Hello Generous Readers of the Digital Media and Theater & Performance Studies Workshops,

This is a partial draft of my second dissertation chapter. The segments highlighted are mostly notes to self – bits of the argument I’m having trouble articulating or piecing together. Skip or skim as you see fit.

When you read, I’d love to hear feedback on:

* Who do you think my audience is?
* If I were to cut this chapter down to an article, what parts would you want to see saved? Taken out?
* What do you think my argument is in this chapter? What conclusions might you draw?
* Who is missing from the conversations I stage?
* Which areas are the most fun to read? Which ones were the most challenging?

Below you’ll find writing on the project on the whole, as well as a brief sketch of the other chapters for those who find such context helpful.

Thank you for your time and generosity! I look forward to our discussion on Monday.

* Arianna

My dissertation project, “The Body in Play: Performance in and Through Video Games,” explores the role of the performing body in video game play. I see video games as culturally dominant playforms, ideological and somatic projects that make strong propositions about what it means to have and be a body in the 21st century. My research focuses on the underlying “software ontologies” of video games; the ways that the software systems (also called “game engines”) used to develop games conceptualize the relationships among their constitutive elements. My overarching claim is that the software ontologies of commercial 3D game engines are historically and culturally specific, and that they offer a set of propositions about embodiment, like the fundamental interchangeability and cosmetic nature of the visible surface of the body, the paradoxical impermeability of a body’s boundaries, and the body’s vulnerability to physical forces. Throughout my writing I focus on the many ways video games augment experiences of embodiment: representationally, through narrative and aesthetics; processually, through processes that make a given body computationally intelligible; and performatically, through the incitement to a repertoire of bodily performances and the enactment of individual player strategies.

Each chapter of my dissertation considers a constitutive algorithmic feature or process of 3D video game engines and analyzes its impact on bodily performance. The bodies in question are both human and nonhuman, and I use “performance” in both its theatrical and computational senses to refer to the practiced, yet contingent experiences of the human body engaged in an act of play as well as the programmed and optimized performance of the hardware and software systems that render the scene of video game play. The first chapter explores how the software ontologies of 3D game engines formalize what constitutes a body and calcify the modes of interaction a body may have with its environment. Chapter Two focuses in on one of these software ontologies – the skin as the visible surface wrapping of a body – and places it in conversation with contemporary critical race theory. Chapter Three discusses the relationship between video games and queer sexual orientations, offering a close look at collision detection algorithms that seek to prevent the interpenetration of video game bodies. My attention in this chapter is directed towards games, both pornographic and those rated for all audiences, that use interpenetration as a signifier of intimacy, if not intercourse. I also discuss player practices that exploit collision detection algorithms, intentionally “clipping” through game objects to satisfy erotic desires. The fourth and final chapter focuses specifically on the relationship between representations of bodies in video games and their somatic projects, thinking about the inverse relationship between physical performances of mastery and visual displays of mastery in first person shooters and “fumblecore” games. My own experiences of gameplay—which I regard as performance practice as research—interweave these chapters and animate them with my own embodied experiences.

**Chapter 2 – Skin and Surface: Race Beyond Representation**

**Introduction: Digital Skin**

**Figure 1:** On the left, Truck Shepard, the McElroy Brother's creation. Screenshot taken by author. On the right the two prototypical Commander Shepards from Mass Effect 2. Image from https://masseffect.fandom.com/wiki/Commander\_Shepard.



In each episode of *Monster Factory,* brothers Griffin and Travis McElroy use in-game character creation menus to produce 3D avatar “monsters.” With glee, they tinker with character creation menus that permit them (or can be hacked to permit them) to alter the polygonal meshes onto which their avatar’s outer-most wrapping, its “skin,” is projected. These videos are predicated upon the software ontology of video game engines that dictates that game objects are parameterized and interchangeable; their outermost surfaces are modular skins that can stretch and warp on the contours of an equally modular invisible polygonal mesh. In their episode featuring BioWare’s *Mass Effect 2* (2010), they produce “Truck,” a variation of the prototypical Commander Shepard (Figure 1). As the brothers change the numerical values of the customization options they warp the character mesh so much that its skin stretches and appears to have exploded. Truck’s blond crew cut floats away from his skull and his eyes rest menacingly in mid-air. His eyelids, chin, and cheekbones clip through the front of his face to form an asterisk in three dimensions. The humor and conceit of the McElroy’s monsters lies in the playful exploitation of the modularity of the skin and mesh, the surfaces of the body, in video games.

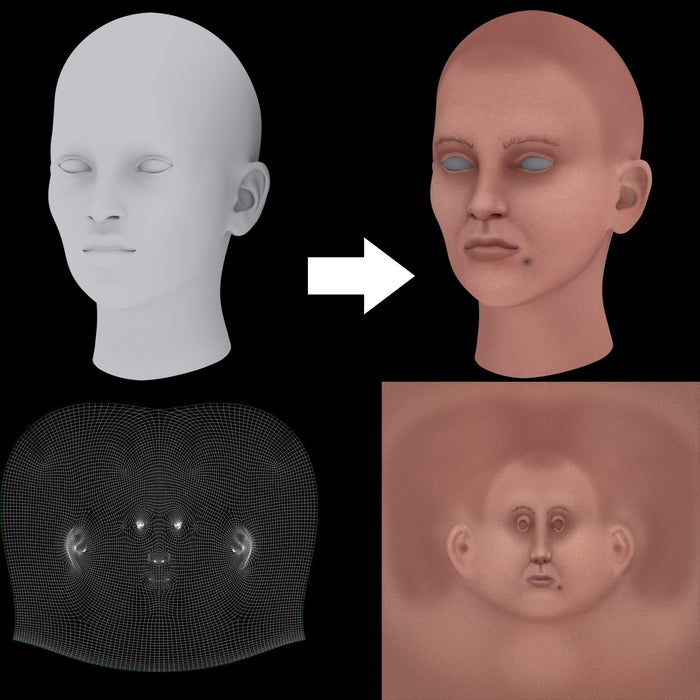
In video games, “skin” describes the outermost visible surface of a digital object. The skin is comprised of 2D images projected onto the outer surface of a 3D mesh in the rendering process. At the most basic level, skin is what is visible to the game player, while the mesh is the abstract mathematical representation of the 3D object comprised of the polygons and a skeleton on which all computational transformations are performed (Figure 2).[[1]](#footnote-2) Meshes only explicitly represent the surface of a game object, meaning that a mesh is a surface literally without depth.[[2]](#footnote-3) The mesh deforms based on the skeletal “rigging” which is composed of joints and sockets onto which physical properties (like weight) are applied. In the context of a 3D video game, the object’s skin is its human-visible surface, and it is entirely modular from the polygonal mesh it covers and the rigging beneath. The skin is technically (or, perhaps more appropriately, technologically) interchangeable because game engines enforce a software ontological separation between the game object’s mesh, skeleton, and the skin projected on top of it (as well as the texture maps and shaders applied on top of that skin).

