

Music as a Source of Narrative Information in Hbo's *Westworld*

Dr. Kingsley Marshall

Introduction

The complex storytelling of the HBO series *Westworld* is typical of what Warren Buckland has termed “puzzle plots” (2014: 2-3), narratives that David Sterritt describes as having a tendency to play around with linearity and causality in their timelines and which challenge viewers to engage with their unorthodox structures (2016: 478). The narrative of *Westworld* is centred around three main themes – (1) the development and exploitation of robotic technology embodied in the hosts of the park, (2) the ethics related to the deployment of these Hosts by both employees of the corporation that created them, Delos Inc, and the human Guests of the park, and (3) an exploration of what constitutes consciousness, specifically in relation to emergent artificial intelligence and robotic technologies. In Season One (2016), these themes are predominantly explored as a number of the Hosts appear to develop sentience as they stray from their pre-scripted programming. These ideas are furthered in Season Two (2018) through the acts of human characters who attempt to replicate themselves after death, initially within Hosts who resemble their character’s previous human form and later through a machine-based consciousness into which they have introduced their memories and emotional profile prior to their death. As in so much other science fiction, from *Frankenstein* (Shelley, 1818) to *Ex Machina* (Garland, 2015), *Westworld* uses these themes to consider notions of identity, memory and the formulation of the self and subjectivity. As the series develops, it becomes clear that the Host’s programming has been adjusted by the park’s co-founders Dr Robert Ford and Arnold Weber. The pair hope that, through introducing trauma and loss into the narratives of the Hosts through their ability to recall the suffering of their past within the park through memories - referred to as ‘reveries’ within the series - the Hosts’ consciousness can be jump started and that they will work themselves free of their subjugation by the Delos corporation.

The “puzzle plot” manifests itself in a story unfolds across four distinct timelines: (1) the park’s present day, which Reddit users have identified as being 2052, (2) one year prior to that moment in 2051, (3) thirty years prior in 2022 and (4) a period 30-37 years prior, in events that take place between 2015 and 2022 (Willett, 2016; Renfro & Cheng, 2018). It is left to the audience to disentangle the characters and events unfolding within these timelines,

a feat made more challenging by the android Hosts, who do not age and are tasked to play different characters during their deployment in the park. In addition, the series does not directly signpost the dual identity of some of the human Guests, nor the true nature of characters who feature in the narrative as Hosts after their death. This includes the park's co-creator Arnold Weber who, it transpires, has been recreated in Host form as the character Bernard Lowe by his colleague Dr. Robert Ford. Instead of providing its exposition primarily by dialogue, in *Westworld* clues are often provided to the viewer as to a particular timeline or character's identity through subtleties of the mise-en-scene. This includes the production design embodied in company logos, costume, props or the dressing of locations within the park, and in the visual grammar of the series, which borrows both its locations and visual language from Sergio Leone and John Ford's cinematic Old West (D'Allessandro, 2017). On a number of occasions, conventions of cinematography and editing that are established in early episodes are later broken in order to signify a disturbance in the park or a Host's deviation from their programming. In an example from the Season One finale, as one of the host characters may or may not have made a decision of her own free will, the cinematography moves from Steadicam to handheld shots. Nolan suggests that, at this moment, the change in aesthetic indicates that the character is free; "We're no longer in programmatic or prescribed behaviors. She's improvising and we're right there with her" (in Riesman, 2016).

More unusually, and in addition to these visual signifiers, a large amount of narrative information is also communicated through the mise-en-bande, or interaction of sonic components on the soundtrack. This is achieved through sound design, but also in the deployment of original music written for the series by the composer Ramin Djawadi and in existing music tracks deployed both non-diegetically and within the diegesis as source music. By aligning the creative practice of those involved in the production – drawn from interviews conducted with the show's co-creator Jonathan (Jonah) Nolan, producer Stephen Semel and supervising music editor Christopher Kaller – with a close analysis of the scenes they discuss, this chapter examines the significance placed on music as a carrier of expositional information within *Westworld*.

