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"THEN WHEN ARE WE? IT'S LIKE I'M TRAPPED IN A DREAM OR A MEMORY FROM A LIFE LONG AGO" A COGNITIVE ANALYSIS OF TEMPORAL ORIENTATION IN THE FIRST SEASON OF HBO'S *WESTWORLD*

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The filmic medium is inherently temporal, presenting information in succession through a series of images that the viewer constructs as unfolding in linear time.[1] The medium is characterised by this temporal relationship between shots, scenes, and, in the case of television, episodes and seasons. As David Bordwell highlights, formal conventions are used in classical narrative film and television shows so as to avoid inadvertently confusing the spectator, working with the limits of the spectator's "perceptual-cognitive abilities" (1985, 74). A supernatural, fantastical or science-fictional element can disrupt these conventions, prompting a need for specific ways to signify temporal ordering: time travel, temporal loops, memory wipes, and other unnatural devices can impact the construction of a coherent timeline. This disruption differs from (but sometimes complements) other non-speculative disruptions that pertain to narrative and filmic organisation. These disruptions often mirror the film's narrative thematically, highlighting issues of memory as they relate to trauma and mental illness, for example in Akira Kurosawa's *Rashomon* (1950), Christopher Nolan's *Memento* (2000), David Lynch's *Mulholland Drive* (2001), Michel Gondry's *Eternal Sunshine of the Spotless Mind* (2004), or Rowan Joffé's *Before I Go to Sleep* (2014). These films question the audience's subjective, perceived experience of time, using film's malleability when it comes to temporal orientation. A temporal disruption rooted in a supernatural or speculative element operates slightly differently, by changing the way natural laws in the storyworld affect characters and narrative. As such, this temporal disruption enables a further exploration of the intersubjective (as well as subjective) experience of time and enables 'unnatural' ways of being in time. While Leonard (in *Memento*) was the only character unable to form long term memories, the androids in *Westworld* are all deprived of memory, causing alienation and lack of identity.[2] The show's first season shows the evolution of a select few androids as they slowly become able to retain their memories, which consequently impacts their sense of self. This article demonstrates that the disruption caused by a speculative element invites us to explore both thematic ideas around memory and self, alongside aesthetic or narratological innovations around the temporal delivery of information. Indeed, how do we process temporal information when the very foundation of time (memory) is unstable?

Several scholars have already highlighted that a disruption of natural laws can impact conventions of filmic representation, creating a higher potential for confusion on the part of the spectator. In *Time Lapse: The Politics of Time-Travel Cinema* (2004), Charles Tryon analyses

several films featuring time travel, linking them to new media technologies, arguing that they are often associated with disruptions in our mediated experience of diegetic time. This potential for misunderstanding can be deliberately exploited for aesthetic and narrative purposes. In this article, I analyse the first season of the Home Box Office (HBO) show *Westworld*, demonstrating how the science-fictional premise of the show, linked to a remediated narrative structure that borrows from video games, disrupts conventions around the delivery of temporal information. This participates in wider discussions around our consumption of filmic media, especially in the era of streaming services and 'binge watching.' Just as the characters of *Westworld* struggle to figure out "who they really are" (a sentence repeated at least once every episode), especially in relation to others, the show interrogates the viewer's relationship with narrative and memory in regard to the formation of the self. In particular, it encourages the viewer to be extremely attentive and active (both while viewing the show itself, and within fan spaces).