Figure 2: Clockwise from top left, a 3D model of a face, the same 3D model wrapped in skin, a UV map with skin textures and shading, a UV map of the 3D model. Image by Tanya Weisner - https://www.instructables.com/Hand-Painted-Game-Texture-Character-Skin/

In a non-digital context, “skinning” generally refers to the process of removing the skin, yet in video games “skinning” or “reskinning” refers to a practice not of removal, but of substitution. Character creation in games like *Mass Effect 2* involves the parameterized augmentation of a given skin and mesh and constitutes just one genre of “reskinning.” Reskinning can also refer to player-driven creation and distribution of skins that cosmetically alter game objects. For example, the *Minecraft* online community has a longstanding and prolific tradition of developing and sharing skins for most game objects, allowing players to customize their avatars (to look like versions of themselves, favorite TV characters, or even characters from other video games) as well as the appearance of other game objects to create themed versions of the game. In this case, “reskinning” arises out of networked fan cultures and is a practice that extends the game world to include creative acts other than playing, like designing, distributing, commenting, voting, and more. Reskinning can also be a propriety process in which a developer releases skins within the context of “loot boxes,” like in popular massively multiplayer online (MMO) games like *Overwatch* (Blizzard Entertainment, 2016)*, Fortnight* (Epic Games, 2017)*,* and *Apex Legends* (Respawn Entertainment, 2019)*.* These cosmetic skins are won by players as trophies or awards and alter the appearance, but usually not the behavior, of the avatar.[[3]](#footnote-4) In some games, these skins can also be purchased with real-world currency via in-game microtransactions. Reskinning can also refer to the corporate practice of using existing game source code and redeploying it with different graphics. This development strategy maximizes a studio’s capacity to re-engage players that have tired of or exhausted a game’s levels, or to appeal to a new market segment, while also minimizing the amount of development work required to design or program a new game. Popular match-three mobile games like *Candy Crush Saga* (King, 2012) and its confectionery siblings - *Candy Crush Soda Saga* (King, 2014) and *Candy Crush Jelly Saga* (King, 2015) - exemplify this corporate min-maxing. At its core, reskinning describes the practice of changing the way a game or game object looks, not how it plays. These practices suggest that all skins are modular and substitutable, imposing a logic of equivalence between all skins.

Given the profusion of player and developer practices that focus primarily on skin, I argue that it is imperative for scholars to attend to skins and the technologies that naturalize them in the context of video games if we want to understand how games mediate culture and how culture mediates games. Unfortunately, there has been a longstanding disagreement within game studies about how and where games make meaning, with some scholars eschewing the “representational” aspects of video games in favor of extended readings of the “mechanics” of the game.[[4]](#footnote-5) For example, game scholar Espen Aarseth dismisses skin as a relevant area of investigation for game studies, writing, “the game’s “skin” or representational layer is interchangeable and therefore often inconsequential for the seasoned gamer, just as the scenery along an oft-traveled road becomes all but invisible for the frequent traveler.”[[5]](#footnote-6) For Aarseth, skin’s invisibility is predicated on its ubiquity, modularity, and, ultimately, cosmetic nature. However, Aarseth fails to acknowledge that skins in video games exist at the nexus of human and machine interpretability: skins interface human players and the mathematical 3D representations that make play legible to the human’s hardware and software interlocutors. Hence, skins are a crucial locus of analysis for scholars interested in understanding the interrelatedness of technological objects and contemporary culture. Furthermore, Aarseth’s analysis fails to acknowledge how the concept of skin, the thing to which this software metaphor refers, is culturally important. Soraya Murray addresses this tendency to cordon off games as though they are not deeply embedded within and productive of contemporary culture. She argues, “to play video games is to engage with the myths of a constituency whose access, agency, and ability to wield the technology allows them to communicate their wishes, fears, dreams, - and even identity politics - through a form of interactive entertainment.”[[6]](#footnote-7) Games as technologies are shaped by these cultural myths on a programmatic level and games are important because they perpetuate these myths as somatic projects. Skin, despite its ubiquity and modularity, cannot be dismissed as therefore meaningless in the context of play. As Michelle Ann Stephens argues, skin in the twenty-first century (still) acts as “a master signifier for the specificity, the particularity, of race.”[[7]](#footnote-8) While skins *are* literallyinterchangeable in video games, they are not interchangeable in terms of their larger cultural meanings and impact how we as players experience the game. Consequently, this chapter explores the technologies of skin in video games, as well as the embodied experiences of playing games that dramatize skin, or the visual appearance of player avatars, through gameplay.

We cannot look beyond skin as a racial signifier in 21st century visual technologies because, as scholars of performance and technology have suggested, visual technologies change and inform how we conceive of race. In *Second Skin,* Ann Anlin Cheng argues that "not only do new visual technologies affect how we see racial difference but […] racial difference itself influences how these technologies are conceived, practiced, and perceived."[[8]](#footnote-9) Though Cheng’s study is limited to an exploration of modernist aesthetics through the cinematic and photographic work of Josephine Baker, I argue that this circuit between visual technology and racial difference continues to operate well into 21st century digital racial representations. Michelle Ann Stephens supports Cheng’s claim, writing that “the visual and recording technologies of the early twentieth century facilitated the scopic act of turning a word, an element of discourse, into a thing, a material object." [[9]](#footnote-10) This capacity for technology to turn race into a “material object” is particularly interesting when thinking about the metaphorical use of the word “skin” to describe the outer covering of game objects. In this sense, video game development technologies have literalized a metaphor, turning “skin” into a modular, interchangeable property of game objects. They have also literalized the concentration of difference as located in the skin in games by instituting systems that enforce identification at the level of the skin, or outer appearance, of game objects in things like the character creation menus the McElroy brothers use to create their “monsters.”

I’m curious not only about how and why skin became the place where identity and identification happens in video games, but also how skins in video games participate in larger cultural conversations about the visibility of race and gender. My inquiry into skin is partially inspired by Amanda Phillips’s insightful work in *Gamer Trouble,* where he argues that “gaming diversity calculus” is often enacted as the “surface characteristics on an avatar,” particularly in the case of the female Commander Shepard (colloquially known as“FemShep”) in *Mass Effect 2*. It seems to me that the surfaceness of identity (or the forcing identity to exist in the skin) could only arise in a technology that can only conceptualize of skin as modular. Their in-depth experimentation with and critique of *Fallout 3*’s character creation menus and FaceGen, the technology that undergirds *Fallout 3’s* facial customization options further underlines the surfaceness of identity in video games. Phillips argues that FaceGen’s statistical approach to facial construction as rooted in nineteenth-century phrenological attempts to quantify and typify the (racialized) human body, concluding that race functions as a “style accessory - that is, in the software logic of *Fallout 3*, [it is] the thing that enables the gamer to establish individuality.”[[10]](#footnote-11) In an earlier article in collaboration with Allison Reed, she terms this logic “additive race,” suggesting that FaceGen and motion-capture technologies share this essentializing attitude towards race as “a matter of style.”[[11]](#footnote-12)

While Phillips’ study demonstrates the discursive work happening in creation menus and highlights the possible player practices that evolve around skin, I limit my focus in this chapter to two games - *Detroit: Become Human* (Quantic Dream, 2018) and *Sunset* (Tale of Tales, 2015) - that limit players by presenting them with “must-play” avatars. *Detroit* is a top-selling AAA game designed for consoles and *Sunset* is an independently published “art game” released for PCs that was deemed a commercial failure. Both of these 3D adventure games were developed in the wake of Black Lives Matter protests in the United States and notably featured Black “must-play” characters whose main story function is not their own death.[[12]](#footnote-13) This chapter explores these two games to think about how 3D video game technologies ontologize skin, how they treat skin as the locus of racial difference in video games, and how that racial difference is felt by players as they play.