The Relationship Between Music and Image in *Westworld*

Directed by Patrick Clair of production studio Elastic, the two-minute Main Title sequence for Season One clearly indicates the significance of music within its articulation of the themes of the series as a whole with story information intrinsically linked to Djawadi's music. The

sequence shows a series of abstract images depicting the creation of a horse and a humanoid host by Delos machinery. This process of manufacture includes the construction of eyes and the connection of bones to tendons, muscles and ligaments. The sequence ends with the eventual immersion of a humanoid frame in a bath of white liquid. Each of the components of the host's bodies is manipulated by more conventional industrial robotic arms. These are familiar to the show's twenty-first century audience, help to situate the events of the series in a recognisable near future and, as Clair admits, owe a debt to Chris Cunningham's music video for Björk's "All is Full of Love" (Perkins, 2016). In the titles, these images of creation cut a number of times to a piano keyboard. Initially, this is presented in an abstract image that shows a robotic arm stringing keys to the pin block of an upright piano. Later the robot arm is revealed to complete its work on a white hand – bare of skin but otherwise fully formed – showing a host playing the melody of Djawadi's score on the piano. Reflecting the puzzle at the centre of the first season's narrative, however, this opening sequence presents its own series of twists. In the fourth shot of the piano, the skeletal player lifts their hands from the keyboard revealing the instrument to be a player piano or pianola, a self-playing instrument that uses a mechanism to perform pre-programmed music inputted into the device through a perforated paper roll. The next shot discloses to the audience the source of the melody, with an extreme close up showing the music roll of the player piano – the perforated holes of the spool forming the code that indicates the specific note and duration to be played by the machine. The following wide shot reveals the player piano and its perforated program performing without the skeletal host at all.

Djawadi's accompanying "Main Title Theme – Westworld" (2016) is aligned meticulously with the visuals to realise this narrative. Opening with a small violin part and a cello, the cello's melody is immediately followed by a piano that repeats the same notes in reverse order. Orchestral strings reinforce this initial state before the piano melody begins to lead the strings, becoming faster and more complex as the theme progresses. The strings counter this to some extent before the music closes with a cascading piano and discordant cello drone that passes through an electronic delay. Clair acknowledges a "close relationship between the pacing of the music and the story of the titles," where his team had even matched the performance of the host playing the piano from a video recording of Djawadi's own hands playing the theme (Perkins, 2016). In a Reddit post, the composer reiterates these themes describing the "Main Title Theme" as representing "an assembly. It starts very sparse and then builds. The idea of something being created" (Djawadi, 2018). The conventions around the instrumentation established within the title sequence are carried through into the music

used within the main episodes of the series. The use of the piano is often deployed in the soundtrack in order to indicate Robert's control over the Hosts, made evident in his calming of Bernard and later Maeve in Episode 8 ("Trace Decay", Season 1, Episode 8). Strings often signify emotional beats, specifically related to the Host's responses to the recollection of their 'reveries' as they recall memories of previous storylines or characters they have embodied within the park, typified by Dolores' flashback to the town of Las Mudas ("Dissonance Theory", Season 1, Episode 4). The use of synthesised or electronically processed instrumentation within the score represents the duality of the real world outside of the park environment or the influence of the Delos corporation within it. This is commonly deployed in scenes whose setting is the Delos facilities buried under the park or the Mesa Hub, an operations and hospitality complex within the park hosting offices, staff living quarters, manufacturing facilities and a control room. Discordant music, or cues subjected to processed effects, commonly indicate a disruption of the scripted narrative of the park.

The title sequence poses a number of questions related to the Host's notions of agency, and the intentions of those managing the *Westworld* park. The significance of programming and repeatability within the park's narrative is represented in the coded perforated music roll of the player piano, while the representation of the piano's "player" presents a sense of ambiguity as to the nature of the origins of the music being played. The raising of the skeletal fingers from the keyboard suggests that this Host is either reclaiming their agency, has been programmed to relinquish it or has acknowledged the purposelessness of their actions. The final framing of the piano minus the player as Djawadi's melody comes to a conclusion implies that the playing itself may be a memory. Supervising music editor Christopher Kaller, recalling a conversation with *Westworld's* co-creator Jonathan (Jonah) Nolan, notes that "the player piano represents the hosts, the player is the Anthony Hopkins' character, Dr. Ford but, in the end, he takes his hands off the piano and the keys keep going as though he has stepped out of the picture while the hosts now have a life of their own" (2018). These narrative ideas are explored over the ten episodes of Season One.

