



Prosthetic Versus Embodied Memory in *Westworld*'s "Kiksuya" and Janelle Monáe's *Dirty Computer*

Colleen Johnson

Abstract

The creation of human-passing Artificial Intelligence (AI) in both science fiction and the real world must interrogate the importance of materiality and embodiment in the development of personal identity and consciousness. While it may seem that both Uta Briesewitz's episode of *Westworld*, entitled "Kiksuya," and Janelle Monáe's *Dirty Computer* [Emotion Picture] work on a theory of memory as disembodied digitizable information, the films actually put forth a more nuanced theory of memory and identity that aligns with recent work in neurobiology which—as described by José van Dijck—claims that memory is constituted by sensory feeling and emotion rather than being just a function of data processing. This theory of memory is portrayed in both works by the traces of deleted memory still accessible to the lead characters and their ability to distinguish between embodied memories of lived experience and implanted prosthetic memories.

Keywords: *Artificial Intelligence, posthumanism, memory, identity, embodiment, materiality, cinema studies.*

Science and science fiction interested in creating and imagining human-passing Artificial Intelligence (AI) must often interrogate questions about what it is to be human, have consciousness, and personal identity. One avenue that may be explored to explain personal identity formation is the impact of nature versus nurture, or how one's lived experiences or the memory information one retains about those experiences, form one's sense of self. If one considers that a person's identity is based on all their past experiences, one might then put forth the theory that an AI meant to pass as human consciousness could form a human like personal identity through the uploading of a set of memories that would give the AI artificial lived experiences. It then

develops its sense of self and behavior patterns. Similarly, one might theorize that if a real human's memories could be uploaded to a computer as a full set of memory data, their consciousness could be replicated in the digital format allowing that consciousness to live on forever. In both Uta Briesewitz's episode of the television show *Westworld*, entitled "Kiksuya," and Janelle Monáe's *Dirty Computer* [Emotion Picture] which was based on her music album of the same name, the role of memory in (non)human consciousness, identity, and behavior is interrogated in order to question the theory of memory as a purely informational system that could be digitized without meaningful loss. Both films ultimately argue that memory is grounded in materiality and embodiment rather than constituted of data/disembodied information that can be uploaded, stored, or transferred digitally. Memory is therefore crucial for the construction of personal identity and, subsequently, behavior.

Both "Kiksuya" and *Dirty Computer* grapple with the questions of memory and consciousness in the digital age and what it means to be human and maintain personal identity. In both works, the institutions in power assume that memory informs identity and therefore determines future behavior. However, they fail to anticipate the role of embodiment in the relationships between a (non)human's memories, identity, and behavior. In both cases, prosthetic memories are implanted in the characters while previously embodied memories are erased in order to implant a new identity into the objectified (non)human so that their behavior can be modified. However, in both works, traces of the "true" or "original" identity remain due to the embodied nature of lived memories and experiences. The failure to convince these (non)humans of the validity of their new identities and their failure to maintain the desired new behavioral patterns enforces a theory of memory as embodied and material. This theory establishes a connection between memory's role in forming identity and its embodied nature. It is then significant that the lead characters in both films are characters of color, as their position as racialized subjects prevents them from escaping the impact of their embodied experience even after their memories are erased and/or replaced. In *Dirty Computer*, the racialized body is already in conflict with social norms and hegemonic value systems of the world of the film, and is therefore marked as deviant for merely existing, even if it is performing good behavior. Similarly, the type of behavior that appears in Akecheta's programming in "Kiksuya" is written as specific racial stereotypes and informs the kinds of embodied experiences he can and will have. The embodied experiences and struggles of Akecheta and Kohana in "Kiksuya" and of Jane and Zen in *Dirty Computer* leave traces of

memory in such a manner that embodied interactions with others' material bodies disrupt their prosthetic memories and identities as traces of their embodied memories resurface. It, therefore, highlights the limits of the authorities' assumption that memory is only information that is upload-able, delete-able, and replaceable.

