



UNIVERSITY OF LEEDS

This is a repository copy of *What Do Sex Robots Want? Representation, Materiality, and Queer Use*.

White Rose Research Online URL for this paper:

<https://eprints.whiterose.ac.uk/201295/>

Version: Accepted Version

Article:

DeFalco, A orcid.org/0000-0003-2021-5714 (Cover date: Summer 2023) *What Do Sex Robots Want? Representation, Materiality, and Queer Use*. *Configurations: A Journal of Literature, Science and Technology*, 31 (3). pp. 257-284. ISSN 1080-6520

<https://doi.org/10.1353/con.2023.a904490>

© by Johns Hopkins University Press and the Society for Literature, Science and the Arts. This is an author produced version of an article published in *Configurations: A Journal of Literature, Science and Technology*. Uploaded in accordance with the publisher's self-archiving policy.

Reuse

Items deposited in White Rose Research Online are protected by copyright, with all rights reserved unless indicated otherwise. They may be downloaded and/or printed for private study, or other acts as permitted by national copyright laws. The publisher or other rights holders may allow further reproduction and re-use of the full text version. This is indicated by the licence information on the White Rose Research Online record for the item.

Takedown

If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing eprints@whiterose.ac.uk including the URL of the record and the reason for the withdrawal request.



eprints@whiterose.ac.uk
<https://eprints.whiterose.ac.uk/>

What do sex robots want? Representation, Materiality and Queer Use

Abstract: This essay addresses its title question by analyzing sex robots, real and imagined, as both representational objects and vital matter. Though frequently read as perverse, actual sex robots are in fact remarkably conventional in their reproduction of a popular heteronormative sexual aesthetic that disavows the vibrancy of the sexualized object. Sex robot art and fictional narratives (both film and literature), including Jordan Wolfson installation “Female Figure,” Alex Garland’s Ex Machina, and Jeanette Winterson’s The Stone Gods, both employ and interrogate this kind of mimetic design. In these texts, sex robots assert their vibrancy and agency via what Sarah Ahmed terms “queer use,” while at the same time reinscribing the humanist hierarchies that precluded their vitality in the first place.

What do sex robots want? The question cuts at least two ways. On the one hand, it is a rhetorical, even satirical provocation that evokes the familiar query what do women want?, a question posed by baffled men throughout the twentieth century (from Freud to Mel Gibson), which exposes the almost comical androcentrism of an ontological framework that regards women’s desire as mysteriously opaque. In this sense, the question implies an affinity between sex robots and the organic human women they are designed to imitate, both of which, according to humanist models, are adjacent to the human category of “Man.”¹

On the other hand, I pose the question sincerely, naively, even perversely. Sex robots, like all robots, all objects, ostensibly have no desires, at least none that humans can recognize. However, following W.J.T. Mitchell, I want to suggest that these entities, like all representations, make demands on their viewers.² Mitchell argues that “people”³ have a “double consciousness’ towards images, pictures and representations in a variety of media, vacillating between magical beliefs and skeptical doubts.”⁴ His work addresses this double consciousness and the simultaneous “power” and “powerlessness” of representations, which he identifies as the central “paradox of the image: it is alive – but

also dead; powerful – but also weak; meaningful – but also meaningless.”⁵ However, Mitchell hesitates when confronted by the ultimate implications of his title question, What Do Pictures Want?, admitting that he does not think pictures, images, representations actually want anything; nonetheless, “we cannot ignore that human beings (including myself) insist on talking and behaving as if they did believe it, and that is what I mean by the ‘double consciousness’ surrounding images.”⁶ Nonetheless, Mitchell, along with Bill Brown, Jane Bennett and others, acknowledges the vibrancy of things, of objects become Other.⁷ “Thingness,” according to Brown, denotes “what is excessive in objects, . . . what exceeds their mere materialization as objects or their mere utilization as objects—their force as a sensuous presence or as a metaphysical presence.”⁸ Like thing theorists and vital materialists, I am preoccupied by the agency, activity, desire -- the thingness -- of nonhuman/inorganic matter, including sex robots.⁹ This essay is a manifestation of this preoccupation; it pays close attention to matter, to form, to the sensual, affective and affecting materiality of sex robots as things in the world.