The Embedding of Music in the Production Culture of *Westworld*

Nolan describes music as vital to his writing process. He uses playlists to help conjure mood, space and tone of scenes as he writes, though acknowledges that this musical accompaniment is typically jettisoned once a screenplay is completed (Nolan, 2018). One of the show's producers who also served as the visual editor of the pilot episode, Stephen Semel explains that Nolan had initially

wanted *Westworld* to be kind of a non-traditional, primarily non-melodic score. Jonah mentioned some specific soundtracks as possible temp score when we were shooting the pilot and while I was assembling the first cut before Ramin had seen the edited scenes. One of them was Mica Levi's score for *Under the Skin*, the Jonathan Glazer movie. There were a lot of thematic similarities between that movie and what was happening in *Westworld*. Jonah's feeling was that *Under the Skin* was an effective use of music in a similar kind of palette, something that told the story about a robot in the world. I think it was the atonality of the music and the thematic similarities that attracted him. (2018)

The use of a temp score, existing music used during editing to help guide the rhythm or atmosphere for a scene or series before a composer is brought onto a production, is common practice in film and television production. However, the show's supervising music editor Christopher Kaller identifies an important distinction between working on *Westworld*, and his previous experience. In this instance, he was brought in very early in the process and worked solely on the production, where more commonly a music editor would be working across a number of shows simultaneously. Kaller explains:

I started working with Steve [Semel] on his first assembly of the show. While he was cutting in the AVID [picture editing software] I had the ProTools [audio editing software] linked so, as he was assembling the picture, I was following right behind tracking everything for the temp track and that first pass. Usually, they don't bring me on until the directors' cut or a little later in the process. On this, they had me right away. I was able to have early conversations with Jonah about what sort of sounds he liked, where he wanted to go and work with him to shape the sound from the beginning. He wanted music to play a much bigger role. The show is complex in how it's written and takes a lot of turns, so he wanted music to hold your hand and be back there taking you on this journey. (2018)

By working in the same space as the picture department team, and well before a locked cut was presented to the producers, Kaller was able to focus entirely on the series and target the use of music within each scene and determine how musical conventions could be presented within the series.

Semel further describes the day to day post-production processes on *Westworld*:
The dailies come in and the picture editor cuts the scene. The editor works with Chris [Kaller] and either the editor has music notes about the scene or Chris uses his own knowledge base about the series and music to create a temp score. The editors cut with the temp score, and the editor runs the cut for the director. The director then has a certain number of days to refine it and do what they deem necessary and to work with Chris to further refine the music. Then the director's cut is presented to the producers. That begins a period of weeks and months when we're working on it. During the producers' cut Jonah and Lisa, and often the writer of that particular episode, get involved in trying to advance the music process while we're working on the picture edit. (2018)

Unusually, Kaller was employed full time on the first season of *Westworld* for around eighteen months, as he explains "This was a full time, every day show. *Westworld* is more like a film in that there's a lot of music and they want temps that sound like finished products. On *Westworld*, I did almost all of the temping for the episodes. It's involved but it's also the most creatively rewarding show I've worked on" (2018).

Semel confirms that this process mirrored the production culture on *Person of Interest* (2011-2016) a television series which, like *Westworld*, was a co-production between Nolan and Joy's Kilter Films and J.J. Abrams' production company Bad Robot:

Our workflow on both *Person of Interest*, *Westworld* and other projects that I've done through Bad Robot, is that the music editor actually resides with the picture editors. Because we're in the same physical space, there are lots of conversations taking place between the producer and the music editor, the director and the music editor and the picture editors and the music editor, and we also have somebody there whose primary responsibility is to create the temp score. That means a lot more attention gets devoted to the temp score and, in *Westworld*, there was a lot more turnover of ideas, listening to things and rejecting or modifying them. Because so much thought and work had already been devoted to the temp score, we were able to give useful notes to the composer about the theme, mood and the turns in the scene that needed to be reflected in the final score. (2018)

Though it is more expensive to employ the music editor at such an early stage of production as a full-time member of the crew, this workflow allowed the team to devote more time than is typical to the formation of the temp score. This work, in turn, enabled the production team to give detailed notes to Djawadi as to the theme and mood of the show when he became involved, at which stage he too began to contribute musical ideas based on the written scenes (Semel, 2018).

Djawadi too had worked with Jonah Nolan on *Person of Interest*. Kaller had previously worked with Djawadi on *Dracula Untold* (Shore, 2014) and it was Djawadi who had brought Kaller onto the crew of *Westworld*. Kaller explains the significance of these working relationships and shared working practices:

Jonah and Ramin had worked together and had a very good relationship going into it. A lot of the time, I would relay notes between Jonah and Ramin. For the main titles, where Jonah wanted very specific moments or instruments to come in and things to happen, I would send Ramin my ProTools session of the sequence with markers on each note so he could see exactly where Jonah wanted things to happen. (2018)

Though this workflow is not unusual in film and television production, the timing of the involvement of these members of the crew in *Westworld* is critical, with the additional time and work on the music occurring months prior to a locked picture cut. This allowed for more creative input from those involved in the music, much earlier in the post-production process.