In the television show *Westworld*, artificial humanoid robots called hosts are created out of flesh-like materials with a computer based Artificial Intelligence program that is modified to individualize each host based on a set of inputs which include a backstory of artificial memories and varying scales of personality traits. These hosts live within a theme park called Westworld which allows human visitors to go on adventures in the Wild West and have encounters with extremely realistic human replicas that they could never have with real human beings. The moral questions at the heart of the show are: When does it become unethical to treat a non-human being that has consciousness like an object? Does it count as rape if a human man forces himself upon a female host? Does it really hurt her if her memory is erased and reset periodically such that she cannot remember being violated? Is it really murder if a human shoots or stabs a host if that host is not human and can be repaired, have its memory erased and reset, and re-enter the park with no knowledge or recollection of the pain of the injury? While these questions recurrent in the entire series, the episode "Kiksuya," which is the eighth episode of the second season, instead argues that lived experiences never actually disappear, even if the specific information of the memory disappears from one's consciousness. Rather, the physical experiences of the body remain evident within the body as feeling, emotion, affect, or even sensory instinct. In "Kiksuya," a host from Westworld's Ghost Nation (which was created to resemble the indigenous American Lakota Indians), named Akecheta, narrates the story of his many remembered lives to Maeve's (one of the series regulars) daughter. His goal in reciting his memories to the young girl is to show her who he is and help her recognize his identity as a friend with whom she is safe, rather than a threat. He recounts how his first life, which he shared with his lover, Kohana, was taken from him when he was taken out of his village and reprogrammed. He explains that he believes the world they are in is wrong and that there is another world outside of it somewhere. Through Akecheta's narrative, we find that he lost his memories of Kohana, but that upon meeting her again, the memories resurfaced. Similarly, through her new interactions with Akecheta, Kohana also regains her memories of their previous life together. The episode implies that Akecheta is taken to be reprogrammed for two reasons: 1) he has discovered the maze symbol and begins to

investigate its meaning which leads him to find the “door” and he comes to believe that there is another world outside of the one he knows and 2) the characters and storylines of the theme park as a whole are being overhauled in preparation for its grand opening after a successful beta testing phase, and Ford, the creator, wants to change Akecheta’s story and identity for the new intended audience (i.e. the human park tourists). Akecheta’s previous identity as a peaceful villager and his knowledge of the “door” that could lead to escape attempts are deemed unacceptable for the grand opening of the park. Consequently, his memories are erased and he is given a new backstory and new personality traits which include increased aggression, so that he behaves in a stereotypically “savage” way to fulfill the expectations of the wealthy park attendees who wish to fight Indians.

Janelle Monáe’s emotion picture, *Dirty Computer*, approaches memory’s role in identity formation and behavior from the opposite perspective in that the objectified beings whose memories are erased and modified are actually humans, as their minds can be interfaced with, as though they are computers using futuristic technologies. The authorities refer to humans as “computers,” and the computers that are classified as “dirty” are captured and taken to the cleaning facility (*Dirty Computer* 00:00:00–00:00:25). The lead character, Jane, is arrested for what is deemed deviant behavior, and is subjected to a memory wipe or “cleaning” in which all of her memories are viewed like files on a computer and deleted before she is given a new name and identity, MaryApple54. The goal of the cleaning is to force those existing outside the society’s norms to assimilate and become part of the authoritarian system. Thus, the introductory voice-over states, “You were dirty if you looked different. You were dirty if you refused to live the way they dictated. You were dirty if you showed any form of opposition at all” (*Dirty Computer* 00:00:11–00:00:23). The first “crime” listed being “look[ing] different” already implicates the authorities as a white supremacist institution which uses technology to enforce racialized persecution. Like Akecheta in the *Westworld* episode, Jane and her lover, Zen—who now believes herself to be the torch MaryApple53—can feel the falseness or hollowness of the implanted memories while recognizing the truth or reality of the embodied memories they regain access to. The experiences and resistance of both characters, Akecheta and Jane, challenge their respective authorities’ assumptions about how memory works as data and information and how prosthetic memories can alter a being’s identity and behavior.