The show presents the story of a Western-themed amusement park, in which 'guests' can interact with androids ('hosts') in a variety of often violent scenarios. The park's lawless 'Wild West' theme encourages the guests to leave morality behind and indulge in violence against the hosts. For example, Dolores' (Evan Rachel Wood) 'narrative' places her at the mercy of other hosts, and the guest can choose to save her, by killing her attackers, or rape her. The host's memory is wiped after every 'loop,' which prevents personal growth, and enables them to retain a positive worldview by forgetting their victimisation. The show directly addresses the ethical and aesthetic implications of the host's narrative, particularly the conflict between Robert Ford (the Park's co-founder, played by Anthony Hopkins) and Lee Sizemore (the Head of Narrative, played by Simon Quarterman). This opposition can also be mapped onto another dichotomy, explicitly discussed in the show: that between 'game' and 'story.' The following graph shows the number of times the words 'game,' 'story,' and 'narrative' are mentioned per episode of the first season.
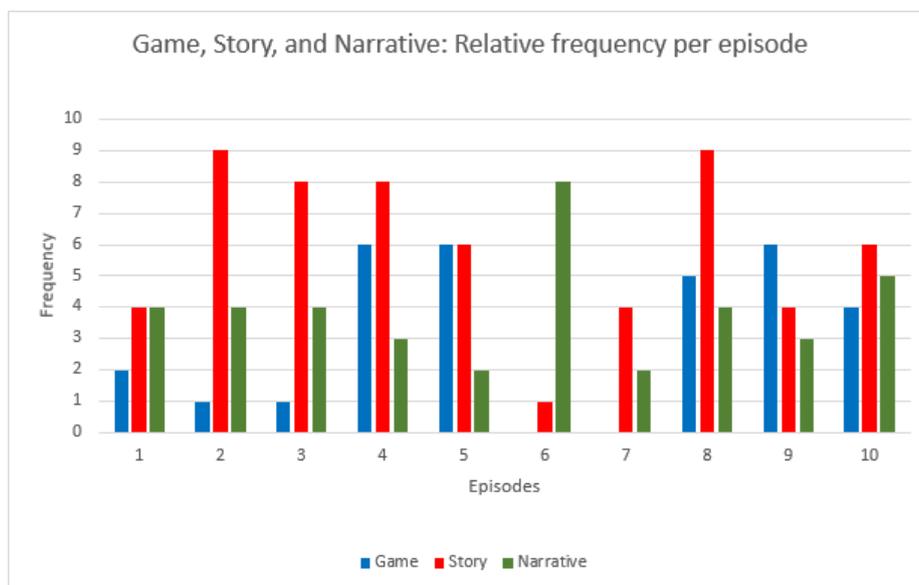

Figure 1: Lexical analysis of the frequency of 'game, 'story', and 'narrative' per episode

'Narrative' is used thirty-nine times over the course of the ten-episode series and refers to the general discursive apparatus put in place by the park to tell a story. 'Story' is used fifty-nine times, to refer to the content of the narratives, their moral values, or qualities. In the last episode, Ford explains his view on stories: "Since I was a child I've always loved a good story. I believed that stories helped us to ennoble ourselves, to fix what was broken in us, and to help us become the people we dreamed of being" (S1E10 01:25:08). 'Game' is used thirty-one times, often in opposition with 'stories'. For example, Logan (Ben Barnes) often justifies his violence towards the android by claiming "it's just a game!", whereas his brother-in-law William (Jimmi Simpson) prefers to engage with the emotional and moral content of the stories. As the preceding graph shows, the frequency of these three terms in dialogue varies from episode to episode, as the three themes are played against each other. Episode 6 is pivotal in that it shows Maeve (Thandie Newton) explore the compound "behind the scenes". As she discovers the workings behind the narratives she had unwittingly been participating in, this episode invites us to reconsider the relationship between stories (and their delivery) and the characters' sense of self. The 'game' aspect of the Park is made possible by the passivity of the androids due to their lack of memory retention. As Maeve (and some other hosts) eschew this passivity, the rules of the game change. In the second half of the season, the hosts get to not only play the game, but influence the overall narrative.

In the first season, the main narrative drive comes from the hosts' progressive retention of memory, leading to potential autonomous consciousness and emancipation. The hosts have to be able to recover lost memories to understand the fabricated reality presented to them, build their identity, and make decisions regarding the future. Similarly, as the spectator's understanding of the world grows, they come to realise that everything is not as it seems. Our limited capacity for processing information is heavily activated by the show's textual richness – the quantity, speed, and ways in which information is presented. A high textual richness creates informational and emotional overload, which can cause the viewer to ignore, overlook, or forget, details that might cue them in regarding future plot twists.

While several scholars have analysed the philosophical, political, and psychological questions raised by the show (Menger 2017, Jeffs and Blackwood 2017, Seaman-Grant 2017), little attention has been paid to the specific ways in which its narrative techniques enable, prepare, and reveal the plot twist. Conversely, several scholars have considered the specific narrative and stylistic strategies of temporal ordering in so-called 'Quality' or 'Complex' television, including, Paul Booth's *Time on TV: Temporal Displacement and Mashup Television* (2012) and more recently J. P. Kelly's *Technology and Narrative Form in Contemporary US Television Drama: Pause, Rewind, Record* (2017). However, these works focus primarily on the mode of consuming these shows, linked to their distributive technologies. For my purposes, the more apposite studies are rather Jason Mittell's *Complex TV: The Poetics of Contemporary Television Storytelling* (2015) and Melissa Ames' anthology *Time in Television Narrative: Exploring Temporality in Twenty-First-Century Programming* (2012). Mittell adapts Bordwellian cognitive film theory to long-form television shows and its "flexi-narrative" style – a narrational mode, peculiar to long form shows, which combines episodic and serialised elements. Ames' anthology is more specifically focused on the temporal element of millennial television shows, arguing that they tend to:

play with time, slowing it down to unfold the narrative at rarely before seen rates (time retardation and compression) and disrupting the chronological flow itself (through the extensive use of flashbacks and the insistence that viewers be able to situate themselves in both the present and past narrative threads simultaneously). (8)

Westworld, on the other hand, problematises the spectator's ability to situate themselves in time, surreptitiously interweaving two decades-apart timelines, while leading the spectator to assume the events happen more or less simultaneously. The show's narrative structure, coupled with the science-fictional elements, misdirects the spectators, before revealing its ruse at the end of the first season. In Ames' anthology, Casey J. McCormick considers the way several contemporary Science Fiction (SF) shows, such as *Dollhouse* (and, I would argue, *Westworld*), present a "narrative [that] is highly self-aware, interconnected with other narrative counterparts, and hyperlinked to postmodern culture at large" (2012 206). McCormick considers this type of narrative to be "posthuman" as it is "deconstructed, temporally complex, nonlinear, and multisubjective," but also because it engages with "cognitive theories that reflect both narrative and thematic concerns" (206). In the case of *Westworld*, the post-human aspect of the narrative is reinforced by the targeting of a specific audience: highly tech-savvy and organised fans.

The androids' journey towards self-awareness, and towards a true understanding of their reality, is mirrored by the spectator's growing understanding of the world and events being portrayed. Both journeys involve a reorientation of the self in time; the first season presents a movement away from timelessness and misdirection towards the creation of memory and identity. As the androids gain self-consciousness, and some form of 'humanity,' they also eschew the limitations of the scripted loops and cliché storylines they were previously confined within. Similarly, the androids move away from a conception of time governed by video game logic (infinite loops) towards one governed by filmic logic (which consists of a logical, causal organisation of events). Finally, the spectator's understanding of the show's narrative structure is similarly changed by the end of the first season – a realisation that I will evidence by contrasting select scenes from the pilot and finale.

The Background of Classical Narration:

In *Narration in the Fiction Film* (1985), David Bordwell introduces a thorough cognitive approach towards narrative in film and the way the spectator processes information. While watching a film or television show, the spectator is bound by a mandated temporal form: shots and scenes follow each other in a prescribed order, with no inherent deixis (grammatical or syntactical structures that encode time, person, gender, number and so on). A scene can be defined as a series of shots happening in a continuous time and place, which makes it the basic temporal marker of film. Bordwell explains that "the cinematic signifier does not have formal marks that could characterize its temporality, not even equivalents of autonomous monemes, the specialized lexical items of language (yesterday, today,

tomorrow etc.)" (62). The spectator must infer the temporal logic of the work by using cues provided by the narration, drawing upon medium-specific and genre-specific schemata as well as intrinsic norms (the standards introduced by the work itself). Bordwell considers that classical narration is characterised by a high level of orientation. Shots succeed one another in such a way as to guide the spectator. Conventional techniques are in place in order to help the spectator orient themselves in time, either directly expressed (intertitles, dialogue) or indirectly inferable (seasonal changes, characters aging).

Three common film techniques disrupt the linear flow of time: flashbacks, flashforward, and ellipses. In order to show how they function, I will follow the distinction between Fabula and Syuzhet, theorized by Formalists and reworked by Bordwell. The Fabula refers to the constructed story the spectator pieces together, composed of a chronological and causal chain of events occurring within a specific time frame and space. The Syuzhet refers to the actual arrangement of the Fabula in the film, the order and manner in which information is presented to the spectator (Bordwell 49). Flashbacks and flashforwards make the spectator create a mental construction of Fabula events, but also several other versions corresponding to the different characters' knowledge: 'What does X character know at Y point in time?' Similarly, ellipsis (temporal gap) elides irrelevant events. Not all films or shows present flashbacks or flashforwards, but the vast majority of them utilise frequent and numerous instances of ellipses. Common knowledge about film easily accommodates ellipses and spectators are familiar with the story moving ahead in time and to different locations. As per the principles of classical narration, most ruptures in temporal linearity are clearly delineated and signified so that the spectator is rarely confused, and temporal disorientation is usually localised and short-lived. In contrast, *Westworld* problematises temporal orientation by presenting a setting that seems to exist in two different times (a Wild West embedded in an unspecified future), problematising questions of historicity as well as genre.