Piano Reductions

According to the title director Patrick Clair, a player piano was a prominent piece of furniture in *Westworld*'s production office (in Perkins, 2016), and has been described by the show's co-creator Jonathan Nolan as one of a number of "touchstone images" of the series (in Crow, 2016), appearing not just in the Main Title sequence, but as a recurring motif within the narrative. Nolan explains:

Lisa and I settled on the image of the player piano very early, as we were developing the story for the pilot. I had been struck by the penny-farthing bicycle used in the opening credits of *The Prisoner*, and I thought we could take something antique, benign, almost comical, and turn it into something much more ominous. We were struck by the idea of the player piano – taking a page from [Kurt] Vonnegut's eponymous novel – as the original western robot. The great granddaddy of our newly

sentient hosts. The piano was the first prop bought and adapted for the series. We found a company that was still producing bespoke versions of the scrolls, allowing us to play the music on set. (2018)

This embedding of the piano as a motif, as a callback to previous extra-textual televisual and literary references and as a metaphor for the hosts is typical to the series – where choices made within the show build a palimpsest of meaning.

A piano playing Djawadi’s “Sweetwater” cue (“The Original”, Season 1 Episode 1, 3:21) can be heard within the opening moments of the first episode in accompaniment to Teddy Flood’s steam train journey to Sweetwater, the town at which all of the Guests start their adventure within the park. The origins of the music within the diegesis are revealed in a close up of the perforated music roll and player piano as the train arrives at the town’s station. As Teddy exits the train, the music changes to a fully orchestrated non-diegetic version of the “Sweetwater” cue that shifts from the foreground of the mix to the background as Teddy encounters characters who play a significant role later in the narrative. When Teddy enters the Mariposa Saloon, a recurring and important location within the series, the cue returns as the non-orchestral diegetic version with the sound of the player piano again foregrounded within the mix. This cue is played diegetically a second time in the next scene to take place in the town, and though the piano is again not shown visually the repetition of its use introduces the notion repeatability within the park’s scripted narratives. Kaller explains the significance of the motif:

The hosts are in a loop which restarts every day, and the player piano signals that. Every day the piano resets, you hear the switch happen, the gears get going and it plays through the player piano as the hosts restart. The first thing that Ramin wrote was that *Sweetwater Theme*. We got a roll printed with the piece and shot inserts to put in there. (2018)

In a later scene that takes place as the Mariposa Saloon closes for the night, an extreme close up of the music roll of the player piano establishes a visual motif for its use. As the piano’s take-up spool begins to spin and its mechanical tracker bar clicks into place, music begins to play and the perforated music roll is revealed as the camera tracks left to right across the instrument. The sound design of the instrument’s mechanism, and the distinct tonality of the player piano within the soundtrack, calls back to the opening moments of Teddy’s arrival in

Sweetwater. In this instance, however, differentiating this moment from the earlier scenes where the piano plays diegetically, the music draws attention to itself not through the player piano playing an original piece of music by Djawadi, but in its iteration of a cover version of Soundgarden's 1994 "Black Hole Sun" ("The Original", Season 1, Episode 1).

Djawadi's soundtrack for Season One of *Westworld* features both original score, licensed source music and, more unusually, a number of instrumental covers rendered diegetically within the narrative through the player piano from an array of artists including the aforementioned Soundgarden, in addition to The Rolling Stones, The Animals, Amy Winehouse, Nine Inch Nails, The Cure and a number of pieces of music originally by Radiohead. Each of these cues has been described by Djawadi as "piano reductions" (in Vineyard, 2016a), in that the harmony and melody of tracks performed by a band are transcribed and condensed by the composer into a performance for the player piano. A number of these cues were then transcribed onto perforated paper rolls from Djawadi's MIDI files by specialists Gnaw-Vol-ty Rolls (Jackson, 2016; Kent Goodman, n.d.; Locke: 2016; Vineyard, 2016.2) and the music rendered diegetically by the player piano within Sweetwater's Mariposa Saloon.