In her article “Prosthetic Memory: Total Recall and Blade Runner,” Alison Landsberg defines “prosthetic memories” as “...memories which do not come from a person’s lived experiences in any strict sense” (175). Landsberg explains, “these are implanted memories, and the unsettled boundaries between real and simulated ones are frequently accompanied by another disruption: of the human body, its flesh, its subjective autonomy, its difference from both the animal and the technology” (175). In the case of *Westworld*, this paper argues that the hosts’ bodies, made from flesh-like material and able to feel the same levels and types of pain and pleasure that humans can, function to disrupt the hosts’ relationships with their prosthetic memories because they possess the level of embodiment necessary to disrupt the simulation. The problem that embodiment poses to a project of altering identity and behavior, by erasing or implanting prosthetic memories, is that once the relationship between body and memory is taken into account, it is much more difficult to locate where memory is “stored” and therefore difficult to devise a way to remove it. In both *Dirty Computer* and *Westworld* the authorities approach the project of controlling bodies through memory with only a basic understanding of memory and look only toward the “mind” in order to alter it. Akecheta’s memories are thought to be stored only in his programming which the theme park’s scientists and technicians can access through their computers and tablets, and can therefore change and reprogram as they see fit. The “science” behind the modification and erasure of memories in *Dirty Computer* is more complex since the objects being modified are humans. However, the facility’s understanding of memory, human mind, and consciousness reduces them to a matrix of data and information stored in the brain, which can be accessed through electric probes and displayed on a computer screen as though the information is but digital files. Once converted to the screen, Cleaners can select memories that are “saved” with a time stamp and file name, just as a digital file is saved, and play the memory like a video or delete it. This theory of memory completely ignores traces of lived experience left elsewhere within the body or the ways in which memory consists of more than just upload-able information, being reliant on embodied experiences.

In her article “Memory Matters in the Digital Age,” José van Dijck brings together multiple theories of memory from neurobiology, cognitive philosophy, and cultural theory, in order to interrogate how memory is embodied and “what ‘substance’ memories are made of” (350). Van Dijck claims that “memory is obviously embodied” and looks to determine how that embodiment functions and interacts with the materiality of what he calls “memory objects” (350). She states,

“on the one hand, personal memory is situated inside the brain...[but] on the other hand, personal memories seem to be located in many (mediated) objects that...serve as reminders of lived experiences: photos, diaries and so forth” (350). It is, therefore, the body’s relationship with these objects and the potential for other bodies to function as memory objects that must be examined in order to understand memory and embodiment.¹

Van Dijck traces the evolution of memory theory’s understanding of memory as embodied and introduces the “connectionist concepts” of memory that first recognizes the possible role of the body (351). The assumed “one-to-one correspondence between physical stimulus and mental image” was refuted in 1896 by Henri Bergson who instead viewed memory as “...not exclusively a cognitive process, but also an action-oriented response of living subject to stimuli in his or her external environment” and therefore disavowed the “idea of ‘pure memory’” that is only mental image without materiality (352). According to Van Dijck, current research in memory recognizes that “...cognitive tasks such as factual recall, or affective tasks such as emotions or feelings” are carried out by the entire “bodily apparatus” that consists of “genes, neurons, and living cells” and that “memory involves both (the perception of) a certain body state and a certain mind state” (353). Van Dijck’s preferred metaphor to describe memory is thus not that of information storage, whether digital files or analogue archives, but rather that of a “symphony orchestra” which is made up of multiple instrumental sections in order to “perform” a memory (354). This metaphor is preferred as it recognizes that the recollection or “performance” of a memory will change over time and be interpreted differently each time it is recalled. Van Dijck also argues for the role of emotion in the embodiment of memory, using the example of Joel in the film *Eternal Sunshine of the Spotless Mind* to show that “...memories consist partly of information that can be erased, yet their emotional core persists” (Van Dijck 355). Van Dijck claims, “the contents of memory are configurations of body states represented in somatosensory maps”

¹For the purposes of this paper, the term “memory object” refers to an object or body that has interacted with the subject, and therefore left traces upon the subject’s body through which embodied memory is stored. The term “embodied memory” then refers to the memory itself that belongs to the subject and was gained through the subject’s physical and embodied interactions with its surroundings. Therefore, the subject might re-access forgotten embodied memories if it once again interacts with the memory object, since the impression of that object is what created the embodied memory in the first place. Similarly, memory objects might also be external recordings or performances of the embodied memory that, while interacting with the subject in a new instance, trigger affective recall of a previously embodied memory.

