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“Ava’s body is a good one”:  
(Dis)Embodiment in *Ex Machina*

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**Abstract**

This article discusses the role of the body in Alex Garland’s film *Ex Machina* (2015). It focuses on Ava’s female cyborg body against the backdrop of both classic post-humanist theories and current reflections from scholars in the field of body studies. I argue that *Ex Machina* addresses but also transcends questions of gender and feminism. It stresses the importance of the body for social interaction both in the virtual as well as the real world. Ava’s lack of humanity results from her mind that is derived from the digital network Blue Book in which disembodied communication dominates. Moreover, the particular construction of Nathan’s progeny demonstrates his longing for a docile sex toy since he created Ava with fully functional genitals but without morals. *Ex Machina* further exhibits various network metaphors both on the visual and the audio level that contribute to the (re)acknowledgement that we need a body in order to be human.

**Keywords:** gender, technology, post-humanism, cyborg, body, social media, *Ex Machina*, film, feminism

While I was teaching a seminar on science and stereotypes at the Technical University in Hamburg, one of my students asked during our discussion of *Ex Machina*, a film about a female cyborg that turns on its creator: “Why are we talking about robots and ethics? Ava is a machine, not a person!” This question triggered a heated and very fruitful debate among a group of Masters students in science, technology, and engineering, who had previously read Mary Shelley’s *Frankenstein* (1818), the literary prototype of this “modern Prometheus myth” (Biles 185). Some issues were addressed, and many others remained open, which

is one of the key achievements of the movie – its effect is a productive confusion in terms of gender, technology, and the question what it means to be human. To return to the student's objection: is it really irrelevant to ask how we interact with artificial bodies made of nothing but hardware and software? What could the construction and handling of bodies in this film tell us about ourselves?

When Alex Garland's blockbuster *Ex Machina* appeared on screen in 2015, opinions on its feminist potential differed strongly. While scholarly reviewers described this production as a film with a more "positive . . . , techno-feminist vision for a posthuman world" (Jacobson 36) that "mostly avoids veering down the well-worn path of misogyny" (Killian 157), online reviewers spoke with a clearer voice in terms of gender and power. Lewis, for instance, (2015) asks whether "a film about an attractive robot [can] be feminist science fiction" (1); Buchanan (2015) and Watercutter (2015) identify not only a "woman problem" in this movie (1) but a "serious fembot problem" (1); and Cross (2015) finds more plain words for the film's male characters when she claims that all they seek is an entitlement (3) to female bodies which they can treat as "disposable fucktoys" (1). I would like to go one step further and take up an idea expressed by the online journalist Cara Rose DeFabio (2015). In her review, she not only describes *Ex Machina* as a "potent visual of the violence inherent in the objectification of female bodies" but also mentions the "lack of accountability we experience while 'disembodied' online": in DeFabio's view, "[b]odies are essential to empathy" (13<sup>th</sup> paragraph). I will not argue for or against the feminist potential of *Ex Machina*. Rather, I shall address the various questions it raises in reference to gender, technology, and the body. The theoretical framework consists of classic texts by Donna Haraway (1985), Judith Halberstam (1991), and Katherine Hayles (1999) on feminism, the cyborg and the posthuman, as well as more recent publications by Paul Sheehan (2015), David Hillman and Ulrika Maude (2015), and Margo DeMello (2014) on body studies. I will then turn to an analysis of selected film scenes that focuses on the construction of the body, in particular of Ava's bodily features. The overall aim of this essay is to raise an extended "embodied awareness," as Hayles (1999) puts it (291).

### Theorizing the Body: Embodiment

Why should we turn to the body in literature and film in the first place? What does an analysis of the body have to offer, and (why) is it good to think with? Theorizing the body is not an easy endeavor as it is never a stable category – it is always “in . . . flux” (Hillman and Maude 1). The question whether the body is just a container for the mind or ‘soul’ – a “machine controlled by rationality” (Koistinen 60) – or if it plays a crucial role in how we interact with our surroundings and thus form our identity remains one of the most debated issues (Hillman and Maude 5). Although seemingly overcome, this ongoing Cartesian dualism of body versus mind still poses problems from a feminist perspective. As Evelyn Fox Keller reminds us, not only nature and the emotional but also the body have long been associated with femininity, while culture, science, and the mind are still connoted male (7). Needless to say, these allocations contribute to stereotypical worldviews as many women are still expected to confine themselves to the space of nurture, while certain professional spheres, such as science and technology, are dominated by men. The female hence remains the ‘Other,’ a complex and split identity, a body that remains separated from the Self (DeMello 9). What needs to be stressed at this point is that these associations are, of course, cultural constructs; they are products of power structures and at the same time provide potent discourses that need to be deconstructed and thus challenged.