The generic hybridity (between SF and Western) is a major factor that contributes to the blurring of temporality. The entirety of the show happens either within the Delos compound (in a non-descript, minimalist decor with slightly futuristic technology), or in the Park (a mythicised version of the American Wild West). The very premise of the Park (and the show) creates temporal confusion as the androids do not age. Not only do they not change over time, but their apparent age does not match their actual age. For example, in the pilot, Chief of Security Ashley Stubbs (Luke Hemsworth) says about Dolores: "You know why she's special? She's been repaired so many times, she's practically brand-new. Don't let that fool you. She's the oldest host in the park" (S1E01 01:25:00). The fact that neither the park nor its androids change makes it possible for scenes to take place years apart, without any sign of this temporal gap. This creates what Bordwell calls a "suppressed gap": information is withheld from the spectator without their knowledge (55). A close analysis of the pilot ("The Original") demonstrates how common filmic techniques such as voice-over and cross-cutting encourages the spectator to make false assumptions and fill in the gaps in knowledge incorrectly.

"The Original": Temporal Misdirection

Mittell explains that the pilot of a show serves a dual purpose: it has to be inspirational (to make people want to keep watching), but also educational; it has to provide narrative exposition and introduce a complex storyworld, especially in cases of high concept shows such as *Westworld*. From a storytelling perspective, "Pilots must orient viewers to the intrinsic norms that the series will employ, presenting narrative strategies so we can attune ourselves to its storytelling style" (57). Mittell aptly compares this orientation to the tutorial level of a video game, in which the product literally teaches us how to interact and engage with it. In the case of *Westworld*, both the story and storytelling norms contribute to the creation of a feeling of temporal ambiguity. In the absence of clear temporal markers, one can suppose that the viewer falls back on the default assumption that shots and scenes are occurring chronologically (with the exception of a couple of clearly delineated flashbacks, such as Arnold's memories of his deceased son). Perceptive or genre-savvy viewers might question this assumption, but the textual richness of the scenes also captures their attention and misdirects them.

From a stylistic and storytelling point of view, several features introduced early on in the pilot episode suggest a complex storytelling structure and textual richness: information is presented in great quantity through a variety of means and at a fast rhythm. Informational and emotional load impact our attention and hypothesis-making: they can serve as a distraction to discourage viewers from potential cues they might have picked up on. A close analysis of the opening scenes of the pilot can illuminate how textual richness can introduce intrinsic norms about storytelling strategies, create both informational and emotional overload, and introduce cues regarding the potential misleading quality of the narration.

The pilot of *Westworld* introduces no fewer than fifteen named characters and contains thirty-seven scenes. Sizemore confirms the park as a metonym for the show's narrative ambition when he exclaims: "We sell complete immersion in a hundred interconnected narratives" (00:27:30). Stylistically, this textual richness takes the form of frequent cross-cutting, ellipses, spatio-temporal jumps, and the use of voice-over and voice-off. The quantity of information and the speed at which it is presented to the viewer creates a heavy cognitive load that demands sustained attention. The pilot opens with a man's voice over a black screen – "First, have you ever questioned the nature of your reality?" (00:00:02) – before the character of Dolores appears, with an extreme close-up of her open, staring eyes, on which a fly is walking. The colour balance is cold and dark, her face basked in a dark, blue hue. This is an example of what Mary Ann Doane, in "The voice in the cinema: The articulation of body and space" (1980), calls a "voice-off":

> Voice-off refers to instances in which we hear the voice of a character who is not visible within the frame. Yet the film establishes, by means of previous shots or other contextual determinants, the character's "presence" in the space of the scene, in the diegesis. He/she is "just over there," "just beyond the frame line," in a space which "exists" but which the camera does not choose to show. (37)