(357). Therefore, memories are felt throughout the entire body, and memory objects might evoke those feelings within the body even if the specific information regarding the circumstances that originated those feelings are no longer present. In other words, when the informational details of the memory can no longer be accessed, the feeling is all that is left of the embodied memory, but that trace of sensory experience is enough to inform identity and behavior and can still be consciously accessed through interaction with a memory object.

However, a disembodied view of memory has been used throughout much of history with metaphors for the mind being “the library” or “the archive” that retains information in “...an enclosed space from which it can be retrieved on command” (van Dijck 351). Posthumanist theorists have also theorized memory and the mind as a disembodied matrix of data and information. In the introduction to her book *The Neuro-Image: A Deleuzian Film-Philosophy of Digital Screen Culture*, Patricia Pisters discusses how the abundance of screens, whether phone screens, computer screens, digital billboards on screens, etc., impacts our understanding of information, our interactions with other people and information, and memory. Pisters claims that contemporary culture operates on what Lev Manovich calls “database logic” in which “the world appears to us as an endless and unstructured collection of images, texts, and other data records” (Manovich quoted in Pisters 10). The view of the world as merely information able to be organized through databases in digital form and viewed on a screen, according to Pisters, has caused “...the traditional (and scholarly) notion of media objects as ‘texts’” to be replaced by “the notion of media operating as ‘dynamic software performances’”. As a result, “memory and history are...seen as dynamic, as well and are continually transforming in an open archive” (Pisters 11). While van Dijck may agree that memory does change and evolve each time it is performed, this paper argues that this is not the same kind of dynamic change that Pisters discusses. For Pisters, memory is not, as Van Dijck argues, reperformed by the individual to contextualize their present experience through their past experiences. Rather, memory—understood through database logic—is seen as a set of data that once changed and reprogrammed in the digital form, does not retain its previous form and is interacted with in the same way as any other digital file. Pisters herself does not believe that memory is never embodied, but she claims the abundance of digital information which is displayed and accessed through screens makes people interact with memory as disembodied digitizable information. This is perhaps why the authorities in both *Westworld* and *Dirty Computer* are able to adopt such a theory of memory and believe they can succeed in altering and

erasing it. They have thoroughly objectified their prisoners and view them only through screens. In *Westworld*, while there are scientists who work to repair the flesh of the hosts, the technicians and writers in charge of programming the hosts and providing their memories only interact with each host's digital file. The files give them information on the host's vitals and physical status as well as information on every thought, action, or speech they have performed. Technicians then might assume they have a full view and understanding of the host since they have access to all the possible data and information that exists about the particular host. However, they lack bodily interaction with the materiality of the host. Similarly, the Cleaners in *Dirty Computer* sit in a room adjacent to their patient where they can theoretically view her through a glass window, however they are seated behind a set of screens which display all her vitals, digital images of brain activity, and her memories displayed in an organized database like form mimicking digital files. They seem not to actually see the material object of the patient's body through the window even as she is displayed in front of them because they believe all they need to know is displayed on the screen. Van Dijck explains this phenomenon, claiming that as digitization has allowed "activities of the living brain" to be "increasingly visualized" through "digitized imaging technologies" (365), human interaction with these digital images of the brain has created an illusion that the brain is a "disembodied informational entity" (367). It is this illusion that "memory could be severed from the body" (van Dijck 367), that the authorities running the dirty computer cleaning facility and the technicians and authorities running the Westworld theme park have based their actions and policies around.