The use of Soundgarden in this sequence establishes a convention of the use of these piano reduction cover versions – where the introduction of the player piano initially draws attention to the repetition of the park's recurring narratives before later indicating to the audience when deviations in the park's scripted storylines are emerging as the Hosts become more sentient, in part through their recollection of past events. This function is iterated in Episode Two where a piano reduction of Radiohead's "No Surprises" is played twice ("Chestnut", Season 1, Episode 2.). The first occurrence of the cue is an accompaniment to a dialogue sequence between the Mariposa Saloon's madam Maeve Millay and a male guest, when Maeve experiences a brief flashback to a memory from her past. The cue is repeated in a scene in the same episode when Maeve speaks to a female Guest, its use drawing the audience's attention to the scripted nature of Maeve's delivery of identical dialogue with the human Guests of the saloon - her programming ensuring repeatability and preventing any unforeseen surprises. In both instances the cue is introduced visually in a manner that directly mirrors the Main Title sequence with an extreme close up of the perforated music roll (again tracking left to right) followed by a close up of the keyboard and, in the first instance of the series, a wider shot of the piano itself in the context of the saloon.

Westworld presented an opportunity to retain some of the music Nolan had used when he was writing within the show itself, deploying this as a vital part of the storytelling. He

explains: “Lisa and I knew from the outset the relationship with the music would be different. Explicit, deliberate, even programmatic. We would take the music that we had used to build the characters and then build it into the narrative” (2018). This embedding of music was driven by Nolan, who recalls that Radiohead was one of the bands he had listened to while writing:

Some of the musical choices were obvious from the beginning; some were discovered later. Each song was painstakingly selected. We would look for instrumental examples, where available, to get a sense of whether the themes translated to the screen. Then we set Ramin loose, working his magic with the adaptation. The beauty of this arrangement is that, conventionally, there is often a tension between music and score – they do not necessarily fit together into a unified whole, especially in television, which tends to overuse music for effect. Here that tension was gone – all of the music benefited from Ramin’s craftsmanship, so it relates to each other in tempo, timbre, feeling. (2018)

Such close collaboration between the music editor and composer is again not unusual in film and television production but, critically, the processes of deciding upon the piano reductions took time and involved a number of personnel.

Djawadi acknowledges that the underscoring of action within the series with known melodies presents an idea that the diegetic presentation of the music, for both the park’s Guests within the narrative and a knowing audience, “enhances the idea that this is all scripted” (In Vineyard, 2016a). In a later interview, he suggests that the use of the reductions is intended to present the player piano as the park’s “jukebox”; programmed to play at certain points within selected narratives, and a demonstration of the control of the park environment by the Delos corporation in Season One (in Ginsberg, 2018). Stephen Semel adds: “It was always Jonah’s intention to have that be a repeating motif throughout the series. I wouldn’t dismiss the kinaesthetic fun factor, you know, does it make the scene come alive? The first consideration was the tone of the music, whether it was fun and whether it enhanced the scene” (2018). This notion of how music could be used to enhance each scene is evident elsewhere in the show’s production culture, where the citation of extra-textual sources is endemic through scripted, sonic and visual references that draw from a deep cultural well of cinema, literature, mythology, theology and fine art (Hoffman, 2016; Winckler, 2017). Nolan explains that the park in *Westworld* is “built on allusion, homage, theft. We wanted those

musical motifs to follow the characters on their journeys, a constant reminder that both the hosts and their world are creations” (2018). As such, each of these musical covers operates on an extra-textual level, in the manner with which they draw upon meaning from outside of the series itself. The cues remind the audience of the inherent inauthenticity of the theme park itself within the show’s larger world. In addition, many of these piano reductions offer a further signifier where the unheard lyrics of the music from the player piano make references to the narrative, specifically the state of mind of the Hosts. Though not a necessity in the communication of the broader story, these cues present the attentive audience member clues as to the timeline being presented and often foreshadow events to come.

In Season One this occurs most often in relation to the character Maeve, the violence of Robert and Arnold’s reveries causing her to flashback to past narratives and triggering her awakening to the constructed nature of her reality. Maeve’s growing awareness of the false reality and machinations of the park, paralleled by a similar awakening by Dolores, serve as the major story arcs of the season. As an example, at the beginning of Episode Six, Radiohead’s “Fake Plastic Trees” plays diegetically (“The Adversary”, Season 1, Episode 6) as Maeve wakes and walks to the saloon – a sequence repeated a number of times within the series. A prominent shot of the player piano in the saloon foregrounds the musical cue as Maeve courts an encounter with a murderous Guest, in order to affect her return to the Delos laboratories. If there were any doubt as to the literality of this cue, her later tour of the Delos facility once she has been returned there for repair is accompanied by an orchestral version of Radiohead’s “Motion Picture Soundtrack” by the Vitamin String Quartet (“The Adversary”, Season 1, Episode 6, 17:59). Both songs reference alienation, attempts to escape the repetition of experience and the inherent dangers of doing so. These themes are evident in a number of the covers performed by the player piano, the lyrics of “Black Hole Sun” describing “a waking sleep”, while the lyrics of The Cure’s “A Forest” which plays in Episode Four (“Dissonance Theory”, Season 1, Episode 4, 5:52), describes a character chasing phantoms (1980).