Central to my inquiry is a focus on the performances staged within the context of these games. Following Stephens and her approach to an expanded genre of performance texts, including photographs, videos, and music, I treat video games and their advertising materials as “intercultural performances” with the capacity to “bring into view the unconscious scenes and relations of fantasy constructed between racialized performers and spectators as interactive embodied agencies."[[13]](#footnote-14) In this case, the racialized performers have a somewhat less clear-cut ontological status, somewhere between computer-generated animation and living, breathing, human. For example, *Detroit,* unlike *Sunset*, features several performances that fall somewhere between the fully computational and those of live human bodies. Quantic Dream’s engine and development pipeline for *Detroit* was designed to showcase the motion-captured performances of its three main characters, Kara, Markus, and Connor (performed and voiced by Valorie Curry, Jesse Williams, and Bryan Dechart). *Detroit* was the first of Quantic Dream’s games to use a motion-capture process that simultaneously records facial, bodily, and vocal performances in one take: usually these three performances are taken separately from the same actor or might be sourced from three entirely different performers stitched together through their fully-digital avatar.[[14]](#footnote-15) Performance in the context of this game encompasses the live performances of these human actors; the edited, programmed and animated performances of these digital avatars; the compromises made in the name of computational performance and the limits of consumer hardware designed for real-time 3D rendering; and finally the contingent and variable performances of the players engaged in acts of play. *Sunset* does not feature any motion-captured performances, but the rest of the categories of performance apply. Likewise “spectatorship” takes on a slightly different meaning in the context of video games: spectatorship is play and only happens through the direct embodied input of the player, without which the scene of performance would grind to a halt. By viewing both of these video games as sites of performance – performances that are computational, embodied, and within very particular social contexts – I explore the ways that the object-ness of race (epitomized in the skin) acts on players as they play.

In this chapter, I pair Phillips’s insightful feminist approach to character appearance in video games with the work of scholars of black performance and philosophy. This intersection of feminist theory, a close attention to the technologies that underpin and facilitate digital racial representations, critical race theory, and performance studies allows me to think across the technological and the cultural, pointing towards the play practices and embodied experience of performing with and along these games. Through a reading of *Kara,* a Quantic Dream tech demo released in 2012, I argue that race appears these games, and perhaps most games, as an epidermal schema, deeply influenced by white supremacy and coloniality which seek to inscribe race on the skin the body and adjudicate humanity on the basis of this racialized surface. [Roadmap will continue here as I figure it out!]

**Epidermalization**

It is my contention that video games are, by and large, stuck in an epidermal racial schema, and that video game play and its constitutive technologies must be situated within the larger context of white supremacist (il)logics. I use the word “epidermalization” to refer to Frantz Fanon’s account of the role of the white colonial gaze in delimiting, describing, and attributing humanity in *Black Skin, White Masks*. Specifically, he proposes that white coloniality conditions an “epidermal racial schema” which attempts to inscribe race on the skin of the body.[[15]](#footnote-16) Crucial to this definition is the notion of race as a written/semantic/narrative construction - written onto the skin by the gazer. Fanon points out that the racialization of skin always surrogates a narrative beyond that of subjective experience. For Fanon, the epidermal racial schema is but one of several possible bodily schemas that both capacitate and delimit the body’s way of being in the world, arguing that bodily schemas are not generalized/generalizable, but are instead subjective, particular, and related to contingent historical distributions of power. Epidermalization, then, is the phenomenological experience of this racialization, of being “overdetermined from the outside.”[[16]](#footnote-17) Though Fanon is writing to address the limitations of mid-20th theories of the mind promulgated by Freudian psychologists, his theory of epidermalization offers an interesting perspective on the software ontologies that dictate the modularity of skin in video games. In this chapter, I’d like to consider how “skins” (the modular surfaces of game objects) stand in tension with the often very particular rhetorical/cultural work that skin (as the outer sensing organ of the body) performs. Why are games invested in technologies that focus predominantly on skin? How do contemporary notions of race shape the development and use of these technologies?

To start to answer these questions, I turn to French game studio Quantic Dream’s tech demo titled *Kara*, which premiered at the Game Developers Conference in March 2012, six years prior to the release of their full-length title *Detroit: Become Human*. Though it may look like any other computer animated film, this demo is a real-time 3D animation and showcases Quantic Dream’s well-optimized game engine as well as the rendering capabilities of the PlayStation 3 hardware.[[17]](#footnote-18) The scene begins with a close-up shot of Kara’s disembodied head as it rotates 180 degrees in the vice grip of a hydraulic factory arm. The shot highlights the translucency of Kara’s skin, juxtaposing the glossy factory arms with the anthropomorphic and “realistic” skin on Kara’s face. In a composition reminiscent of Botticelli’s *Venus*, Kara is pieced together by the disembodied male voice that controls the robotic arms. The voice commands Kara to move her arms, and she complies, marveling at the white skin that seeps through the even whiter, glossy surface of her cyborg body. Accompanied by a sound effect that sounds a like stirring a bowl of Jell-O, Kara strokes her excreted skin. Lowered from the grasp of the mechanical arms she takes her first steps, and the camera pans out from a close-up of her joyful face to a three-quarter shot that captures both tits and ass as she turns for the camera. Fully covered in skin, she becomes cognizant (and ashamed) of her own nudity: as she covers herself with her hands, the male voice declares, “you’re ready for work, honey” (Figure 3).[[18]](#footnote-19)

The emphasis my summary places on Kara’s skin is not incidental; this tech demo is not only narratively designed to highlight Kara’s skin as the bearer of her qualified humanity, it is also designed to show off the improved skin shaders and other features of Quantic Dream’s proprietary game engine and the real-time rendering capacities of the PlayStation 3. A picture containing opened

Description automatically generated

Figure 3 "You're ready for work, honey." Still taken by author. "Quantic Dream's "Kara" PS3 Tech Demo @ HD" Rajman Gaming HD, 3/8/2012, Accessed 5/5/21 https://www.youtube.com/watch?v=PPCw09-DNFg

Before addressing the cultural implications of this demo, I’d like to unpack what Kara’s skin is doing in the context of this tech demo. At the start of the demo there is a visual similarity between the glossy white cyborgian components that later come to form Kara’s body and the non-anthropomorphic, boxy, glossy bodies of the hydraulic factory line that assembles her. As Kara’s humanoid skin seeps sonically and visually onto her body, the tech-savvy viewer understands that Quantic Dream is making a visual argument about the realism of their improved skin shaders: Kara is unlike the the factory line because she has “realistic” skin. As Lead Graphics Programmer Ronan Marchalot explains in his 2018 Game Developers Conference talk, physically based rendering and skin and eye shaders were a major technological priority for Quantic Dream in the DBH development process.[[19]](#footnote-20) Kara’s skin appears realistic because Quantic Dream’s developers attempted to approximate the translucency of human skin through something called screen space skin subsurface scattering, which models how light diffuses through surface materials rather than reflecting off them.[[20]](#footnote-21) This contrast between Kara’s humanity, symbolically represented by her skin, and the non-human robot arms that assemble and dissemble her rehashes a trope of animation tech demos. It is common for beginner animators to build short demos featuring robots with glossy reflective surfaces: the contrast between Kara’s skin and the skin of the factory robots further underscores the technological progress that Kara’s skin, in turn, represents. Overall, the demo highlights the fact that Kara’s skin *isn’t* glossy; the transparency and layered appearance of her “realistic” skin versus the glossy pure white of the more decidedly non-human robots is a key aspect of how Quantic Dream hopes to market their game as on the cutting-edge of graphics technology.