However, the protagonists in both *Dirty Computer* and *Westworld* challenge their respective institutions' assumptions about a disembodied mind by accessing their embodied memories. For both Zen in *Dirty Computer* and Akecheta and Kohana in *Westworld*, the "memory objects" that ultimately cause erased memories to be recalled are objects they had embodied, had material interactions with, and objects that provided strong emotional, affective, and sensory experiences that were felt not only in their conscious mind, but throughout their entire bodies. In both films, these memory objects are not mere objects, but the beings and bodies that the protagonists had loved. In *Dirty Computer*, Zen finally rediscovers her identity through interaction with Jane and the embodied impact Jane has on her as a memory object tied to a deeply emotional experience. In the timeline of the film, Zen appears after Jane's first cleaning treatment. She wakes Jane and introduces herself as the torch MaryApple53 who is

there to help Jane through her cleaning process. Since Jane resists the process and all her memories have not been deleted in the first round of the “Nevermind,” she recognizes MaryApple53 as her lover, Zen, and tries to explain that they know each other. But Zen has been successfully cleaned and only knows herself to be MaryApple53, a torch who is only aware of her life and her job within the facility checking vitals and guiding dirty computers through the process of assimilation. Later, however, after Jane has endured multiple rounds of cleaning, MaryApple53 notices the tattoo on Jane’s wrist. The tattoo is shown multiple times throughout the film leading up to this scene, so the viewer recognizes it as an important symbol and object. MaryApple53 is perplexed by the tattoo and examines it. Mid-examination, she seems to be disturbed and experiences an affective response to her interaction with the tattoo. She sits down next to Jane, but rather than voicing her own feelings, she expresses perhaps a newly found affection for Jane and attempts to comfort her. However, her memory is not yet fully returned even if the emotions have been evoked. She parrots to Jane the mantra that seems to have been drilled into all the workers at the facility, stating “people used to work so hard to be free. But we’re lucky here. All we have to do is forget” (*Dirty Computer* 00:33:39–00:33:49). This line suggests that true freedom comes from assimilation and that erasure of memory can erase identity to the extent needed to fully assimilate into hegemonic culture and, therefore, live a life free from oppression.

Much in the way that American society promises to reward racial and cultural assimilation with success and social mobility, the fictional society of *Dirty Computer* rewards MaryApple53’s assimilation into the authoritarian system. While she cannot literally become white, MaryApple53 performs an appropriate level of whiteness by submissively accepting the system, giving up every aspect of her individuality (including her own name), dressing in the institutionally mandated garb, and continuing the cycle of oppression by participating in the cleaning of more so-called dirty computers. Jane, however, values her life, her experience, and her identity too much, and recognizes that she would rather continue fighting the system and challenging social hegemony than lose her lived experiences. She responds, “but I don’t want to forget you” (*Dirty Computer* 00:33:50–00:33:55). The scene culminates with a palpable emotionality as the two women stare at each other and MaryApple53 clearly fights her instincts and emotions that are evoked by her interactions with Jane’s material body. She is shaken by Jane’s claims of their past relationship, and feels enough truth in them that she later asks her supervisor, Mother Victoria, about the possibility that it all

might be true. Thus, MaryApple53 can feel the presence of the embodied memory even if she cannot yet access its informational details.

The significance of Jane's tattoo to Zen's embodied relationship with Jane is further explained when one of Jane's memories is played out to the song "Don't Judge Me" (*Dirty Computer* 00:39:10–00:40:25). Throughout the timeline of her memories, Jane had been romancing two people, Zen and Ché, and the three end up in a polyamorous relationship. In this final memory, the three lovers are spending a relaxing evening on the beach. The toned-down color pallet of the scene emphasizes the emotion by drawing the focus of the viewer to the characters in each shot, rather than allowing the viewer to be distracted by busy surroundings. Close ups on each character's face, on physical touch between characters, and on the symbol that becomes Jane's tattoo also emphasize the emotionality of the scene. Zen is shown to draw the design of the tattoo on paper, show it to Jane, and then draw and embed it on Jane's skin. So, not only is the tattoo an embodied part of Jane's identity, it is also a link between Jane and Zen's lived experience. The process of creating the tattoo is an embodied memory for Zen such that even when she can no longer remember the memory of the tattoo's creation, or even remember her name being Zen, she still has an emotional and bodily response to her interaction with the tattoo and Jane's skin as material objects. The tattoo, as a memory object, stores a performance of the memory while also evoking the embodied memory that remains within Zen's entire somatosensory system, not just her conscious mind. When viewing the memory, Cleaner 2 remarks that he thought they had already deleted the "beach stuff," (*Dirty Computer* 00:40:27–00:40:29) but it seems the deep embodiment of that memory for Jane as well causes it to resurface continually. When Zen finally regains the informational details of her memories, she is again studying the tattoo, and stroking it with her fingers as Jane sleeps. Once Jane regains consciousness, the two exchange an emotionally loaded look and Jane knows through Zen's reaction that she finally remembers. This also suggests that the newly attempted deletion of the beach memory has failed, as Jane is still aware of Zen's true identity and her feelings towards her.