Answering the question of my title – What do Sex Robots Want? -- produces a potentially conflicted analysis of sex robots since it attends to them as both representational objects and vital matter. However, I regard this as a productive conflict that reflects and responds to their embodiment and indeed hyper-reification of normative sexist values in tension with their capacity to stir insights into the porousness of binaries and boundaries. My analysis looks to theories of representation, materiality and queer, racialized animacies in order to better understand what sex robots want, do, and are. At the same time, I consider how and why their potential vibrancy is so often overshadowed by the representational desires and goals of creators and users who conceive of sex robots

primarily as mimetic objects. I argue that sex robot design effectively disavows the more-than-human vitality of its objects in its efforts to effect an imitation of human life.¹⁰ My discussion begins by considering the mimetic qualities of these machines more generally before turning to actual sex robots, Harmony and Roxxxxy, to explore the significance of their particular embodiments. In part two I analyze their imaginary counterparts in artistic texts, arguing that Jordan Wolfson's "Female Figure," the film Ex Machina and Jeanette Winterson's novel The Stone Gods explore the queer animacies that haunt sex robots. These texts enact mimetic design and at the same time expose its limitations, hinting at the intra-active more-than-human agencies disavowed by conventional sex robot design. These imaginary texts offer visions of sex robots put to, or more accurately, putting themselves to "queer use,"¹¹ Sarah Ahmed's term for other-than-intended applications, in ways that assert their disavowed vibrancy and agency, but also largely reinscribe the humanist hierarchies that precluded their vitality in the first place.

The opening paragraphs of this essay interpret the title question as an inquiry into robot desire; however, an additional meaning of want is significant, namely, lack or deficiency. In asking what sex robots lack, one begins to discern their underlying irony. These are canny representational objects that ostensibly improve upon the substantial success of lifelike sex dolls by introducing the vitality of robotics to otherwise inert matter; and yet the limiting accuracy of their affordances (a term I investigate further below), based as they are on heteronormative pornified scripts of desire, effectively undermines their potential vitality. As I discuss in Part 1, the difficulty of interpreting what sex robots long for is that they are designed to eliminate their own potential vibrancy, their own opacity and difference, and, therefore, the possibility of their own desire; they are designed

lacking. They want what “you” (the user) wants and as a result, they want want. They make no claims. They embody a version of animacy at odds with vital materiality, effectively producing “harmony” (not uncoincidentally the name of the market’s leading sex robot) by demanding nothing and accepting everything.

While Part 1 traces how sex robot design nullifies animacy and naturalizes the conflation of generic Man with the human, Part 2 demonstrates how imaginary sex robots threaten to disrupt this naturalization, exposing the narrowness of the human genre Man and the vibrant debris produced by its violent maintenance. In their fantasies of queer use, failure and animacy,¹² “Female Figure,” Ex Machina, and The Stone Gods expose the literal and figurative violence of generic boundaries and their (re)inscription as well as hinting at the inhuman intra-active agencies animating their queer interventions.

Part 1: What are sex robots?

Sex robot utility depends on mimesis; the very term sex robot collapses utility and ontology. Sex robots are, first and foremost, functional representations, mimetic creations meant to both imitate and affect the world they inhabit. In fact, I would argue that the limited scholarship devoted to discussing the material particularities of actual (and imagined)¹³ sex robots reflects the degree to which scholars, much like designers and users, regard sex robot materiality and functionality as one and the same.¹⁴ These objects are understood as representations of their function: they look, feel, move and sound like (a heteronormative, pornified version of) sex. As a result, one finds numerous analyses of the ethical ramifications of sex robot utility, but far less attention paid to their material specificity, as if their embodiment were the straightforward effect of their functionality. In design, this phenomenon is called “affordance”: designed objects – at least, well-designed

objects – need no instructions since their design encourages or “affords” particular human/object interactions. The term “affordances” comes from psychologist James Gibson and was picked up by Donald Norman in The Psychology of Everyday Things (1988), which elaborates principles for intuitive design: “The term affordance refers to the relationship between a physical object and a person (or for that matter, any interacting agent, whether animal or human, or even machines and robots). An affordance is a relationship between the properties of an object and the capabilities of the agent that determine just how the object could possibly be used.”¹⁵ As Norman explains, “For designers. . . visibility is critical: visible affordances provide strong clues to the operations of things. A flat plate mounted on a door affords pushing. Knobs afford turning, pushing, and pulling. Slots are for inserting things into. Balls are for throwing or bouncing. Perceived affordances help people figure out what actions are possible without the need for labels or instructions.”¹⁶ And so, it follows, sex robots are for (penetrative) sex; they are amply equipped with “slots for inserting things into.” But sex for who? As critical disability scholars have made clear, knobs may be for turning and balls may be for bouncing for some bodies, but for others, those without fingers or hands or with limited motor control, for example, knobs may not be for turning and balls may not be for bouncing or throwing. Indeed, non-normative embodiments can lead to a wide range of “queer uses,” Sarah Ahmed’s term for things used for other-than-intended purposes and “by those for which it was not intended.” (For those with chronic muscle pain, for example, balls may be for easing trigger points.) As Ahmed reminds her readers, “intentions do not exhaust possibilities”; users can, and often do, ignore or reorient an object’s affordances according to their own needs and desires. While some queer use might be read by