This tech demo also highlights the modularity of skins in video games. The image that wraps Kara’s polygonal model can change between the glossy android to the translucent human because within the software ontology of this (and most) video game engines, skins are modular. The surface of Kara’s model can change from frame to frame because surface is a mutable aspect of every game object. From a technical perspective, this change in Kara’s skin tone is only possible because of the underlying software that ontologizes skin as the interchangeable surface of a given game object.

Kara’s skin is technological in that is it literally a demonstration of computer graphics technologies and their advanced physical simulations. However, within the diegesis of this demo, Kara’s skin is also *narratively* technological. Kara’s skin is an overburdened symbol, simultaneously insinuating her humanity and marking her as nonhuman by virtue of her skin’s technicity.The moment Kara is covered in “realistic” white skin is the moment she becomes addressable as both an object and a subject. When the overseer says, “You’re ready for work, honey,” Kara is simultaneously addressed as a worker and hailed as an object of the male gaze. When Kara describes herself as “alive” and is released from the mechanized process of her assembly, she enters the marketplace as “merchandise.” We might refer to this movement between subject (and object) positions to be similar to what Fanon describes as epidermalization. Fanon offers up the theoretical tool of epidermalization to explain something about being fixed by the colonial gaze that projects the stories of race onto the outer surface of another human body. The stakes are different when I describe what’s happening in this demo as epidermalization, but what this theory allows us to see is the conspicuous whitewashing at play in this narrative.

Media and surveillance scholar Simone Browne describes Fanonian epidermalization as a "contact moment of fracture of the body from its humanness, refracted into a new subject position."[[21]](#footnote-22)Through the course of the demo we see Kara’s body assembled, disassembled, and reassembled again as she tearfully begs the overseer for her life. What Browne’s definition highlights is the cross between the optic and haptic that happens in this process – where looking becomes violence enacted on a body. As Amanda Phillips so deftly writes, "Kara's whiteness is the invocation of white womanhood as the universal sympathetic victim, supplanting historical realism (performance on an auction block) for the emotional realism of the damsel in distress"[[22]](#footnote-23)

*It’s a scene so clearly trafficking in the signs and symbols of white supremacist enslavement – a scene that is evacuated by these signs through sanitized high-tech surfaces*

- "prototypical whiteness is one facet of the cultural and technological logic that informs many instances of the practices of biometrics and the visual economy of recognition and verification that accompany these practices"[[23]](#footnote-24)

The technicity of Kara’s skin recalls that skin is often marshalled as a technology of racialization. Shifting back to Fanon, in his account of epidermalization, he describes his body as a “sensor,”[[24]](#footnote-25) and “a long antenna encountering the various axioms on the surface of things.[[25]](#footnote-26) No longer an integrated whole, his body is divided into technologized parts. Throughout the chapter, Fanon uses medicalized language to evoke the attempts of colonial science to produce a truth about the Black body and consciousness. Yet, his description of his body as a sensor, an antenna, departs from these metaphors to implicate the developing broadcast and computational technologies of the mid-twentieth century. In one reading, Fanon’s antennae might recall Gregor Samsa’s surprise arthropodan transformation, but this metaphor also brings to mind the “bunny ears” of mid-century terrestrial broadcast technologies. Fanon, in discussing the effect of the white colonial gaze, describes the outer-most surface of his body – his skin – as a technological sensing organ.

Sylvia Wynter expands upon Fanon’s argument about the affective[[26]](#footnote-27) and physiological impact of racism. She displaces a naturalized biocentric definition of human experience in the same way that Fanon sought to intervene in the medicalizing/biocentric discourses around race and consciousness. Wynter discusses racism (also framed as anti-non-white sentiments or even black “autophobia”) as “the expressions of a self-evident order of consciousness to its subjects.”[[27]](#footnote-28) Wynter problematizes this “self-evidence” by proposing that our experiences of consciousness, our human identity, are framed and structured by the “coercive semantic technologies” of culture that seek to adjudicate between the human and the non-human.[[28]](#footnote-29) One aspect of Wynter’s point is that phenomenology is “as objectively, constructed as its physiology,"[[29]](#footnote-30) displacing a merely biocentric definition of consciousness with a sociogenic[[30]](#footnote-31) one, capable of handling the “*rhetoricity* of human identity.”[[31]](#footnote-32) Reading Wynter through the writing of scholar Simone Browne, the sociogenic principle is an "organizational framework of present human condition that names what is and what is not bounded within the category of the human, and that fixes and frames blackness as an object of surveillance."[[32]](#footnote-33)

As Amanda Phillips demonstrates, the instability between Kara as a robot, human and android “merge with Kara-as-performer, for the real magic behind the cutting edge of contemporary computer animation technology is not the ability to generate the illusion of life purely from an artist's imagination and skill; it is the ability to train computers to accurately reproduce the performance of a human actor captured on camera."[[33]](#footnote-34) As Phillips so expertly unpacks, Kara’s performance of whiteness is underwritten by the performances of at least four actors, which are wrapped up in this skin.

**Skin As Surface**

If the “Kara” tech demo dramatizes skin as the bearer of qualified humanity, the full-length game, *Detroit: Become Human*, makes drawing the line between human and nonhuman (android) into a game. Set in Detroit in November of 2038, this episodic action-adventure game follows three main characters, all of whom are androids developed by fictional tech conglomerate CyberLife. Kara (the same character from the tech demo) is a standard issue maid android purchased by drug addicted Todd and tasked with caring for a child named Alice; Connor is a special-issue police android investigating “deviant” androids alongside human investigator Hank; and Markus begins the game as a special prototype android that works as a valet for aging and disabled human artist, Carl Manfred. As the teleology of the tile might imply, *Detroit* is about each of these characters encountering situations that deliberately place the player in the role of judge, acting out their fantasies of what it means to be and treat others as human (or to speculate about the ways of treating others as nonhumans).