In the following episode, Maeve awakes for the first time to no musical accompaniment, indicating a break in the repetition of the narrative cycle. In the next shot, the player piano creaks into life, the tempo of the “Sweetwater” cue slow to reach its usual tempo (“Tromp L’Oeil”, Season 1, Episode 7, 13:5) as Maeve makes her way through the town. This slowing or distorting of familiar cues is a device used within the series to signal an imminent disruption of the park’s narrative. As she enters the saloon, the player piano is foregrounded both visually and in the soundtrack – Maeve slams the piano’s lid shut, both ending the cue

and indicating her desire to break from her Delos programming. In the next shot, however, the piano lid is open, a subtlety of production design that suggests a slip in the timeline as Maeve sits at the bar and speaks to her colleague Clementine (Angela Sarafyan) in an effort to determine whether other Hosts can have their consciousness awakened. Shortly afterward all of the hosts in the saloon freeze as a Delos team remove Clementine from the saloon. In Episode Eight, The Animals' "House of the Rising Sun" plays in the Mariposa ("Trace Decay", Season 1, Episode 8, 5:38) and again can be read extra-textually, its unheard lyrics reflecting an earlier conversation between Clementine and Maeve where Clementine describes a plan to escape her in the saloon by developing her work as a seamstress. As Maeve becomes aware of the scripted nature of her conversation with a newly substituted Clementine, now played by Lili Simmons, the musical cue slows in tempo matching a slow-motion point of view shot of Maeve surveying the saloon as she again realises the artifice of her experience.

Later, in the same episode, Maeve's return to Sweetwater is accompanied by another cover version, the player piano playing a piano reduction of Amy Winehouse's "Back to Black" ("Trace Decay", Season 1, Episode 8, 28:41). This is shown to occur in the diegesis by the now familiar grammar of the click of the mechanism, a close up reveal of the perforated piano roll and its keyboard. In a break from the previously established visual conventions, however, the camera tracks right to left across the roll. This reversal in the direction of the camera movement is significant and indicates a further layering of clues as to the narrative and timelines ceded within the mise-en-scene. The cue plays as Maeve awakes; she rises from her bed, walks through the town to the Mariposa Saloon and speaks with the substituted Clementine at the bar. The cue pauses for a moment, replaced with a non-diegetic synthesised musical sting, an indication of a break from the scripted narratives of the season and reflecting her knowledge of the Delos facility where synthesised cues are more commonly heard, as Maeve challenges the saloon's barman (Bradley Fisher). He glitches for a second, indicated through his facial twitching, and the diegetic player piano cue restarts as he processes and accepts the new narrative. Maeve surveys the bar and, on seeing a small girl and her mother at the window, the piano cue ends again as she is drawn into a flashback to a previous timeline with her own daughter. The "Back to Black" cue returns as the flashback recedes and Maeve returns to the present moment, and issues revised instructions to the substituted Clementine. The piano reduction then ends, demonstrating Maeve's ability to alter the scripted narratives of the hosts through her own spoken commands, effectively allowing her to reprogram hosts within the park. Again, the Winehouse cover is operating in this

episode at an extra-textual level, the unheard lyrics of the song entirely relevant to Maeve's awakening. The song reflects that the hosts have "died a hundred times" over the course of their narrative but are removed from their experiences – literally in the case of Clementine – and destined to continue to return to the park.

As Sean T. Collins observes, HBO shows are adept at deploying pre-existing music to do some of what he describes as the narrative heavy lifting, referencing the use of pop music in *The Sopranos* (1999-2007) and the cover versions of Tom Waits' "Way Down In The Hole" in the main title music of *The Wire* (2002-2008). A more sophisticated use of cover versions embedded within the narrative can be seen in HBO's *Generation Kill* (2004), where US Marines sing bubblegum pop and hip-hop acapella to one another as they tour Iraq in their Humvee, these cues indicating their alien presence in the country and their homesickness. In *Westworld*, Kaller and Djawadi's involvement early in the production allowed them to consider the use of music across the season during a period that the show's creators Jonathan Nolan and Lisa Joy and their writers were still developing scripts for later episodes (Hutchinson, 2016). This workflow allows for a much richer embedding of music within the series as a whole, with Djawadi providing a robust underscore supported by piano reductions that operate as part of a complex hypertext of music.