In *Westworld*, Akecheta similarly realizes he is living a different and wrong life when he finally sees his lover Kohana again and recognizes her eyes. He *feels* as though he knows her even though memories of her do not exist in his conscious mind. This occurs because his memories with Kohana were not only a part of his

prosthetic backstory that the Westworld writers fed into his artificial mind. Rather, once he and Kohana were released into the park as hosts, he had formed new embodied memories through his material interactions with Kohana. Somatic traces were left behind each time his flesh interacted with its environment, such that his body remembers the feelings Kohana's eyes evoked in him even if his "mind" does not remember who she is. This embodied recognition causes him to feel as though he "had lived another life before this one" and that "the past was calling [him]" ("Kiksuya" 00:19:40–00:19:51). In order to restore Kohana's memory of him, Akecheta attempts to evoke her embodied memories by making her imitate their farewell ritual from their previous lives. He places her hand on his chest and recites the words as they used to before their identities were changed, saying, "Take my heart when you go" ("Kiksuya" 00:25:30–00:25:45). His plan works as she responds with the other half of the ritual, saying "Take mine in its place" ("Kiksuya" 00:25:50–00:26:00). Even though her previous performance of this ritual with Akecheta was presumably deleted out of her programming and she no longer recognizes him or remembers knowing him, her body knows how to respond. Her "mind" does not have the informational part of the words, but her embodied senses of hearing and vision recognize the familiarity of seeing Akecheta speak those words in connection to her affective loving relationship with him. In the past, she had felt the words in her body in addition to processing them in her mind and, as Van Dijck suggests, the somatosensory engagement with the experience left its traces such that the bodily response to the memory could be reperformed even without the presence of the informational details of the memory. The body's remembrance then triggers the rest of the memories to return, and she is able to remember his name and recognize him as her lover once more. Kohana states, "I feel I've loved you for so many lifetimes. I remember that" ("Kiksuya" 00:27:45–00:28:05), demonstrating that her memory and ability to remember is directly tied to feelings and emotions as an embodied part of her sensory experience.

In a scene that parallels the emotionally climactic scene in *Dirty Computer* then, Akecheta Kohana sits close to a camp fire as they further discuss their situation and future plans. Similar to the scene in *Dirty Computer*, the emotional intimacy of this scene is emphasized through the use of close-up shots of their face, while the scene is filmed in a low light with a dull sandy background such that the viewer's attention is drawn fully to the characters in the scene rather than to their surroundings. The use of close-ups also plays off the assumption that the face is the instrument that expresses most of

the emotion as it appeals to the viewers as they associate face with a character's personhood and emotional investment.

In addition to arguing for memory's embodiment, Van Dijck also connects memory to identity formation. She argues for the ways in which loss of memory objects is "...often equated to the loss of identity, of personal history" (358) and notes that the materiality of the memory object is also important to its role in a person's identity. The physical impressions left on the memory object due to its interactions with its environment (including those with the subject to whom it is significant) are, in fact, what make it a memory object for that subject. Therefore, when a sentimental object is lost, a new copy cannot replace it, even if it is an exact replica. According to Van Dijck, this is because the "physical appearance—including smell, look, taste, and feel—renders mediated memory objects somehow precious" (358). Those physical qualities are unique to the object due to its specific lifetime and interactions with its environment just as a person's embodied state is specific to their interactions with their environment such that the physical state and quality of their body are always reliant on their lived experience (358). Thus, even at the level of the body, a person's identity relies on embodied memories.