Gameplay consists of navigating 3D space in the third-person, controlling these three characters as you accomplish simple objectives, while choosing between time-sensitive dialog or narrative branches (much like a choose you own adventure story), and completing quick-time events used in action-heavy sequences (e.g. you have a short period of time where you have to repeatedly press a particular button or hit a series of buttons to escape or kill another character). This game was designed to utilize all the haptic and sonic features of the updated PS4 controller, including the built-in speakers, touchpad, and color bar. For example, some in-game tasks, like washing dishes, require a player to mimetically rub the trackpad of the controller as though they were rubbing a sponge on a dish. Cage and Quantic Dream are known for designing mimetic control schemes within the limited repertoire of possible game controller interactions, a design choice made in the service of immersion and identification.[[34]](#footnote-35) Unlike other game genres in which player skill is a large factor in player success, playing the game means roleplaying as an avatar, experimentally choosing from a highly constrained menu of potential options in a given scenario. Similar to *The Walking Dead* (Telltale Games, 2012-19)*,* an action-adventure game about surviving a zombie apocalypse, *Detroit* asks players to make quick moral decisions when faced with ethical dilemmas.

For example, at the climax of the opening episode of the game, a deviant android stands on the precipice of the roof of a luxury high-rise, holding a young white girl, waving a gun. Like much of the game that follows, this scene is rife with the anxiety of discerning between human and android, Human and nonhuman. “If I die, she dies,” proclaims Daniel, the “deviant,” as he holds Emma, the child, over the ledge. The cutscene camera pans vertiginously overhead to reveal the street below, lens flares skate across the screen from the ambulance lights. Police robot Connor enters the scene with a clear objective – “SAVE HOSTAGE AT ALL COSTS.” As Connor, the player can choose to address the android by his name, empathize with his situation, attempt to calm him down, lie or tell the truth about having a gun. Of six possible endings, four are “successful” (meaning human Emma is saved), and in all four endings Daniel dies and in half of these Connor dies as well. There are two “failure” scenarios in which Daniel shoots Connor before Emma can be saved, or Daniel takes Emma over the ledge with him. The scene implicitly values Emma’s life over Daniel’s; player choice configures the degree to which Connor addresses Daniel as though he were human.Treating other androids as humans seems to make the androids humans in turn – as is suggested by Connor’s “software instability.” The software instability is indicated to players after making choices by an overlay indicator in the upper right hand of the screen as well as on Connor’s skin: what is narratively a status indicator on his temple is functionally another heads-up-display for the character’s “instability” attribute. As the *Detroit* fan wiki states, “The more unstable the software, the more human Connor becomes, as the name of the game implies.”[[35]](#footnote-36) As mentioned earlier, adventure games ask players to experiment, to take a trial-and-error approach to making quick (and often moral) decisions, even in life or death scenarios. What sets *Detroit* apart from others in the genre is the surprisingly “on-the-nose” anxious questioning that undergirds nearly all major plot points. The game asks players the same question over and over: Who is human here and how human are they? Moreover, this question exists just at the surface of these character models – through the LED HUD, through the strategic shifting skins of the androids.

Despite (or regardless of) director David Cage’s disavowal of the real-world influences and political intent of *Detroit*,[[36]](#footnote-37) I interpret the game as an affective archive of 21st century anxieties around the racialized and the technologized body through the visual language of modular surfaces. Unlike *Sunset*, which I discuss in the following section, *Detroit*’s tired allegory between the racialized and the technologized offers up a deeply anxious text/tech that is continually translating between surface and ontology.

In her writing on Josephine Baker at the turn of the 20th century, Anne Anlin Cheng describes the white modernist "pure surface" as a "a mutual fantasy, one shared by both Modernists seeking to be outside of their own skins and by racialized subjects looking to escape the burdens of epidermal inscription."[[37]](#footnote-38) What Cheng sees in the relationship between modernist aesthetics and Baker’s work on film and in print is a reckoning with the “historic, social, aesthetic, and philosophical problem of how to fashion skin/surface, how to naturalize that which has been - can only be- fundamentally tailored or stylized."[[38]](#footnote-39) While I think that *Detroit* works differently than photographs of Josephine Baker’s skin, this game’s investment in skin, the aesthetics of skin, the problem it tries to solve through the visual representation of realistic human skin on androids is

Part of the rising action of Markus’s plotline includes storming the “Stratford Tower” to broadcast his message of android liberation to local Detroit news outlets. Markus, Josh (a black android with strong investments in respectability politics), North (a former sex worker with a penchant for violence), and Simon (a basic white guy) storm Channel 16 news in a series of events involving a stolen window-washing scaffolding, laser cutters, and, of course, a dramatic scene where Markus and North scale the glass facade of the skyscraper to the top floor. Markus is left with the choice to distract or kill the (human) security guards outside of the control room. After the scuffle in which Simon may or may not be injured, Markus stands in front of a green screen, Josh’s eyes turn into camera apertures while simultaneously becoming film countdown leaders. Simon prompts, “Markus, your face.” The heads-up-display (HUD) indicates that the player should move and hold the right joystick up to “remove skin.” Completing this action (required to progress in the story), causes Markus to touch his temple, close his eyes, and shimmer his racially coded skin off of his face to reveal the white, shiny, and segmented “true” surface of his android body.[[39]](#footnote-40) It is in this deskinned (or reskinned) state that Markus relays his demands for android liberation, a pastiche of American 20th century civil rights and 19th century abolitionist demands. [[40]](#footnote-41)

Graphical user interface, application, website

Description automatically generated

Markus’ android skin evokes the “pure [white] surface” of modernist architecture as described by Cheng, as well as the visual language of Apple's early iProducts; glossy, glassy and white. In both of these cases, the pure white surface is a visual metaphor for technological advancement, progress, and a civilizing force representative of a “better” future. It’s possible to interpret the choice for Markus to “remove [his] skin” and reveal his android skin as a way to play into the symbolic meaning of “pure surface” and better futures. Chalk it up to bad scene writing, or Cage’s lack of imagination for what a 21st century abolition movement might actually look like (hopefully not this!). However, this scene, and others in which Markus’ or any other android’s “true skin” is revealed, tell a different story of “prototypical whiteness” in this game world. Though many of the androids are highly racialized,[[41]](#footnote-42) within the world of this game, they can be understood narratively to be literally prototypically white. **The androids’ skin in DBH is both literally merely a projection, as well as diegetically so - a wrapped image on top of the white android body just as it wraps the polygonal vertexes that makes it computationally intelligible.**

**Shine as "the very medium through which the visual and the sensorial merge. In short, I am interested in shine as relationality. Hence Baker lacquer, instead of repeating a rhetoric of corporeal residue (i.e., sweat), functions to release or open up the body from its corporal limits by linking it to metallurgical, plastic, and other synthetic materials" Cheng 115**

**"flesh reveals itself as style, even as style becomes discernable only through its simulation of the corporeal" Cheng 120**

**Baker "enacts the modern machine's internal struggle between ideals of human emulation and the condition of the inhuman" cyborg logic and the pull between animation and inanimacy Cheng 128-9**

**"verification, identification and automation practices that enable the body to function as evidence" Browne Book 109**

This layered representation of Markus’s skin is further complicated by the Quantic Dream development process that heavily utilizes motion capture from real human actors, in this case biracial actor, Jesse Williams. Known for his role in Grays Anatomy and his 2016 BET award speech in solidarity with Black Lives Matter, it seems significant that Quantic Dream decided to model, voice, and base Markus’s animations on Williams. The goal of *Detroit* was to include more and more-detailed performances by their actors, a standard that both influenced Quantic Dream’s decision to remake their game engine and contextualizes *Detroit* within the larger context of their previous adventure games (which have previously featured actors Willem Dafoe and Elliot Page). There is a kind of indexicality happening in their casting choices that is both materially significant within the field of games (in this case, representations of Black bodies are indexed to the actual Black artists that voiced and performed these characters) and challenging to the very software ontologies that these technologies are built upon. Quantic Dream could have used any actor to get the full body motion capture, and a different one still for the face and voice acting.[[42]](#footnote-43) They could have invented a skin for Markus that had no anchor point in the real world. But instead, their choice to prioritize theatrical performances and model the character after Williams seems significant in so far as Williams’s real-world work seems to lend a kind of “authenticity” to Markus’s in-game message - as though it is underwritten by Williams’s real-world organizing and activist practices. This casting choice is not only a nod to earlier media technologies (film - where we assume that the actors are the actors, except in CG), but also a technological flex. The androids appear human in this game because they are modeled by humans - humans pretending to be androids.