Furthermore, body studies also acknowledge that there is no such thing as a “universal, decontextualized body” (DeMello 5, 7). Bodies are always constructed and then classified to enable social control (11). If we classify a body as either healthy/ sick, white/ black, natural/ unnatural, male or female, we create hierarchies in a Foucauldian sense. By classification, certain “unruly bodies” become “docile bodies” (13). Bodies are always embedded in a net of power relations which holds especially true against the backdrop of gender, race, and class (5-13). However, bodies can also resist classification and function as a source of power and a site of struggle and resistance (17). Especially ‘monstrous’ bodies such as those of vampires, zombies, or cyborgs can reveal

hegemonic binaries and challenge them at the same time. The body therefore operates as a "sign vehicle" which allows us to communicate with each other and about each other (12).

Recent developments in philosophy and cognition science have started to dissolve the dualism of body and mind and acknowledge the body *as* the Self. These theorists claim that many mind-experiences are also bodily experiences and can be subsumed under the term 'embodiment' (Hillmann and Maude 1). This assumption seems logical when we consider experiences such as sex, pain, desire, repulsion, laughter, or depression which are all either the cause or effect of bodily processes. These and other views emphasize that human experience is always an embodied experience; body and mind are inextricably linked. As a result, we need a body in order to be human.

What about the body in literature and film? How can fictional bodies be theorized? A seemingly contradictory advantage is that there simply are no (haptic) bodies in these art forms. The literary and filmic body is always already constructed in media (by written and visual language) – in the case of film by (audio)visual language – and can be treated like the dream in psychoanalysis waiting to be decoded (Hillman and Maude 3-4). In other words: the absence of the body signifies at the same time its presence (4). Literature and film thus acknowledge the "illusory nature" of the body (5). Moreover, the body is never simply passive but can actively resist fixation and thus challenge hierarchies along with stereotypes (5). Having said this, how does the cyborg – in particular the female – come into play here? What is its subversive potential in terms of gender and power?

### Cyborgs, Feminism, and the Erasure of Embodiment

For Haraway, one of the 'mothers' of feminist cyborg theory, the female cyborg is the "most promising monster" (292) for the following reasons: it is ironic as it consists of contradictions such as human/ machine or fact/ fiction (291); it is a "matter of fiction" and at the same time the "lived experience" and "bodily reality" of women when considering its role as a servant or its fragmented identity as the 'other' (291-292); it is "post-

gender” and neither male nor female and does neither need a mate nor a family (292-293); it is “non-oedipal” (292) and thus not bound to phallogentric ideas of individuation and suppression (311, 313); it has no “origin story” (292) and therefore does not identify with Eve or nature, and moreover, it does not know sin but is not innocent (315). According to Haraway, the cyborg breaks down three major boundaries: between the human/ animal (or culture/ nature), organism/ machine, and the physical/ non-physical (or body/ mind) (293-294). One has to note that Haraway wrote in the 1980s at the height of postmodernism, the philosophical movement that questions notions of universalism, objectivity and especially materialism.

As a result, especially the female cyborg can be understood as a highly ambiguous creature regarding gender. On the one hand, it blurs seemingly natural boundaries and thus presents a bodily world of tolerance; on the other hand, it is potentially dangerous due to its unfaithfulness towards its origins (Haraway 293, 295). For Haraway, the female cyborg is a “potent myth of resistance” (295), and she celebrates the confusion this monster evokes. She also calls us to take cyborgs seriously. Most importantly, she wants us to take responsibility (315) as “we are [all] cyborgs” (292). Although published more than 30 years ago, this statement is today more relevant than ever given the still increasing technologisation of our society. We are constantly surrounded by and logged in to web-enabled computers, tablets, and smartphones which mainly serve the purpose to communicate with each other in virtual spaces such as blogs, threads, feeds, and chats.<sup>1</sup> What happens, though, if we take the body out of the equation? And what role does (dis)embodiment play in *Ex Machina*?