Because of Dolores' position, facing the camera, we can hypothesise that she is interrogated by a character standing behind the camera, whom we cannot see. A voice-off suggests that there is a space beyond the scope of the camera, an 'elsewhere' that problematises the selective nature of the framing.[3] The man's voice asks her what she thinks of her world. The show then cuts to a top-down medium shot of Dolores in bed. In contrast with the previous shot, the colours are bright, warm, and vibrant. Dolores continues in a voice-over which, contrary to voice-off, implies the voice is speaking from a temporal and spatial distance. Prospectively, the audience supposes that they are seeing a memory, brought about by her answer to the man's question (this is the first major false assumption the spectator is invited to make). She explains that she chooses to see the beauty in the world, not the ugliness, as the episode shows her walking down the stairs and out the front door of her house, as slow, languid non-diegetic piano music starts playing. The voice-over stops and the Dolores the viewer sees addresses her father, still off-screen at that time, before the camera follows her and reveals him, sitting on a chair on the porch. They exchange a few words about natural beauty and painting. As she gazes into the distance, the viewer transitions to a sweeping shot of a Western landscape, with canyons and plains, while Dolores's voice-offer resumes her musings about the beauty and order of the world (00:00:44). The shot cuts to a close-up of an automated piano, as it starts playing a jaunty, lively tune, which spectators will soon learn to recognise as the Sweetwater theme (00:00:53). The male interrogator resumes in voice-over, asking Dolores what she thinks of the newcomer. The episode cuts again to images of a man, sitting on a train, arriving at Sweetwater (00:01:01). Within one minute, the show has established its storytelling strategies, cross-cutting between five different times and places, with voice-off and voice-over operating transitions between the spaces. Viewers are also encouraged to find thematic connections between the voice-over and the shots: Dolores talking about natural beauty is for example coupled with shots of beautiful nature. This is a mental operation that creates a lot of cognitive load, especially as, at this point, a first-time viewer is not familiar with the characters and the settings. This coupling of the voice-over with the visuals also 'primes' us to interpret the following shots similarly: discussion of the newcomers is coupled with shots of a man, soon identified as Teddy, inviting viewers to believe him to be one of the human 'guests' who visit the park. This is the second major false assumption the show invites the spectator to make.

By the end of the episode, the two false assumptions are corrected, with the revelation of the existence of 'loops' and of Teddy's true nature. Until the end of the episode, there have been no indications that the events presented (Dolores waking up, Teddy arriving) have occurred multiple times. As the end of the episode reveals, these events are part of their respective narrative 'loops', which play out time, and time again and the images viewers see in the beginning of the pilot could be from any of those multiple iterations. Secondly, the end of the episode also reveals that Teddy, who was assumed to be a human guest, is actually an android host playing out his own loop. As a consequence, the spectator is invited to ponder the nature of several characters, in particular, the Man in Black. The original *Westworld* (1973) featured a nameless android also nicknamed the Man in Black, prompting viewers of the show to hypothesise that its own Man in Black would end up being an android too. This hypothesis can be strengthened by the revelation that Bernard, a member of the Park's staff, is an android (which he finds out at the same time as the spectator, in episode seven,

"Trompe l'Oeil"). Both Teddy's and Bernard's twists can be seen as further misdirection, red herrings encouraging the spectator to focus on the possibility that the Man in Black could be an android too. This distracts from the actual twist (the existence of two timelines). *Westworld* therefore goes further than other 'puzzle' or 'twist' films: not only does the show present a twist, but it also anticipates the perceptiveness of forensic fans and gives them a false sense of confidence. This 'twist-on-the-twist,' or 'trick' aspect, is also linked to the serial nature of the product and the existence of an involved fanbase, which sets apart *Westworld* from films like *The Sixth Sense*.

Over the course of the first season, spectators and characters are invited to try and make sense of the world in front of them. The presentation of a partial resolution at the end of the first episode provides immediate satisfaction. As such, the pilot promises further puzzles, but also further resolutions. This encourages the spectators to keep watching (as Mittell suggests, it has an "inspirational" vocation) and teaches them how to watch (it is "educational"): looking for clues to the puzzle (56). As such, *Westworld* differs from shows like *Lost* (2004-2010) – deemed unsatisfactory by many fans for the lack of resolution – and *Twin Peaks* (1990-1991) – the narrative of which is radically confusing, without much substance to latch on to. Furthermore, as Catherine Zimmer explains in "Serial Surveillance: Narrative, Television, and the End of the World" (2018), "both viewers and characters struggle to understand the meaning of repetitions, the location in time of events, and the identities of themselves and others. […] *Westworld*'s narrative enunciation becomes increasingly synonymous with the technology that supplies the premise of the show" (21). The "technology" mentioned here can refer to the very premise of the Park, conceived as a metaphor of open-world video games. Games (and puzzles) present challenges to be resolved, which is part of the gratification participants get from them. This ludic inspiration is not merely a thematic exploration, but it also permeates the very narrative structures used in the show. In particular, the temporal presentation of events borrows from video game logic, before reasserting a more specific filmic logic later on.