**Skin, Surface, Shine**

*Sunset* begins with an image of the protagonist, Angela Burnes, reflected on the surface of the elevator door. As she enters the penthouse of wealthy Anchurian art collector Gabriel Ortega, we catch glimpses of her body on the glass façade of the penthouse and the mirrors in the guest bathrooms, where she pauses to adjust her afro. *Sunset* takes place between May 1972 and March 1973 in a fictional South American country and focalizes around Angela, a highly educated American expatriate who now works as a house cleaner. Players are assigned domestic tasks by Ortega, and gameplay consists of navigating the lush interiors of Ortega’s mod bachelor pad, completing these tasks before the sun sets and the game advances to the next day. Players can choose to do as much or as little domestic work as they please without the risk of ending the game prematurely: the game lacks win or lose conditions recognizable as such, and failure to complete tasks has little influence on the course of the game’s narrative.

Unlike *Detroit’s* indexical control schemes in which game controls echo their onscreen actions, *Sunset* conforms to the generic expectations of control schemes in adventure games, often referred to as “point and click” adventures. Accordingly, all domestic tasks are represented by the same point and click action, though some tasks cause in-game time to elapse more quickly than others. As players explore Ortega’s apartment to complete these tasks their movement will be constrained by reflective glass doors that impede access to certain areas of the house. Text adventure developer Emily Short critiques the use of these doors as heavy-handed devices that direct player interaction and limit player movement.[[43]](#footnote-44) Yet, she misses what I contend is part of the point of this game: unlike locked doors in other adventure games, there is no puzzle here, no solution, no code or key to be found, no prize for completing the day’s tasks, just Angela’s reflection.

What the reflective surfaces of Tale of Tales’s game reveal is not a hidden treasure or passageway, but that they chose to include a character model for Angela. Games like *Myst* (1993, Cyan Inc.) and *Dear Esther* (2012, The Chinese Room), as well as *Gone Home* (2013, Fullbright) and *What Remains of Edith Finch* (2017, Giant Sparrow)*,* are all first-person adventure games, yet none of them feature a rendered first-person avatar. *Firewatch* (2016, Campo Santo) renders the arms and legs of the player character, but the entire body of the character is never fully visible. Ten years after the release of *Myst*, developer Robyn Miller described immersion as the design principle behind the choice to develop the game with a first-person perspective. The goal was to feature “the player as the main character. You didn’t have an avatar or anything like that. You were just sort of in the world, and you were the person in that world, wandering around.”[[44]](#footnote-45) Because of its popularity and commercial success, *Myst* set a generic convention in adventure games in which the first-person perspectival camera is a metonym for the player’s body. Within this design logic, the identity of the player has no impact on the game. The story is and can be told the same way regardless of who is playing. But, Angela’s fully modeled body counters the implicit assumptions of the embodied first-person camera. By subverting generic convention, this artistic choice questions the logic that dictates that no body stands in equally as well for every body and serves every story equally well. I suggest that Tale of Tales forces players to experience the tension between the generic expectation of close bodily identification with the first-person camera and the particularity of the fully rendered character model whose reflection they encounter at nearly every turn. Even for players whose may find their real-world identities reflected back to them in the shiny surfaces of Ortega’s home, might experience this tension between the generic metonymic relationship between camera and player body and the images that appear before them on the screen.

This reflective engagement is borne out in the ways players spend their time in the game. One play strategy may involve an unwillingness to engage in forms of labor as play, in which the player chooses to explore Ortega’s apartment or rest instead of completing the proscribed chores. While exploring, players find books from Ortega’s library, records, notes from Ortega, and unlock more of Angela’s thoughts. Resting in a slipcovered chair prompts diary entries to appear in an overlay on the screen. Angela reflects upon the world outside of Ortega’s apartment in these entries, describing a recent military coup, the difficulties of living abroad, the frustrations of underemployment, and the loss of her brother. These built-in moments of reflection are part of Tale of Tale’s long-standing interest in not playing as a form of interaction with games. In their earlier game, *The Path* (2009), when a player stops controlling the game, eventually a young spirit will approach them and guide them to a different area on the map with a playful dance, sometimes holding hands with the player character. A player patient enough to allow this simulation to unfold will be brought to locations in the environment that trigger larger story events for each of the six player characters. In both *Sunset* and *The Path*, not playing the game becomes a viable play strategy, it is as important to understanding the game as the actions players choose to take. Rest results in poesis: the refusal to perform labor within the diegesis of *Sunset* introduces richer story elements when players choose to perform their in-game labor. This poses a challenge for a game hermeneutic that centers solely on player action, opening space for the contemplation of the poetic and meaning-making potential of the processual elements of the game that exist in a gray area between player choice and player action.

The opposite play strategy focuses on the completion of the tasks assigned by Ortega. This strategy connects the effort and time it takes to play a game as entertainment and to games as labor. It’s possible to interpret Tale of Tales’ focus on domestic labor within the game’s diegesis as a critique of the ways that games both replicate and contribute to extractive economies of labor in the practice of “gold farming” where players, play to sell rare loot items, time-consuming achievements, or well-managed accounts.[[45]](#footnote-46) It also recalls the rhythmic interludes of “casual games” that emotionally mediate the precarity and discontinuity of the neoliberal workplace through feminized, repetitive labor, experienced as play in games like *Diner Dash*.[[46]](#footnote-47) Completing tasks in the game condenses the amount of real-world time it takes for the hour of in-game time to pass. Time moves faster when Angela labors, thus completing all of the tasks limits the amount of time the player has to explore or rest before the sun sets.

The player that opts to complete chores can choose between two “moods” in which to complete the task: a warmer mood, often involving affective labor and care; or a cooler mood, best described as perfunctory, yet satisfactory, labor. For example, when electing to put away Ortega’s record collection players choose between one of two emotional states, “enthusiastically arrange records by tempo, slow music first” or “methodically arrange the records by genre and artist.”[[47]](#footnote-48) This choice makes explicit the relationship between Angela’s domestic labor and the less concrete forms of affective labor that accompany it. Playing this game requires affective attunement and evaluation: the two moods are not clearly described during play and their colors and descriptions invite interpretation and role-playing. Where other adventure games engage players in riddles, puzzles, and treasure hunts*, Sunset*, like Angela’s in-game work, demands from players what it narratively represents: affective labor.