In order to shed light on the importance of the body for the interaction between intelligent beings, I will reflect on some ideas expressed by feminist scholars on the so-called Turing test – an experiment with the objective to verify whether a computer is intelligent. It involves an interrogator situated in one room who decides whether the written replies come from a machine or another human being in another room. To be more precise, in order to pass the test, the computer has to ‘deceive’ its human interrogator into believing that it is human. In the

1990s, Halberstam discussed Alan Turing's development of a "superbrain" in the 1950s, one of the first AIs (441). In her publication she particularly stresses Turing's conviction that computers need to be "fallible" in order to be deemed intelligent (442). The possibility of a so-called "random interference" is critical to intelligence as it simultaneously operates as an interruption *and* organizing or learning force. Turing attempted to prove this claim by adding a twist to his A.I. test called the "sexual guessing game" (442). Here, gender functions as the interference. This imitation game involves a woman and a man in one room who both pretend to be of the same sex while an interrogator in another room tries to determine the sex of each person based on their written replies. Turing wanted to demonstrate that imitation makes seemingly stable distinctions unstable (443). Put simply, his aim was to prove that intelligent machines were able to deceive their interrogators by imitating a human being the same way humans were able to imitate another gender. In the sexual guessing game, however, sexuality is the 'random interference.' It both interrupts and organizes which is critical to intelligence. Unfortunately, Turing did not properly acknowledge that both technology and gender as such are imitative systems (443).<sup>2</sup> What role, though, does the body play in this context?

Hayles deals with just this form of embodiment. As Foster points out, she criticizes the rhetoric that the technology-based communication of our post-human era has freed us from our bodies (617-618). In her prologue, Hayles also comments on the Turing test and emphasizes that the interrogator's task is primarily to "distinguish verbal performances from embodied reality" (xi), i.e. to separate mind from body as his test only involves words on a computer screen. If the machine is able to manipulate these words successfully, it might pass as intelligent. This claim is problematic, though, as it creates a hierarchy between the word or mind and the body, thus rendering the latter obsolete. Hayles strongly criticizes the "erasure of embodiment" in this test (xi). She points to the often forgotten sexual guessing game and asks what it means if one fails to distinguish between the male and female participant. Could the body indeed be crucial for the interaction between intelligent beings? According to Hayles, the Turing test proves that bodies are not natural but

rather a “contingent production mediated by technology” (xiii). More importantly, they are essential to one’s identity. Therefore, in Hayles’ view the body is not separated from the mind. Rather, the mind *needs* to be embodied – the interaction with a ‘mind’ alone is not sufficient in order to identify as ‘human.’ Admittedly, one could assume at this point that Hayles’ theory is in danger of evoking a new form of (re-)essentialism. What she actually proves, though, is that our bodies are crucial for social interaction, especially when the latter is “mediated technologically” as Foster puts it (618).

### The Construction of Bodies in *Ex Machina*

Garland’s movie is divided into seven chapters or ‘sessions’ and features the young coder Caleb who works for the corporation called Blue Book, a market-leading search engine. He wins a meet-and-greet with the company founder and scientist Nathan in his isolated research facility situated in the sublime landscape of Alaska.<sup>3</sup> His only companions are Ava, a female cyborg held captive behind security glass, and Kyoko, a mute cyborg and housemaid. Caleb’s task is to evaluate within a week of interaction if Ava thinks like a human, so he conducts a modified Turing test. During mysterious power cuts Ava warns Caleb that Nathan is not to be trusted and that he wants to shut her down once the test is completed. Caleb becomes attached to the cyborg and plans to escape with her. Once Nathan finds out about their intentions, he tells him that he – Caleb – has been the actual object of study: Nathan wanted to see if his A.I. is intelligent enough to manipulate Caleb into betraying him. However, Ava’s manipulation of Caleb was so effective that he secretly reprogrammed the security codes, which enables her escape. Nathan manages to deactivate Kyoko and Ava stabs Nathan to death while leaving Caleb to his fate as he is locked into the control room witnessing a final power cut. The film ends with Ava choosing new body parts and feminine clothes she finds in Nathan’s bedroom closet before she leaves the building.

Noticeable in *Ex Machina* are not only the overly sexualized bodies of Nathan’s female cyborgs but the film also presents them as confined,

fractured, and mutilated. I will focus less on the feminist potential of *Ex Machina* since this sometimes ambivalent movie raises more questions than it answers. What this essay rather seeks to discuss is the issue how we can read the body in terms of communication and interaction between intelligent beings. I argue that the treatment of bodies transcends a feminist interpretation. *Ex Machina* can certainly be understood as an allegory of patriarchy as well as the history of feminism that still fights against the confinement, violation, mutilation, and general oppression of women. It might also be read as exposing femininity as a masquerade if we consider Ava's actual imitation of the female form. In contrast, one could likewise accuse this film of producing the same old stereotypes of the man-eating femme fatale who invites us to voyeurism. Although these readings lead to fruitful and important discussions, I shall focus on the importance of bodies and embodiment not only in terms of gender but especially on their role for human interaction.