Temporal Circularity through Remediation with Video Games

The re-evaluation of temporality is enabled by a remediation with video game temporal logic. Jay Bolter and Richard Grusin, in *Remediation: Understanding New Media* (2000), define remediation as "the way in which [new media] refashion older media, and the ways in which older media refashion themselves to answer the challenges of new media" (14). *Westworld* can therefore be seen as a Complex Television show remediating video games: the very premise of the show mimics the concept of many video games. The player ('guest') is invited to enter a fictional world, separate from their own specific time and space. The show's main narrative arc explores questions of morality, identity, and memory. This exploration is centred on the contrast between video game temporal logic, and filmic temporal logic. In *Video Games and Storytelling* (2015), Souvik Mukherjee highlights the unique function of time and memory (156). In particular, save mechanics enable the player to resume the game at a previous save point (in order to avoid an undesirable outcome, such as a loss of items, or after the death of the player character). Contrary to flashbacks, this return in time is also an erasure: the events that happened after the save are removed from the Fabula. The player character's health and other statistics are restored to a previous state, as well as their abilities and

skills. Video game logic is therefore defined by a rupture of linear temporality and causality, as reality can be erased and re-written at will. In the first episode, Teddy overhears a guest saying to his friend that the first time he came to the Park he acted in a moral way, but the following time he decided to "go black hat," and re-do previous narratives without a moral compass (S1E4 00:48:42). As such, the show mimics games like the *Red Dead* series (2004-18), which take place in an open world inspired by the Far West that players can explore at their leisure.[4] It also includes a built-in morality system in the gameplay: the player's actions impact their levels of reputation or fame, influencing how non-playable characters react.

Maeve, the android who acts as the town brothel's Madame, initially embodies this video game logic too; once she realises that dying allows her to get a glimpse at the world 'behind the scenes', however, she stops caring about the drives built into the scripted narrative loops, exclaiming "none of this matters" as she asks Hector (Rodrigo Santoro) to kill her (S1E04 00:55:04). Both Maeve and Dolores abandon the clichéd and stereotypical narratives scripted for them and move into the sphere of the metanarrative. As the season progresses, the show increasingly foregrounds the discrepancy between video game and filmic logic. Many critics (in both television and video games studies) have analysed the show's use of video games, mostly in relation to violence and morality. For example, Ellen Menger discusses morality and gaming practices in *Casual and Hardcore Players in HBO's Westworld (2016): The Immoral and Violent Player* (2017), and Larry Busk compares *Westworld* to the violence of Roman circus games in "Westworld: Ideology, Simulation and Spectacle" (2016). This discussion of violence and morality has overshadowed a more formal analysis of the influence of video game narrative logic on filmic media. I argue that *Westworld* invites a closer look at its ludic influences for two reasons. Firstly, the contrast between filmic and ludic logic, exemplified by the creation of memory (and influenced by the show's own narrative drives) makes erasure turn into memory, and the spectator (along with the androids) gets reoriented through time. Secondly, the interactive aspect of video games also mirrors the spectator's own engagement with *Westworld*: the show's availability on streaming services facilitates the creation of an active, attentive fandom. I argue that *Westworld*'s most innovative and significant contributions to the current media landscape reside less in its discourse on violence, but rather within its invitation of collective interactivity. I therefore suggest that *Westworld*'s progressive exploration of temporal orientation encourages media-savviness and ultimately draws the spectator's attention towards specific information delivery strategies (especially of temporal elements). As such, it bridges the gap between Mittell's analysis of operational aesthetics and video game theory analyses of ludonarratives, such as Clint Hocking's (2007). A closer look at how the second half of the season presents a reorientation through time demonstrates how *Westworld* celebrates personal agency; as the androids create their sense of self through their memories, the spectator is also invited to (re)create a mental map of the story. This reorientation also draws attention to narratological and stylistic elements in a way that promotes media literacy.