I would also like to suggest that labor also exists in a computational sense when players encounter Angela’s reflection. Seeing Angela’s body is computationally “expensive.” Reflections in games greatly impact game performance. In Unity, the engine used to develop *Sunset*, reflections rely on information from what is best described as another camera, called a “probe,” positioned in 3D space that projects what it captures like a skin onto the surface of another game object. Each of the reflective doors, mirrors, and windows in the game are basically additional in-game cameras. Each probe forces the engine to render the scene an additional six times. Time, the number of frames rendered by the game per second, literally slows down as hardware attempts to keep up with the demand of rendering these reflections of Angela’s body.

When Angela’s body is rendered in a reflective surface it enacts computational slow down, that can then be perceived (depending on the hardware configuration of the player) as a different temporality marked by judders or sharpness, not smooth, not “realistic” and not approximating the fidelity of visual information we perceive in the real world. This computational slow-down transposes the in-game action of sitting in a chair and reflecting into something that can be felt by the player as they play. It’s worth noting here that to discuss framerates in a game is about as subjective as describing one’s experience sitting in the audience of a play. Framerates are uniquely tied to the hardware configuration being used by the player, and changes in framerate are often sub-perceptual (unless a player has enabled a framerate overlay). In 2020, playing *Sunset* using a GTX 570 graphics card, my framerates ranged from 60 frames per second (fps) plummeting to 20fps. Looking at any reflective surface (mirrors, windows, glass doors) generally halved my framerate to around 30fps. This drastic drop in frames per second, likely due to the increased computational load of rendering all of the real-time reflections in the surfaces of Ortega’s mansion, was palpable. The game felt slower.

To write about framerates and computational performance in a game like *Sunset* for players that are not exactly competitive or likely to care too much about perfomrance is a bit counterintuitive. But I want to make a connection between the game world in which a majority of the actions available to a player in any moment in the game are essentially to rest - to sit down, to think - and the choice to include an avatar for Angela and populate the environment with reflective surfaces. I see these choices that work against computational efficiency and best interest, as important interventions in the

[This is just plopped in here but I want to draw out the mirror moments in DBH/Sunset and think through them with Fanonian triplicate – what is it to see yourself in triplicate/third person?] The fifth chapter of his book describes both the psychological and physiological impact of being captured or fixed by the white colonial gaze. Fragmented by the racist epithets of a child on a train, Fanon describes “being aware of my body, no longer in the third person, but in triple.”[[48]](#footnote-49) In this movement from DuBoisian “double consciousness” to Fanonian triple consciousness,[[49]](#footnote-50) the movement is not just from that of being hailed or seen as existing beyond the hegemonic interpretation of *Man* (“seeing oneself through another’s eyes”)*,* but of a shift from subjectivity to objectivity (Fanon writes, “[I] gave myself up as an object […] peeling, stripping my skin”), that imposes a skin-based physiological schema.[[50]](#footnote-51) As I interpret Fanon, triple consciousness entails three overlapping schemas composed of interlocking and layered dialectics: between the body and the material world (“construction of my self as a body in a spatial and temporal world” 91), the body and historical-racial conditions (”a thousand details, anecdotes, and stories” given to him by “the Other, the white man” 91), and the body and the white colonial gaze (the subjective experience of the body reduced to ”an epidermal racial schema” by the gaze of a third party 92). ]

Yet, *Sunset* is more than a hall of mirrors. The reflective surface of the penthouse windows that separates and insulates Angela from the rest of the city is also a portal that connects the goings-on of the apartment with the outside world, just as the game itself is a portal into American politics in 2015. We are remined of the permeability of boundaries between inside and outside when, in week nine, the windows are shattered by bomb shrapnel. As the weeks continue, the world on the other side of the windows erupts in flames: the people, including Angela and her employer, revolt against a dictator backed by western superpowers in a fight for their freedom. Angela’s brother, David, has been incarcerated by the government for his involvement in the revolution. Of the game, developer Auria Harvey writes:

The focus of *Sunset* is on what happens in regular people’s daily lives. Today, we are all living our lives while in the background a war is going on. [...] *Sunset* is about all of our lives, the lives we all lead: in our peaceful apartments while the world is burning outside.[[51]](#footnote-52)

The revolution I encountered on my computer screen was a reflection of the world on the other side of my computer screen: The game was released May 21st, 2015, just weeks after public unrest in Baltimore after Freddie Gray was tortured and killed by Baltimore Police. I first played the game in August 2015, shortly after a white supremacist murdered nine people at prayer on June 17th, and nearly on the day of the year anniversary of Michael Brown’s murder in Ferguson, Missouri. As Angela considers her own transition from peaceful acts of protest to militant action, I reflected on the meaning of the words “riot” and “looting” as they were deployed to reframe Black life in Ferguson as disposable and criminal. Returning most recently to the game in the summer of 2020, the game resonates with the experience of an isolated and extended quarantine period and the ongoing and sustained uprisings in defense of Black life after the murders of Tony McDade, Breonna Taylor, and George Floyd.