In her article "Identity, memory and cosmopolitanism: The otherness of the past and a right to memory?" Anna Reading broadens the link between memory and identity to the scale of cultural memory and claims that memory not only has implications on personal identity, but also on "culture, citizenship and justice" (381). Reading notes that "studies of personal and individual memory stress the ways in which remembering the past over time are crucial to identity" (383) and references Martha Nussbaum's suggestion that "the negation of memory results in a loss of self" (383). *Dirty Computer* and "Kiksuya" both demonstrate the ways in which individual memory is tied to cultural memory, in turn, showcasing Akecheta's and Jane's lived experiences as reliant on their cultural identities, and their ability to remember those lived experiences profoundly impacting their sense of self and identity. Akecheta feels a connection to his original cultural identity within the pastoral village, as his first lived experiences occurred in the same context. Therefore, when his entire culture is reprogrammed as seemingly savage warriors in the park's upgrade, he retains his embodied cultural memory of the material interactions he had in his previous life and feels that his new culture is wrong. Jane's extreme resistance to the Nevermind is similarly tied to her embodied cultural memory. Her experiences as a black queer woman, in a society that already marks her as deviant due to her cultural and racial

ties, fuel her identity as a rebel and her drive to stand up against assimilation. Because she has cultural memory and knowledge, her personal identity is strengthened, and she is able to fight to maintain it. We also see that Zen must lose access to her cultural identity as a queer woman of color in order to assimilate into the passive torch that she becomes.

The connection between memory and identity is also supported by Landsberg's claim that, "we rely on our memories to validate our experiences" (176). However, Landsberg states this in an argument for prosthetic memory's ability to alter identity, further stating that "the experience of memory actually becomes the index of experience: if we have the memory, we must have had the experience it represents" (176). She claims, "memory is constitutive of identity" and provides the example of the beggar character in the 1908 film *The Thieving Hand*, who shifts his identity from that of a beggar to that of a thief after inheriting prosthetic memories of thieving from a prosthetic hand that previously belonged to a thief. Landsberg argues that with prosthetic memory, we might "...[have] the memory without having lived the experience" (176) and claims that this "...problematizes any concept of memory that posits it as essential, stable or organically grounded" and "...makes impossible the wish that a person owns his/her memories" (176). This notion, however, is challenged by Van Dijck, and the two works this paper analyzes show that prosthetic memory is recognized as inauthentic by the protagonists once they become aware of their "true" embodied memories. Even after Akecheta's "aggression" is increased to not only change his identity through erased memory but also through programmed personality traits, it is recognized as prosthetic, and he is able to return to his true identity once he regains his true memories that were based in the lived experience of his time in the pastoral village. Similarly, Zen in *Dirty Computer* returns to her identity as a rebellious queer woman of color as soon as she regains her original embodied memories. She is able to recognize her prosthetic identity—the passive torch MaryApple53 who had been assimilated into the facility/governmental system of cleaning dirty computers—as fake and divest herself of it.

This question of the role of memory and identity brings us back to the key question in AI studies of what makes an AI successful. According to Katherine Hayles in *How We Became Posthuman*, the definition of AI "...privileges consciousness as the essence of human being" (235) and the goal of AI is then to show "intelligence comparable to that of a human," but not necessarily develop further, such that the "machine intelligence ...cannot be distinguished from a

human intelligence” (238–239). The *Westworld* hosts are therefore designed to function as closely to humans as possible, so it follows such theories of memory and identity formation that would determine how they are programmed. It also cause their experiences with embodied and prosthetic memory to mirror the humans in *Dirty Computer* even if their developers did not anticipate it. Hayles performs an analysis similar to Van Dijck regarding the importance of embodiment and the ways in which the theories of AI have ignored it.