Temporal Accumulation: The Creation of Memory and Identity

The show problematises the existence of loops by highlighting how the video game logic of circular sameness cannot exist in a medium such as film (or television shows) that functions by accumulation. This is made obvious by the repetition of certain scenes or shots, which serve to both foreground the existence of loops (similar to video games), but also to highlight the specificity of filmic media. These scenes include Dolores waking up (repeated four times over the course of the first season), the attack on her family ranch (twice), Dolores dropping a can from her shopping basket (four times), and, at a smaller scale, character catchphrases like Clementine's "You're new, not much of a rind on you" (repeated eight times). Let us consider the repetition of Dolores's morning scene further as its affective impact evolves as it gets repeated. The show's layered meaning is due to the discrepancy between what the spectator and characters know: for Dolores each iteration is a new, unique one and she has no memories of the atrocities she has suffered. The spectator, meanwhile, retains memories of the events in-between and knows both what happened to Dolores in the past and what is likely to happen again in her future. Due to the cumulative nature of the medium, the interpretation of a scene is automatically impacted by the scenes that came before; the meaning of Dolores's waking up scene becomes more sinister every time viewers see it. The lighting and music of the scene change – as opposed to the acting, framing, and composition, which remain the same – creating a tension between familiarity and strangeness. Her father changes too: at the end of the first episode, the android who played that role malfunctions and is replaced. Dolores greets her 'new' father in exactly the same way as before, showing the same affection and familiarity, as if after a lifetime of filial love. Ironically, the android that has been repurposed to be her father was one of those who attacked her ranch in previous iterations of the loop. Nonetheless, this irony is available only to the spectator, who functions according to filmic logic, but not to Dolores, who remains unaware. Over the course of the first four episodes, the show has therefore introduced both repetition and variation in the representation of the scene, prompting the evolution of the spectator's emotional interpretation of it. In the second half of the first season, the show presents the androids' journey towards self-discovery, which paradoxically involves a sense of loss. As Zimmer puts it:

> Despite the intellectual effort involved in the complex layering of plots, the revelations that emerge are deeply affective. The hosts' self-discovery is inextricable from their loss of self, amid realizations that they have lived their (artificial) lives hundreds of times, and died perhaps just as many. (22)

Escaping the repetitive and mindless video game logic they had been scripted in, both Dolores and Maeve start having visions of what viewers are led to believe are past events and loops. By the end of the season they seem to have recovered their memory and can keep it even after being rebooted. They are able to look back on past experiences with new eyes and realise they had been fooled. Similarly, at the end of the season, the spectators realise that the narrative they had been invested in had been misleading, and that characters were not who we thought they were.

Temporal Reorientation through the Revelation of the Plot Twist

A plot twist by definition invites us to look back on the narrative information presented previously and interpret it in a new light. As Daniel Barratt explains in "Twist Blindness" (2009), plot twists are often accompanied with flashbacks that show viewers scenes that they have seen before, inviting them to interpret these differently (74). This is the case with the twist in the first season finale of *Westworld*, which prompts viewers to reconsider their understanding of the season's timeline. Throughout the first season, viewers have followed Dolores's journey with William and Logan, as well as the Man in Black's quest to find the Maze (which brought him in contact with Dolores). The plot twist is twofold: firstly, these two plotlines had actually been happening decades apart, and secondly, William and the Man in Black are actually one person. A closer look at the twist itself shows storytelling techniques similar to the ones identified at the opening sequence analysed earlier, in particular the cross cutting and the use of voice-over narration. The scene opens with The Man in Black beating up Dolores, trying to extract information about the maze, when Dolores mentions that William is going to come and save her. The Man in Black chuckles, surprised that she "[does] remember some things after all," and says he knew a guest named William (00:28:17). He starts telling his story. The scene cuts to a flashback of William, frantically looking for a missing Dolores, killing and torturing soldiers who might have hurt her. The scene alternates between dialogue inside the flashback and the Man in Black's voice-over commentary (in third person, past tense). William picks up a discarded gun and a black hat, but does not put it on. The scene cuts back to the 'present' and the Man in Black comments that William "couldn't get [her] out of his head" (S1E10 00:33.30). Another cut to the flashback, showing William arriving to Sweetwater, where he finally finds Dolores "right back where [he] started" (00:33.35). Their eyes meet, but she does not show any sign of recognition, only the polite interest at meeting a stranger. Dolores drops a can: this is part of her traditional loop and how she originally met William. Viewers have seen this scene repeated three times already, the can being picked up by Teddy, William, then the Man in Black. In this flashback, the can is picked up by an anonymous guest, to whom Dolores smiles coyly. William realises that not only had her memory been wiped (meaning she has no memory of their relationship), but their meeting was not genuine but merely scripted to attract guests by inviting them to assist Dolores. The emotional impact of this scene on the spectator relies on the epistemic distance between William and viewers on one side and Dolores on the other: his memory of her causes him pain and longing, compounded by her absence of memory of him. William's position at this moment mimics the viewer's perspective of the hosts' loops: the epistemic distance between humans and hosts (and between filmic and ludic logic) also creates a layered affective tone.