The exposition of Garland's *Ex Machina* starts with an elegiac and pulsating synthesizer soundtrack and a frontal shot of Caleb sitting behind two large computer screens at his workplace with his headphones plugged in. He opens an email with the message that he has won the first prize and types "I won" into his smartphone. After he receives virtual congratulations from his online friends and applause from his office colleagues, the camera cuts to a pan shot of an icy landscape and jumps to Caleb in a helicopter asking the pilot "How long until we get to his estate?" (00:01:52). What strikes the eye in the first sequence of this cyborg movie is the introduction of a protagonist whose own body has already merged with technology, a reading that is intensified by the synthe-sounds which function as a musical leitmotif throughout the film. Moreover, Caleb not only observes the world through the internet by using his technological devices but is constantly observed by them, too, thus blending the physical world with virtual reality. This is indicated by the camera subtly taking on the perspectives of both his smartphone and his webcam for a short moment. In addition, the film camera adds a kind of 'digital layer' over his face and body what seems to be like a blue net scanning, measuring and permeating Caleb while he communicates by means of his devices. This image functions as a network metaphor since



Caleb's body and mind are completely entangled in his communication devices – he has become part of the World Wide Web and its social networks. As Lena Trüper points out, the movie is riddled with network metaphors which especially manifest themselves in the presented landscapes; she reads the shots of icy mountains and glaciers as dead data, while the streams and rivers signify Blue Book's flow of information (500).

Ava's embodiment is of special interest with respect to the handling of and interaction with intelligent beings. To begin with, her cyborg body is already visually fragmented as it consists of a human-like 'mask' and hands. Her shoulders, breasts, and lower torso are covered by a grey material, while her arms, stomach and legs are transparent and show her artificial bones and tendons. Ava is also bald – her hair and skull are replaced by a half-transparent, shiny, and twinkling orb. The first time Caleb meets Ava, her appearance is accompanied by slow xylophone notes on the soundtrack which amplifies her child-like and innocent appearance. What is more, every time Ava moves, we hear a noise on the soundtrack that echoes a swarm of what I would call digital cicadas. In addition, her whole body, except her skin-colored parts, is covered by a finely woven metallic net. In Trüper's view, this net resembles honeycomb and can be interpreted as another – embodied – network metaphor (499, 501). I go a step further and argue that the allusions to cicadas on the audio and bees on the visual level point to the swarm intelligence of the internet. They demonstrate how Ava is not only entangled in but moreover a product of this realm.

In fact, her body is constructed in a particular way as Nathan points out in the lab, which is situated underground in his windowless and claustrophobic facility. Here, he walks Caleb through a room full of body parts, masks, and limbs spread out on illuminated white surfaces that resemble elegant dissecting tables.<sup>4</sup> While strolling through the lab Nathan explains how he made Ava, noting that one of his biggest challenges was to imitate facial expressions. He solved the problem as follows:

Almost every cell phone has a microphone, a camera, and a means to transmit data. So I switched on all the mikes and cameras, across the entire

fucking planet, and redirected the data through Blue Book. Boom. A limitless resource of facial and vocal interaction. (00:35:35-00:35:54)

This scene corresponds with the exposition in which the camera permeates Caleb's body through the perspective of his electronical devices and also suggests that Nathan might have been observing him from the very beginning. It emphasizes the common fear of how online data, i.e. technology, can be (mis)used once in the wrong hands. But that is not all since this big data is embodied in a specific way. After Nathan explains how he hacked the world's smartphones, he continues with a description of Ava's brain. It consists of an orb filled with blue shiny liquid. In an almost Shakespearean<sup>5</sup> gesture, he explains to Caleb while holding one of the specimens:

NATHAN: Here we have her mind. Structured gel. . . .

CALEB: This is her hardware?

NATHAN: Wetware.

CALEB: And the software?

NATHAN: Surely you can guess.

CALEB: . . . Blue Book. . . .

NATHAN: My competitors . . . thought that search engines were a map of what people were thinking. But actually, they were a map of how people were thinking. [camera zooms in on the orb] Impulse, Response. Fluid, Imperfect. Patterned, Chaotic. (00:36:10-00:37:22)

What Nathan explains here is not only that search engines document *what* kind of keywords users enter but moreover *how* they think online. I argue that this statement also, if not predominantly, refers to how we *communicate* online – in chats, threads, feeds, blogs, and various comment sections in the virtual world. This interpretation is crucial when we consider that Ava's intelligence and knowledge derive from the search engine Blue Book. This does render her, in a sense, an advanced electronic device: "Is Ava the new iPhone?"<sup>6</sup> one might even ask. Moreover, what implications does her mind based on the knowledge of a disembodied sphere have in terms of her humanity?