Reverie

In a number of instances, the use of the piano provides a more explicit narrative purpose within the fabric of the story itself than the implicit use of the piano reductions. This function of music as exposition is most unambiguous in the use of Debussy's "Rêverie L. 68" (1890). The cue is first heard in Episode Three ("The Stray", Season 1, Episode 3, 35:05) played by a Host who is sat at a piano in the corner of the office occupied by Ford. This piano is a mechanical one, rather than the automated player piano of the Mariposa, yet the music is again pre-programmed, in this instance played physically by an early iteration of a Host rather than mechanically from a perforated piano roll. When Ford taps the player on the shoulder, the Host freezes in position and the music stops, suggesting that Ford is in control of the park's Hosts as its pianos. Later, in Episode Five, Ford is shown to be able to play the piano for the first time, offering a rendition of Debussy's "Clair de Lune" ("Contrapasso", Season 1, Episode 5, 48:26) in a bar at which Teddy and the Man in Black have met. Ford's playing of the piano brings to life his presence in the title sequence as the orchestrator of the park. The scene signifies his omniscience, his understanding of how Hosts and Guests traverse the park and how, to a large extent, both Hosts and Guests are obsequious to Ford's scripted

narratives. As with the other piano cues, this choice of music again carries a relevant extra-textual connotation. “Clair de Lune” (1905) takes its title from the poem by Paul Verlaine that refers to a tradition of Italian masked theatre, reflecting the performative nature of *Westworld*, and the disguises taken on by the guests in Verlaine’s poem; “Peopled with maskers delicate and dim, that play on lutes and dance and have an air, of being sad in their fantastic trim” (Brugnoli, 2014: 269; Richardson, 1974).

Debussy’s “Rêverie L. 68” appears on the soundtrack a number of times through Season One, often in instances related to Host’s memories of their past. In Episode Seven, the cue is played non-diegetically in an opening dream sequence in which Bernard recalls his son suffering in a hospital (“Tromp L’Oeil”, Season 1, Episode 7, 1:42). In Episode Eight, the melodies of the cue are echoed within Djawadi’s non-diegetic score in an adaptation of a cue called ‘What Does This Mean’ as Ford calms Bernard (“Trace Decay”, Season 1, Episode 8, 1:42). It appears again diegetically when Dolores experiences a flashback to an earlier timeline where early iterations of the Hosts are being taught to sequence dance to the cue as part of the initial testing of the park (“Trace Decay”, Season 1, Episode 8, 38:31). Towards the end of the same episode, the significance of the cue’s repetition is made clear. Delos technicians indicate that Maeve, suffering from hysteria and overwhelmed by the memory of her daughter’s murder, will not respond to voice commands. Ford triggers Debussy’s “Rêverie” cue within the diegesis using a handheld device and her recognition of the music immediately calms her, as Ford makes reference to the music forming a failsafe that has been hardwired into each Host’s programming (Kornhaber, 2016; Vineyard, 2016.3).

The track appears again in Episode Nine as Teddy recalls two different memories of his part in a mass killing in a town called Escalante. In his first recollection of the event he is assisting a character in the murder of ex-Confederate soldiers, in the second it is Teddy killing the people of the town. At the end of the massacre, Arnold’s hand is seen to turn a crank triggering the “Rêverie” cue on a gramophone in the diegesis (“The Well-Tempered Clavier”, Season 1, Episode 9, 29:11). The cue is heard again a number of times in the closing episode of the series. In a scene where Dolores kills Arnold, Teddy witnesses Arnold play the cue on a wax cylinder gramophone (“The Bicameral Mind”, Season 1, Episode 10, 1:08:48). Arnold explains to Dolores that the song was his son’s favourite song, one played when “he wanted sleep”, providing the connection between the cue’s usage as the failsafe in the Host’s code and that it was Arnold who had chosen it. The cue is heard for the final time towards the end of the sequence in the season-closing Episode Ten (“The Bicameral Mind”, Season 1, Episode 10, 1:26:31). As Teddy watches Dolores approach Ford to shoot him and her followers turn

on the guests, Teddy recalls his memories of the massacre at Escalante for a final time – in this iteration revealing Dolores to be responsible. The use of the cue suggests throughout the series that the Host's sentience is not entirely under their control – their apparent murder of the park's creators more accurately described as an assisted suicide.