One of the initial field defining studies in Artificial Intelligence was that of Alan Turing, who—in his famous 1950 article “Computing Machinery and Intelligence”—posed the question, “can machines think?” In this work, Turing defined what he called “The Imitation Game,” which has since become known as the “Turing Test.” This game consists of an interrogator, a human, and a machine attempting to imitate human intelligence. The level of “thought” that the machine can attain is therefore judged by whether or not the interrogator is able to distinguish (without seeing either of the other participants) the machine from the human based on their participation in a written conversation or interview. According to Hayles, the job of the interrogator in the Turing Test is to “...pose questions that can distinguish verbal performance from embodied reality” (xi), however, by continually emphasizing the goal of the thinking machine, “...researchers performed again and again the erasure of the embodiment at the heart of the Turing Test” (xi). It is this tendency toward the erasure of embodiment that *Westworld* and *Dirty Computer* seek to critique. Hayles provides Hans Moravec’s proposal that “human identity is essentially an informational pattern rather than an embodied enaction” (xii) as an example of such an erasure of embodiment. She elaborates that “the Moravec test was designed to show that machines can become the repository of human consciousness—that machines can, for all practical purposes, become human beings” if given the right pattern of information (xii).

The two works this paper has analyzed combine the theory of identity as based on memory information with the interpretation of memory as an embodied construct. It leads to a new theory of identity as the formation of self that is shown to be based upon one’s embodied memories and lived experiences. This theory of memory and identity as embodied is demonstrated by the traces of the deleted memory still accessible to the characters, Akecheta, Kohana, and Zen. It is also evident in the way characters can distinguish between embodied memories of lived experience and implanted prosthetic memories throughout both works and the ways in which they define their

identities through their embodied memories. Therefore, while it might seem that *Dirty Computer* and *Westworld* put forth an older theory of memory in which memory is “a kind of information-retrieval system” (Van Dijck 355), the works actually put forth a more nuanced theory of memory and identity that aligns with recent work in neurobiology which—as described by Van Dijck—claims that memory is constituted by sensory “feeling” and emotion rather than “data processing” (355).

Taking this theory of embodied memory into consideration, it may be concluded that, while it is tempting to use nonhuman simulations in order to enact violent fantasies or assimilate deviant elements, the justification that the erasure of memory data prevents violence from being “real” or impactful is ultimately erroneous. A justification of violence towards conscious machines or humans treated as machines based on a theory of disembodied memory and identity also—as seen in *Westworld* and *Dirty Computer*, respectively—might lead to a slippage between how we view and define humanity versus technology, allowing for humans to become dehumanized, as our own consciousness becomes more and more associated with machine-like functionality.



Works Cited

- Bergson, Henri. *Matter and Memory*. Translated by Nancy Margaret Paul and W. Scott Palmer, Allen and Unwin, 1911.
- Hayles, Katherine. *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics*. University of Chicago Press, 1999.
- “Kiksuya.” *Westworld*. Dir. Uta Briesewitz. HBO. 10 June 2018.
- Landsberg, Alison. “Prosthetic Memory: Total Recall and Blade Runner.” *Body & Society*, vol. 1, no. 3–4, 1995, pp. 175–189.
- Manovich, Lev. *The Language of New Media*. MIT Press, 2002.
- Monáe, Janelle. *Dirty Computer [Emotion Picture]*. Writ. Chuck Lightning, Wondaland, Broadcast Music Inc., 2 Music Rights Societies, 2018. *YouTube*. www.youtube.com/watch?v=jdH2Sy-BINE.
- Moravec, Hans. *Mind Children: The Future of Robot and Human Intelligence*. Harvard UP, 1988.
- Nussbaum, Martha. *Upheavals of Thought*. Cambridge UP, 2001.
- Pisters, Patricia. “Schizoanalysis, Digital Screens, and New Brain Circuits,” Introduction. *The Neuro-Image: A Deleuzian Film-Philosophy of Digital Screen Culture*, Stanford UP, 2012.
- Reading, Anna. “Identity, memory and cosmopolitanism: The otherness of the past and a right to memory?” *European Journal of Cultural Studies*, vol. 14, no. 4, 2011, pp. 379–394.
- Turing, Alan M. “Computing Machinery and Intelligence.” *Mind*, vol. 59, no. 236, 1950, pp. 433–460.
- Van Dijck, José. “Memory Matters in the Digital Age.” *Configurations*, vol. 12, no. 3, 2004, pp. 349–73.