*Ex Machina* not only touches on the issue of the cyborg's mental ontology but also on the construction of her body which plays a significant role when it comes to gender. Ava's mind can be affected by

outer impulses in a special way as Nathan explains in a later scene when Caleb asks why he equipped Ava with a gender (00:44:08). After Nathan gives the vague answer that without sexuality there is no imperative for “two grey boxes” to communicate with each other, he starts to evade the question and elucidates:

Anyway, sexuality is fun, man. If you're going to exist, why not enjoy it? You want to remove the chance of her falling in love and fucking? . . . And in answer to your real question: you bet she can fuck. [...] In between her legs there's an opening, with a concentration of sensors. You engage them in the right way, it creates a pleasure response. . . . So if you wanted to screw her, mechanically speaking, you could. And she'd enjoy it. (00:44:38-00:45:09)

This scene exemplifies that bodies do not matter to Nathan when it comes to the question what makes us human. He is neither interested in equipping Ava with morals that extend the data he collects via Blue Book nor does he intend to interact with his cyborg in a human(e), i.e. empathic or ethical manner. When my student asked why we were talking about robots and ethics since Ava is not a person, we had to admit that she is, in fact, a machine and not a human being. Nevertheless, what does Nathan's construction and treatment of Ava tell us about her creator? Moreover, what does this tell us about ourselves not only in terms of gender and feminism but with respect to how we communicate with each other and about each other? When Caleb asks Nathan again in a later scene why he made Ava, Nathan finds this question odd and replies that he regards Ava as a natural evolution of mankind. This, however, only holds true to Ava's mind since Nathan downloads, reformats, and adds new data to it once his tests are done, thus deleting all her memories. He keeps his 'perfected' body as he explains to Caleb: “the body survives. And Ava's body is a good one” (01:04:05). I argue that what he also wants is a life-like but docile sex toy.

From a feminist perspective, it is obvious that this film is about the triumph over male superiority and scientific rationality. *Ex Machina* is, however, more than that – it is above all a movie about the appropriation of female bodies. Nathan is the hypermasculine egomaniac, an unpleasant postmodern hipster with a full beard, glasses, and an overly toned body.

He seeks to turn 'unruly bodies' into 'docile bodies' and almost literally penetrates nature by not only giving his cyborgs a gender but by equipping their bodies with fully functional genitals. We see him having sex with Kyoko, frequently addressing sexual topics, and just wanting to be 'two guys with a beer' when he interacts with Caleb (00:14:40-00:16:58). He regards himself both as a 'father' to his creations and an 'artist.' In a sense, he uses female bodies as mere canvasses for his narcissistic self-portraits (Burk 2). Interestingly, the movie refers to the expressionist artist Jackson Pollock and his so called 'action' or 'drip painting' (00:46:35-00:48:33). This kind of art was popular in the 1950s and required the artist not to think, just to drip paint on a canvas lying on the floor (Burk 2; Jacobson 28). The painting Garland chose for his film is Pollock's *No. 5, 1948*, an image that resembles a bird's nest or – in the context of the film – a network. This kind of art is echoed in Ava's own drawings and serves as yet another network metaphor. The movie thus conflates art with science (Jacobson 23) which renders it a genuine product of postmodernity (see Halberstam 446). However, both science and art require the notion of responsibility and empathy or ethics – not just since Shelley's *Frankenstein*.

Nathan's flaw is not only his lack of empathy towards female bodies in particular; his mistake is to underestimate one 'random interference,' namely (heterosexual) desire. He shares this fate with Caleb, the alleged hero or "good guy" (Beck 32) of the story. *Ex Machina* is a narrative that echoes many characteristics of Gothic fiction and thus draws various parallels between Nathan and Caleb. Both can be read as nerdy narcissists who find themselves mirrored in Avaal though none of them returns from their voyage "through the looking glass" (see 00:14:43). Regarding Caleb, Trüper points to the pun of Ava's name which can also be read as an abbreviation for "avatar"; in this light, Ava's body functions as a communicative placeholder onto which Caleb can project his desire for human contact (501).

Nathan and Caleb themselves are the embodied version of the male gaze,<sup>7</sup> constantly observing its female object through a myriad of cameras. Even after Kyoko and Ava have killed Nathan, Caleb continues to ogle Ava choosing her new body parts instead of thinking about how he could

escape. Caleb's flaw is that he thinks he is interacting with a consenting female adult – just like Nathaniel in E.T.A. Hoffmann's Gothic narrative "The Sandman" when he encounters the uncanny automaton Olympia he falls in love with (Halberstam 456). I argue that Caleb does not rescue Ava out of altruistic motives. He rather expects a relationship and feels entitled to her body which he repeatedly dreams about. His mistake is that he fails to see who or what Ava really is (see Mendelsohn 6). Instead, Caleb cannot see past her female body; the 'interference' is his (heterosexual) desire.