**[there’s a section yet to be written on relationality and shine/reflection that will happen here… also a conclusion]**

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1. This process of projecting the 2D image onto the 3D surface is called UV mapping, where U and V represent the two axes of the 2D image to be mapped onto the X, Y, and Z axes of the 3D object. [↑](#footnote-ref-2)
2. Or, if we are to consider it as having depth or volume that is an implicit quality of the object. [↑](#footnote-ref-3)
3. There is significant player experimentation and documentation regarding the impact of these supposedly cosmetic skins in competitive MMOs like *Apex Legends*. For example, in 2019 reddit user superzaropp posted a side-by-side comparison of *Apex Legends* character Pathfinder to demonstrate the ways that the hitbox, which is mapped to the actual character mesh, is much smaller than the “Legendary” skin projected on its surface. This resulted in players shooting at the character, and it appearing to hit the character, without a hit registering by the game system because the skin exceeded the size of the hitbox/mesh. This means that though the character appears quite large in the game, the areas on it that actually result in damaging the character (the core mechanic of this game) is far smaller than the skin would suggest, potentially conferring players who chose to play this character strategic advantage over others. superzaropp, “Pathfinder’s In-Game Model vs Hitbox (Picture Comparison).” [↑](#footnote-ref-4)
4. For an extended analysis of this trend, as well as its impact on female scholars and scholars beyond the binary see Phillips, “Negg(at)Ing the Game Studies Subject: An Affective History of the Field.” [↑](#footnote-ref-5)
5. Aarseth, “Ludology,” 188. [↑](#footnote-ref-6)
6. Murray, *On Video Games*, 3. [↑](#footnote-ref-7)
7. Stephens, *Skin Acts*, 1. [↑](#footnote-ref-8)
8. Cheng, *Second Skin*, 6. [↑](#footnote-ref-9)
9. Stephens, *Skin Acts,* ix. [↑](#footnote-ref-10)
10. Phillips, *Gamer Trouble: Feminist Confrontations in Digital Culture*, 96. [↑](#footnote-ref-11)
11. Reed and Phillips, “Additive Race,” 140. [↑](#footnote-ref-12)
12. Kishonna Gray and David Leonard address the spectacle of Black death in video games like *Battlefield I* (Electronic Arts, 2016) in which players take on a series of Black “must play” avatars (all fictional members of the Harlem Hellfighters) who inevitably die as the game progresses. Gray and Leonard, “Post-Racial.” [↑](#footnote-ref-13)
13. Stephens, *Skin Acts,* vii. [↑](#footnote-ref-14)
14. “Motion Capture Technology | Quantic Dream.” [↑](#footnote-ref-15)
15. Fanon, *Black Skin, White Masks*, 92. [↑](#footnote-ref-16)
16. Fanon, 95. [↑](#footnote-ref-17)
17. For more information on real-time rendering and rendering pipelines, see Möller, Haines, and Hoffman, *Real-Time Rendering*. “Rendering” refers to the graphics rendering pipeline, which consists of several stages run in parallel. I will not go into depth on the individual processes and subprocesses that comprise rendering, but the important distinction I’m attempting to make here if between computer graphics that are rendered and then recorded versus those that are rendered in real time. Real-time graphics are generally described as “interactive” computer graphics because as “an image appears on the screen, the viewer acts or reacts, and this feedback affects what is generated next.” Even though this demo is not interactive in the same way that a video game is interactive, what’s important about the demo is that it is being generated in real time using Quantic Dream’s proprietary game engine on common consumer hardware. [↑](#footnote-ref-18)
18. https://detroit-become-human.fandom.com/wiki/KARA\_(tech\_demo) [↑](#footnote-ref-19)
19. Marchalot, “Cluster Forward Rendering and Anti-Aliasing in ’Detroit”; Arif, “Quantic Dream Wants to ‘Push the Limits’ With Advanced Visual Features for PS4-Exclusive Detroit.” In this talk delivered at the Game Developer’s conference, Marchalot describes the “six pillars” of the new Quantic Dream engine as clustered-forward rendering (a way of optimizing rendering speeds by strategically updating clusters of pixels, rather than tiles of a screen), temporal anti-aliasing (a way of jittering pixels to smooth the edges of rendered objects and reduce the visual side effects of the downsampling required for real-time rendering), physically based rendering (including physical camera effects like bokeh and volumetric lighting), character skin and eye shaders, special particle effects like rain and snow, and minimizing loading screens and loading times. In the interview with Arif, Lead Designer David Cage says, ‘"We worked on skin shaders, we worked on hair shaders, eye shaders. We worked on translucency which allows you to, when you have a strong light behind your ear, see that your ear becomes red." [↑](#footnote-ref-20)
20. See Pettineo, “Subsurface Scattering” for more information on subsurface scattering for real time skin rendering. [↑](#footnote-ref-21)
21. Browne, “Digital Epidermalization,” 134. [↑](#footnote-ref-22)
22. Phillips, *Gamer Trouble: Feminist Confrontations in Digital Culture*, 72. [↑](#footnote-ref-23)
23. Browne, “Digital Epidermalization,” 135. [↑](#footnote-ref-24)
24. Fanon, *Black Skin, White Masks*, 99. [↑](#footnote-ref-25)
25. Fanon, 96. [↑](#footnote-ref-26)
26. I use affect here in the clinical sense, as a term germane to psychology rather than 21st century theories of affect. [↑](#footnote-ref-27)
27. Wynter, “Sociogenic Principle,” 57. [↑](#footnote-ref-28)
28. Wynter, 48. [↑](#footnote-ref-29)
29. Wynter, 54. [↑](#footnote-ref-30)
30. Wynter writes, "the sociogenic principle, as the information-encoding organizational principle of each culture's criterion of being/non-being, that functions to artificially activate the neurochemistry of the reward and punishment pathway, doing so in the terms needed to institute the human subjects as a culture-specific and thereby verbally defined, is physiologically implemented, mode of being and sense of self." (54) [↑](#footnote-ref-31)
31. Wynter, “Sociogenic Principle,” 60. [↑](#footnote-ref-32)
32. Browne, *Dark Matters*, 7. [↑](#footnote-ref-33)
33. Phillips, *Gamer Trouble: Feminist Confrontations in Digital Culture*, 71–72. [↑](#footnote-ref-34)
34. “But having said that, we always felt that having some sense of mimicry in the controls would be something very powerful, because the goal with *Heavy Rain* was to put you in the shoes of your characters, make you feel what they feel, and make them play their daily lives -- so that when something important happens to them, you're on board, you're with them, you're part of them. And I think the interface played really an important role in this mechanism, to work together.” https://www.gamasutra.com/view/feature/171004/beyond\_heavy\_rain\_david\_cage\_on\_.php?page=3 [↑](#footnote-ref-35)
35. “Software Instability.” [↑](#footnote-ref-36)
36. According to interviewer Nathan Grayson, at E3 in 2017 David Cage claimed “that he’s not trying to make a game with an overtly political message, nor is he drawing on real world history or politics as influences.” https://kotaku.com/despite-political-overtones-david-cage-says-detroit-is-1795939952 [↑](#footnote-ref-37)
37. Cheng, *Second Skin*, 13. [↑](#footnote-ref-38)
38. Cheng, 78. [↑](#footnote-ref-39)
39. Notably, his eyes remain the same off color - both piercingly light shades of blue and green that are indicative of his post-resurrection state. The eyes also reference those of actor Jesse Williams who voices and performs the role of Markus. [↑](#footnote-ref-40)
40. The demands in the game include recognition, an end to slavery, equal right, free speech, justice, an end to segregation, a right to work, universal suffrage, a right to own property, the means of reproduction, territory - all of which can be relayed in “peaceful” or “determined” moods. Notably, “determined” appears to be a euphemism for more militant actions, including the destruction and defacement of corporate and public property. [↑](#footnote-ref-41)
41. (often trafficking in real-world racial stereotypes, like Luther the “Magical Negro”/Sambo character who rescues and protects Kara and her questionably-human ward, Alice) [↑](#footnote-ref-42)
42. Quantic Dream did employ a stunt double, French-Martinican performer Alex Martin, for some of Markus’s scenes, but this division is common in both film and motion-capture performances. While Markus is voiced by different voice actors in other localizations, it remains notable that the motion capture performance behind Markus is largely performed by a single actor whose likeness is also used in the game. [↑](#footnote-ref-43)
43. Short, “Sunset (Tale of Tales).” [↑](#footnote-ref-44)
44. Miller, “Classic Game Postmortem: Myst.” My transcription. [↑](#footnote-ref-45)
45. Tai and Hu, “Smart Play.” [↑](#footnote-ref-46)
46. See Anable, "Rhythms of Work and Play," Playing with Feelings and “Casual Games, Time Management, and the Work of Play.” [↑](#footnote-ref-47)
47. Harvey and Samyn, Sunset. [↑](#footnote-ref-48)
48. Fanon, *Black Skin, White Masks*, 92. [↑](#footnote-ref-49)
49. Sylvia Wynter argues that Fanon is developing DuBois’s concept further (TSP 31), and that Fanon offers sociogeny as the explanatory cause of this triple consciousness. [↑](#footnote-ref-50)
50. Fanon, *Black Skin, White Masks*, 92. [↑](#footnote-ref-51)
51. Harvey, On Politics. [↑](#footnote-ref-52)