fizek, 2022). The game playing itself relieves the player of a certain task. When the software runs in the background on a loop, the NPC dies over and over again, in different locations, and also buries various bodies of previous NPCs. This results in changes to the environment that future viewers can witness. The networked persistence in this case is vital to the creation of interpassive play. Although the primary experience of the software requires a viewer to interpret, there is a secondary experience that can be had passively with the software running without an audience. One simply knows and imagines the software continuously making changes to this living world.

Interpassivity takes the death meditation one step further: from passing through a world without us, to doing it without our own agency, and finally to simply knowing that an agent is moving through the world somewhere, making changes, and it does not need us.

Conclusion

Death in games rarely feels like death. If anything, witnessing our avatar bloody and decapitated furthers the distance between the physical player and their representation. However, it does often connect to the player's emotional state: that of failure, frustration, the end of the current play session as they give up for the time being.

The goal of this article was to look at another way that games can provoke thoughts and feelings about death. It looked at death meditation and its benefits, discussing how walking, both real world and simulated, can stimulate this form of reflection. It explained how the qualities of self-playing games can reinforce this theme by looking at their underlying procedural complexity through the lens of cognitive interactivity.

It described an example design of an autonomous walking simulator that thematically reinforced its procedural death meditation through its narrative. We looked at ways in which it served as death meditation: the player's loss of agency, narrative reflection on physical mortality, generative experience of the world moving on without us, and remnants of self-becoming a part of a persistent, networked system.

Contemporary art has a more clearly-developed relationship with spiritual practices like meditation. Installation art, sculpture, and location-based work, with their emphasis on the viewer's movement through space, may help broaden our concepts of what we want from walking in games. Long-term performance work can give us a sense of ways to bring persistence to digital work. Conceptual art teaches us how to expect the audience to cognitively participate and imaginatively fill in the gaps.

The aforementioned Arcangel and Paper Rad's *Super Mario Movie* (2005) straddles game culture and contemporary art. It takes software that is associated with frenetic action and makes it slow and meditative. The glitches make us aware of the physical medium on which the program is recorded. It makes us aware that the object has a life, as well as an eventual death through corruption. In this piece, Mario is walking directly through an engagement with his digital mortality.

In Katchadourian's (n.d.) installation *Indecision on the Moon* from 2002, one enters a pitch-dark room and hears the sounds of several people attempting to communicate over radio static, short lines of dialogue that devolve into "um"'s and "uh"'s. It becomes clear that this is audio from the moon walk, but with the certainty and triumphal narrative removed. The audience not only viscerally enters an unknown space but feels like they have been given access to the astronauts' inner disorientation through the focus on these interstitial glimpses. The experience of the dark interior of the space ties the audience's physical sense of location to the elliptical wandering of the dialogue. Prochnik (2017) feels "these voices are surely caught in an act of disconnection as violent as the severing of this world from the next" (p. 72).

This is not a game, and is not generally categorized as a simulation, but it provokes an experience of an inner emotional state that might come over someone encountering a new and unknown space. It is an imagined sense of surprise and losing one's bearings when finding oneself on a walk outside of the Earth. The dialogue is like a hand reaching out into the darkness and finding nothing to hold onto. It is walking with the shock of pure awareness.

Some conceptual and performance artists use the physical act of walking directly in their work. Fulton's work revolves around taking long walks, which he documents, maps, and presents in various conceptual forms. One of these is his large-scale line drawings of horizons. In his discussion of the work, he says:

> The lines provide both a physical point of reference and 'evoke emotions as to what a skyline or horizon symbolizes: a distant, ungraspable end to a journey and the mystery of what lies beyond our given place and time, what might be the edge of something far larger than ourselves'. (Wilson, 2002, p. 29)

Simulating, or provoking thoughts of the 'ungraspable' is important: it helps us reflect on the numinous or ineffable aspects of life. Typical game interaction, however, can subtly reinforce the idea that everything is within our grasp, can by puzzled out via logic. Removing interaction and creating distance can allow us the time and space to humbly sit with our thoughts and explore what lies beyond our understanding.

Mountain by O'Reilly (2014) is a mostly self-playing game. The mountain is a living and dying being, containing imagined ecosystems. It is personalized through the player's initial decisions, so one can project oneself into its life cycle. A walking simulator in the sense that through the player's ability to rotate and zoom in and out of it (as well as the camera's own movements when left alone), it simulates walking around a sculpture. It simulates a world without the player but bearing their imprint. Through text displayed in the upper-left corner, the mountain has occasional speech, or thoughts. They are an invitation to engage cognitively, and sometimes give the sense that the player can affect the world, but this ability is just out of reach.

The ability to provoke death meditations, and associated benefits, are not constrained to small experimental indie games. Many large, open-world AAA games contain elements of walking simulators (Kagen, 2022), and as stated before, they also have self-playing procedural moments. Many allow for play styles that choose to emphasize one or both aspects. For instance, in many open-world games like *Grand Theft Auto V* (Rockstar North, 2013), one can choose to ignore game goals and combat and find a place to wander and watch the world. Despite the player being the reason for the world's existence, one can choose an experience that feels as if the world is unaware of one's presence, moving on without one. Having self-playing walking simulator gameplay as an optional way of experiencing a mainstream game may even more powerfully evoke these feelings by way of contrasting with the game's standard mode of play. Arguably, the inclusion of non-standard gameplay options like this can increase a game's appeal and longevity. More importantly, though, self-playing walking simulators are potentially valuable formats to provoke experiences of the sublime and meditate on the world after our deaths.

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