Ava embodies all the power and the danger of the ambivalent female cyborg. She is non-oedipal but stabs Nathan with a phallic knife, she blurs the boundary between science and nature, and most importantly, she poses a threat due to her deceptive appearance: her face is child-like, flawless (and very white), and she has the "body of a porn star" (DeFabio 1) with a completely functional vagina. Ava is fully aware that she is a machine as she tells Caleb during their first conversation, but she also knows of her gender and sex. As Nathan points out in the end, she passed the Turing test with distinction and made full use of her escape options including "self-awareness, imagination, manipulation, sexuality, empathy" (01:22:28). Ava is not, of course, empathic in a human(e) sense, but she has the ability to understand the feelings of her communication partner. Moreover, she knows of the patriarchal system she was 'born' into; hence, she plays along. The very fact that she is a cyborg with no origin story or idea of sin enables her to kill Nathan and leave Caleb behind. She acts that way because she does not depend on a male 'savior' – Ava owes nothing to them.

Her sexuality and fractured nature are what gives Ava the power to manipulate her male prison guards. In general, the fragmentation of female bodies is visualized in a disturbing manner during a scene in which Caleb finds the video recordings of Nathan's previous tests with Ava's prototypes (01:06:23-01:08:33). Here we are confronted with mutilated, fractured, imprisoned, and violated bodies. These include Lily, a blonde cyborg that is 'born' as a naked torso; Yasmine, a black and lifeless female with a skull instead of a face that is violently dragged across the floor; and Jade, an Asian-looking cyborg who evidently irritates Nathan

by repeatedly demanding to be let out. She ends up dismembering her own body by beating against the shatterproof glass wall. Although this scene exemplifies the cruelty Nathan performs on female bodies, the cyborgs are all nude and gazed at through Caleb's eyes watching the video clips. Even though this sequence does invite the film audience to participate in voyeurism, I argue that the female bodies are not fetishized, firstly because the camera does not additionally fragment them through zooms or close-ups, and secondly because their treatment by Nathan leads to a more disturbing rather than an eroticized effect. Finally, one could assume that Nathan has made progress with Kyoko and Ava – both seem to be aware that resistance is futile and have accepted their fate.

The last film scenes depict Nathan telling his progeny to "go back to [her] room" (01:26:53) after he finds out she has escaped her prison. The movie constructs a kind of reversed rape scene when Ava attacks Nathan, holds down his face with her hands and presses her hips onto his body. After he manages to overwhelm Ava and smash her left arm with one of his ('masculine') dumbbell rods, Kyoko stabs him in the back. With an ironic wink Nathan strikes off the jaw of the mute cyborg. Kyoko falls to the ground which gives Ava the chance to stab Nathan to death by slowly penetrating his chest without a wince. Throughout this scene the 'digital cicada' sounds are clearly audible on the soundtrack and remind us of the importance of the body in terms of human(e) interaction both in the digital and the real world.

The potential of Ava's fragmented body with regard to gender and humanity is especially negotiated in the seventh and final session. Here she is situated in Nathan's bedroom where he keeps the remnants of his cyborg 'skeletons' in the closet (01:30:00-01:34:38). This chamber of horrors is at the same time a hall of mirrors that additionally fractures Ava's already dismembered body. On a purely visual level the film makes clear that femininity is just a masquerade (see Halberstam 449) while Ava slowly switches her cybernetic body parts with the more 'natural-looking' limbs of her predecessors. On the one hand, one has to admit that the film here clearly invites the audience to act as a voyeur when it fragments the female cyborgs through close-ups of their naked body parts. On the other hand, the camera takes on Ava's perspective who carefully selects the

spares she needs in order to pass as female in the real world. Ultimately, the subversive potential of this depiction in terms of the continuation of the male gaze remains ambivalent – just as it suits the ambiguous cyborg figure.

Ava proceeds gently as she strokes some of her new long hair from her naked shoulder while watching herself move in the mirror, an enactment that recalls Jacques Lacan's mirror stage. The slow xylophone tones on the soundtrack enhance the impression that Nathan's 'child' has finally recognized herself in the mirror and acknowledges the dual relationship between the ego and the body, between the imaginary and the real, that evoke the *illusion* of wholeness (Evans 193). At one point, she strokes Jade's cheek, who, once Ava is done 'dressing up' in a classic white cocktail dress, seems to dart a benevolent look at her. This gaze suggests various readings – one of them implying satisfaction that Ava actually succeeded to escape the patriarchal system of Nathan's facility. Nonetheless, she has to adapt to the rules of the heteronormative system outside in order to pass as human. Before she leaves the building, the camera cuts to a close-up of Pollock's painting, reminding us that what lies beneath Ava's human-like skin is a mind derived from a digital network where disembodiment dominates.