The shifting characteristics of the Hosts presented some challenges in the use of themes within the music used within the soundtrack. Kaller explains that this was most challenging in the case of the duality of Arnold/Bernard, which is not made explicit in the narrative until much later in the series, and the changes being experienced by Dolores:

We needed something to signify every little element, whether that was a tone coming in or out sometimes for an eye movement or when somebody puts something together. In the second episode when Dolores digs up a gun, she gets up and there's a slow roaring tone. Dolores changed over the course of the series. Jonah wanted a new theme for Dolores because she was no longer who she was. (2018)

Importantly, these cues are established early in the series. A tone is repeatedly used in the sound design when Dolores is caused to question her reality and can be heard as early as Episode Two, while the duality of the Man in Black is also subtly signposted through sound before his past identity as a younger man in the park is made explicit.

Conclusion

Jonathan Nolan acknowledges a debt to Kurt Vonnegut's debut novel *Player Piano*, published in 1952, exactly a century before the 2052 setting of *Westworld's* primary timeline postulated by Reddit users (Willett, 2016; Nolan, 2018; Renfro & Cheng, 2018). Both Vonnegut's book and Nolan and series co-creator Lisa Joy's *Westworld* feature dystopic worlds where mechanisation and automation have disrupted individual identity, social structures of class and politics. The characters of both novel and television series are similar too, in that it is engineers – embodied by Ford and Arnold - rather than capitalists – embodied by James Delos (Peter Mullan) – who are the oligarchs of their relative worlds. In another similarity, the central story of rebellion is told from two different positions: the first from the perspective of the Hosts, the discontented population ensconced within the scripted system of *Westworld*; the second of the Guests and engineers who are outside looking in, and both group's choices to pursue either happiness, revenge or freedom. Both stories offer revolutionary narratives orientated around the perception of progress which is not accompanied by social change. The

piano in Vonnegut's novel, as in *Westworld*, serves as a metaphor; in early scene in the novel men forced out of work by the advent of the machine age and widespread automation sadly watch a player piano recount a track while they drowning their sorrows in a dusty bar.

Throughout *Westworld* the use of music and the deployment of the player piano reductions serves as a metaphor for the shadow of human control over the park's android Hosts, and the desire of the park's creators for these android inhabitants to break free of their programming in order to reach self-actualisation and sentience. Reflecting the narrative complexity of the show the soundtrack operates in five different modes: (1) the electronic score, (2) the orchestrated score, the use of (3) popular music cues and (4) cover versions, and, finally, (5) the piano reductions. Ramin Djawadi's electronic accompaniment to the activity and influence of the Delos corporation and his more traditional orchestration which accompanies the Hosts' journey to sentience is not dissimilar to his work across film and television, driven by themes that reflect individual characters or the geography of the fictional world, exemplified by his work on *Game of Thrones* (2011-). The use of popular music and cover versions has also been a convention of quality television drama for over a decade, Sean T. Collins citing *The Sopranos* (1999-2007), *Mad Men* (2007-2015) and *Lost* (2004-2010), from *Westworld's* executive producer J.J. Abrams, as examples (2016).

It is the addition of this fifth mode in Djawadi's piano reductions, however, and their deployment in the soundtrack by Kaller, that indicate something more sophisticated. Acknowledged by the Hosts as part of their story world and by the Guests as a nostalgic accompaniment to their adventures within the park, significantly *Westworld's* player piano cues also offer expositional rewards to the attentive audience member who follows the extra-textual clues they provide. Nolan explains that, in Season Two, the piano takes on another form within *Westworld*:

We are looking at a world that has been broken open, a world of rebellion and expansion, and we expanded our musical world to reflect that. The player piano we now see broken and discordant as the world around it collapses. This season we actually see a number of our characters playing pianos: Dolores, Clementine, Ford. Once again, the anachronism of a contemporary song in an old world theme park environment serves as a clue to the audience. Throughout the episode, we are exploring the conversation between Eastern and Western filmmaking, the conversation between Samurai films and Westerns, and this twist on a twist of the song is a perfect way to encapsulate that feeling. (2018)

Westworld presents an unusual unification of sound and image. The show makes extensive use of music to challenge the primacy of scripted dialogue or mise-en-scene and to communicate narrative information and deploys music in new and unusual ways in order to offer further insight into the motivations driving the characters and the larger narrative arcs of the series. The abundant Reddit threads that speculate on their meaning or purpose of these cues within the larger puzzle narrative are a testament to their impact, adding a fascinating extra-textual dimension beyond the primary televisual text.

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- *Exit Music (For a Film)*

- *Fake Plastic Trees*
- *House of the Rising Sun*
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- *No Surprises*
- *Rêverie*
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