The camera tracks forward, closing up on William's upper body as he puts on the black hat (S1E10 00:36:06), obscuring his face. When he straightens up, the scene cuts back to the 'present' and it is the Man in Black viewers see. Speaking to Dolores, he switches to the first person and present tense, cementing the viewer's realisation that he is an aged William: "I really ought to thank you Dolores. You helped me find myself" (S1E10 00:36:10). As Dolores herself realises who he is, the scene cuts to four other flashbacks, overlaid with the Man in Black's voice-over: "my path always led me back to you, again and again […] I guess your path led you back here, again and again […]

you were lost in your memories, even then" (00:37:02). The flashbacks show scenes that viewers have seen before, of the journey Dolores undertook with young William. The other characters in it disappear midway through the shot, leading us to understand that, in those scenes we saw, Dolores was actually alone, and she (and viewers) were hallucinating her memories. This scene invites viewers to reconstruct past scenes along three axes: the identification of characters (William is revealed as the Man in Black), the temporal inscription of certain scenes (decades apart), and the truth value of the images presented to us by the narration (some of them being hallucinated memories). This reconstruction is guided by the very same filmic techniques that made the disorientation possible in the first place: flashbacks, repetition, cross-cutting, and voice-over. Dolores's knowledge of events is being reshuffled, along with the viewer's. Dolores' exit of her loops is done through filmic devices that had previously been used to hide said loops.

Conclusion

An analysis of *Westworld* opens up several avenues for further research, particularly in the fields of cognitive psychology, and transmedia narratology. From the point of view of cognitive psychology, Fantastika texts are uniquely positioned to explore questions of temporality both thematically and narratologically. Further research could be made using experimental protocols and quantitative measurements to further analyse spectator's reactions to temporal displacements, especially as it pertains to such aspects as neuroatypical spectators or variations in viewers' age and gender.

Westworld bridges television shows and video games not only in its text itself, but in the technological apparatus that delivers it and the viewing practices it encourages. Just as a player can play a game several times (and re-playability is a highly valued quality), re-watchability and the potential for fan engagement are prized by producers. The importance of sustained loyalty is highlighted in the narrative itself, in episode two, when Ford explains the attraction of the park:

> The guests don't return for the obvious things we do, the
> garish things. They come back because of the subtleties, the
> details. They come back because they discover something they
> imagine no one had ever noticed before, something they've
> fallen in love with. (S1E2 00:53:50)

From the perspective of transmedia narratology, the highly self-aware embedded narratives of *Westworld* present both overt and hidden temporal complexities, relying on the narratological and thematic influences from video games in order to explore themes of memory, identity, and humanity. As such, it presents a unique (and extreme) example of remediation between two new media: serialised television fiction and video games. The commonalities and discrepancies of the two media are highlighted as much by the show as in the conflict between androids and humans. *Westworld* is a compelling example of how it is possible to engage with cognitive theories that, as McCormick suggests, "reflect both narrative and thematic concerns" (206). Just like the 'bicameral mind' theory that gives its title to the season finale, the show is based on the dialogue – between

film and video games, between narrative structure and themes, between humans and androids, and between illusion and truth. Broadly speaking, a close analysis of representational strategies peculiar to Fantastika texts participates in the everlasting debates about temporality in art. While comparative narratology and transmedia theory tend to focus on how the medium affects the content, a closer study of remediated Fantastika texts can bring to light the cross-pollination and synergy between different media within one single text.

NOTES

1. In this article I will use 'filmic' to refer to narrative films and television shows.

2. The TV show is based on the 1973 film written and directed by Michael Crichton.

3. This notion is further complicated later on in the season, when it is revealed that the voice does not belong to a person physically present in the scene, but to one of Dolores's memories. As such, this 'elsewhere' space becomes an 'elsewhen,' which is emblematic of Dolores's journey.

4. At the New York Comic Con, *Westworld* showrunners Jonathan Nolan and Lisa Joy have explicitly quoted *Red Dead Redemption* (2014) as one of their main sources of inspiration, mentioning its Western theme, its open world, and the exploration of morality (See Osborn 2017).

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BIONOTE

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