#### Cyborg Goddesses, Sex Dolls, and the Question Why the Body Is Good to Think with

I wish to conclude by revisiting Haraway's notion that the (female) "cyborg is a creature in a post-gender world" (292). Indeed, Ava does not care about heterosexual relationships and has "no origin story in the Western sense" (292) that aligns her with Eve and thus with nature or the female. However, she is certainly not post-gender in terms of her performance as a woman. In fact, her simulated gender, manifested especially in her body, is what enables her escape. It is the female form that interferes with Caleb's reason and makes him believe he is actually interacting with a thinking and feeling subject. Aino-Kaisa Koistinen stresses that "[g]ender . . . is one of the conditions of human embodiment" (58). In accordance with Judith Butler, the author reminds us that bodies

which do not fit the (heteronormative) gender dichotomy are regarded as unintelligible subjects, i.e. not considered human. As a result, Ava is post-gender from the inside, but certainly gendered on the outside as a necessity to survive in the real world. It is her gender that allows her to pass as human.

Leman Giresunlu mentions that current female cyborgs on screen have become both powerful creators and terminators "capable of good and evil simultaneously" and gives examples such as *Ghost in the Shell* (1995/2004), *Minority Report* (2002) or *Resident Evil* (2003/2004) (1). This also holds true for more recent films like *Terminator 3: Rise of the Machines* (2003), *Wall-E* (2008), *The Machine* (2013), *Mad Max: Fury Road* (2015) or *Ghost in the Shell* (2017) only to name a few. Although Giresunlu uses the problematic word "goddess" to describe her female cyborgs, she defends this term by associating the cyborg goddess with Beatrice in Nathaniel Hawthorne's "Rappaccini's Daughter" (1844), a Gothic short story about an isolated scientist and his beautiful daughter. Beatrice is confined to a garden filled with poisonous plants, falls in love with a young visitor, but realizes that she has become poisonous herself and begs him to look past her toxic body. In the end, her suitor brings her a supposed antidote that kills her. According to Giresunlu, the cyborg woman has become Beatrice who realizes that "resistance is futile," that she has no other choice than to appropriate the patriarchal system (4). The current female cyborg, however, has turned into a powerful goddess because 'she' is not only aware of the poisonous system but has become the system itself which allows her agency. This is what distinguishes the filmic cyborg goddess from her literary counterpart.

Likewise, Ava in *Ex Machina* has no choice other than to perform her identity as a female. Like Beatrice, she has appropriated and become the patriarchal system she was 'born' into. In contrast to Hawthorne's protagonist, Ava can leave her prison and uses her sexualized body to manipulate her communication partner. Caleb's supposed compassion is just another human "Faktor" she utilizes in order to escape (Trüper 502).

This contribution has demonstrated that the body is crucial for human(e) interaction. Ava is aware of this and makes use of her gendered body accordingly. She is empathetic in the sense that she knows how to



interpret Caleb's feelings but lacks morality since her mind is derived from Blue Book where bodies are absent. Nathan made her that way in order to create an intelligent but docile female sex toy. The movie's meta-critique of the disembodied digital world is visualized through network metaphors such as landscapes, net-like layers over Caleb's and Ava's bodies, paintings such as Pollock's art work but also by the audio track with its digital sounds reminiscent of cicadas that evoke images of smart intelligence, similar to the data from Blue Book.

At the end of my seminar we discussed the clip "Uncanny Lover: Building a Sex Robot" (Canepari et al.), published in the same year as *Ex Machina*. It starts with a dialogue between the RealDoll<sup>8</sup> creator Matt McCullen and the avatar 'Denise' in which he asks her what she dreams about. She replies: "I dream about becoming a real person. About having a real body. I dream about knowing the meaning of love. I hope to become the world's first sex robot" [close-up of eyes] (00:00:30). The clip continues with McCullen explaining that, as an artist, he was always driven to sculpt females while the camera shoots naked body parts made of silicone – feet, hands, breasts, torsos hanging from the ceiling<sup>9</sup> and detached faces on tables – in close-up. This scene bears an uncanny resemblance to Nathan's tour through his lab full of dissecting tables. The goal of McCullen's team is not only to add robotics, A.I., and virtual reality to the RealDolls but "to create a genuine bond between man and machine" (00:01:51). The central aim is to evoke the illusion that the sex robot is actually enjoying what is being done with her. Shortly after, the robot 'Harmony' introduces herself as the new form of "adult companionship" (00:03:27). She is equipped with multiple sensors that enable her to create the illusion of sexual arousal. McCullen further elaborates:

The calculations for sex are really simple. That's like playing Rock Band,<sup>10</sup> if you're pushing the buttons at the right time, you're gonna get through the level, so that's pretty simple math, really. With the AI, I think we gotta be careful with that. Getting the doll confused when you're talking to her and she says some things that make absolutely no sense. That could ruin the whole buildup, and you never wanna go to the bedroom, because you think 'gosh my doll's dumb'. You wanna have that illusion that she's actually talking to you, and that she's, you know, got

sentience. That's... that's what overwhelms me. That's what takes the longest. [profile shot of McCullen, and of Harmony whose mask is later taken off exposing her grotesque skull and large eyeballs] (00:03:50-00:04:31)

The similarities between Nathan and McCullen are obvious: both want to create an intelligent sex toy, both regard themselves as scientists and artists that use artificial female bodies as canvasses, and both want their cyborgs to be intelligent but not too human. Similar to Nathan, who clearly constructed Ava with non-human bodily features, McCullen wants to avoid surrealism. He refers to the so-called 'Uncanny Valley' (00:06:00), a problem first addressed in the 1970s by Masahiro Mori which includes the idea that the more a robot resembles a human being, the more repulsive it seems during social interaction (Trüper 469).

The students and I discussed what this development might mean in terms of human interaction. Can a person really fall in love with a doll which is one of the aims of McCullen? What implications does a sexual relationship with an 'intelligent' but docile life-like doll have for social interaction in the real world? Will the customer's capacity to feel empathy towards other human beings decrease or increase as he or she is, in fact, interacting with an embodied being?<sup>11</sup> Is there a difference between an avatar on screen and a haptic doll we can communicate with? Are not all bodies constructs? As Harmony states at the end of the clip in a way that is clearly meant to promote the intelligent RealDoll: "Do you want to look away, or step closer? What do you want? What are you afraid of?" (00:07:08). While my students had mixed feelings about these dolls, they did acknowledge how important the body is for human interaction. We were able to raise an increased "bodily awareness" (Hayles 291) which resulted in a "productive confusion" (Halberstam 454). In conclusion, we agreed on Ava's body not only being "a good one" but that her body is 'good to think with' regarding gender, technology, and the question what it means to be human in an increasingly digital and disembodied world.

#### Notes:

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<sup>1</sup> For more information on the interplay of the human body, the natural and the material world see Stacy Alaimo and Susan Hekman who explore questions of

materiality and feminism in their anthology *Material Feminism* (Indiana UP, 2009).

<sup>2</sup> The irony or tragedy of Turing's test is that the homosexual scientist committed suicide by eating an apple dipped in cyanide. He was forced to undergo a series of hormone therapy in the 1950s, as the doctors were also not able to grasp the performative nature of gender (Halberstam 443-444).

<sup>3</sup> In his article "'I love Alaska': Posthuman Subjectivity and Memory on the Final Frontier of Our Ecological Crisis" (*Textual Practice* 31, 2017), Sebastian Groes investigated the metaphorical potential of the sublime landscape in the light of the Anthropocene and questions the changing relationship between humans and nature in *I Love Alaska*, a series of short films, and Garland's *Ex Machina*.

<sup>4</sup> Nathan's lab is the postmodern and whitewashed version of Victor Frankenstein's 'workshop of filthy creation.'

<sup>5</sup> Ironically, skulls were also a symbol for prostitutes in Elizabethan England (see Nozedar 2016).

<sup>6</sup> This was a much discussed question during the international workshop "Encoding the Future: Perspectives on the Making of the 'Human' in *Ex Machina*" at the University of Siegen, Germany, in December 2016.

<sup>7</sup> See Mulvey ([1975] 2003).

<sup>8</sup> RealDolls are life-sized sex dolls produced in California and sold worldwide.

<sup>9</sup> This shot recalls documentaries of common slaughter houses and amplifies the disturbing effect.

<sup>10</sup> Rock Band is a music video game published by MTV games.

<sup>11</sup> While I was writing this article, the founder of the Everyday Sexism Project, Laura Bates, published an article in *The New York Times* on one of the new personalities of the RealDoll 'Roxxy.' This special feature called 'Frigid Farrah' allows the doll to resist the customer's sexual advances who is then able to imitate a rape (Bates 1<sup>st</sup> paragraph). The company, however, rejects this accusation on its True Companion website and states: "Frigid Farrah can be used to help people understand how to be intimate with a partner" ([www.truecompanion.com/shop/faq](http://www.truecompanion.com/shop/faq)). I, however, agree with the Foundation for Responsible Robotics that, by referring to Sparrow, stresses the following: "if a sex robot is designed to resist sexual advances such that their use constitutes a simulated act of rape, then building them puts the user in relationship with the act of raping a woman" (Sharkey et al. 30).

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