normative culture as relatively benign (birds nesting in a mailbox), others are interpreted as improper, destructive, even perverse (Bible pages used as wastepaper).¹⁷ Ironically, sex robots are frequently derided as perverse when in fact they are remarkably conventional in their reproduction of a popular heteronormative pornified sexual aesthetic. The alignment of their form and function – they look like sex; they do sex; they are sex – relies on narrow parameters of desire and sexuality that sediment (in Ahmed’s terms) normative forms and behaviours. These reproductions claim to reflect desire, but of course they are always reproducing it at the same time, reinscribing a limited trajectory of desire and orientation, evoking Ahmed’s observation: “The more a path is used the more a path is used.”¹⁸ Queering sex robots diverts the direction of travel, but existing sex robots inhibit such reorientations in their disavowal of the queer animacies of the nonhuman.

Though sex robots may be new and emerging, they are the inheritors of a long line of sexualized, feminized representational objects designed for the pleasure of male users. Scholars often invoke this lineage to situate the sex robot within a history of masturbatory objects and mythological synthetic lovers.¹⁹ For example, robot philosopher John Sullins writes, “The dream of a perfect artificial lover is at least as old as the myth of Pygmalion. It is also a staple of classic science fiction, which abounds in morality plays about the emotional costs of falling in love with one’s own creation.”²⁰ Sex robot scholarship tends to focus on the ethics,²¹ legality,²² and public perceptions²³ of sex robots. There is a great deal of concern about their potential impacts on individuals and society. Like most robot anxieties, sex robot anxiety primarily stems from a fear that their mimesis will be too successful, that they might replace or eliminate certain human experiences or relationships, thereby harming users and their affiliates.²⁴ Some critics predict that they

might promote undesirable attitudes towards the humans (typically women) they imitate,²⁵ particularly in regard to the meaning and importance of consent.²⁶

However, sex robot scholarship pays less attention to the visual, tactile, aural, and affective properties and particularities of sex robots.²⁷ This is despite the fact that the representational qualities of sex robots, their designed affordances, are largely responsible for determining users' affective, physical, and imaginary interactions and relations with these objects. Indeed, roboticists, including robot ethicists, stress the importance of form for human robot interaction and the eagerness with which humans anthropomorphize machines, including robots.²⁸ Philosopher Mark Coeckelbergh argues that robot appearance is the most significant factor in determining human-robot relations, arguing that "Robot appearance is crucial, fundamental for relations, much more so than robot ontology. . . . how a robot appears will determine human relations with that robot, regardless of what it really 'is,' so to speak."²⁹ Though I agree with Coeckelbergh's central premise – that robot appearance determines how they function and signify in human worlds -- I question the epistemological/ontological separation that underpins it. While Coeckelbergh's emphasis on appearance leads him to propose an "approach to roboethics . . . [that is] self-consciously anthropocentric instead of robocentric," and signals a "turn from the 'inside' (what is 'in the mind' of robots) to the 'outside' (what robots do to us),"³⁰ my aim is to evade this either/or logic by proposing an epistemo-ontological approach that encounters and engages sex robots as representational objects, material things, relational matter. What is "inside" the robot cannot be disentangled from its "outside" affects. Software, AI, hidden hardware -- these invisible aspects are just as much what a robot "is" and "does" (to humans and otherwise) as its immediately visible exterior. My inquiry

arrests and extends Coeckelbergh's commentary at the point of "tak[ing] seriously the ethical significance of appearance" in order to enhance, rather than inhibit, robocentric approaches, or in this case, posthumanist and new materialist approaches that ask not only what sex robots "do to us" (whoever "us" might be), but what these things want from "us." Who, I ask, is addressed by these objects, and how? Like robot ethicists, I believe sex robots provoke significant, demanding ethical questions and problems. My approach highlights sex robot response-ability, a crucial concept for many feminist philosophers, who, like Kelly Oliver, argue that the capacity to respond produces responsibility.³¹ My commitment to a feminist relational ontological approach that regards matter as responsive and relational first and foremost, keeps me preoccupied with particular objects in particular settings, contexts and scenarios. It brings me back to my opening question: What do sex robots want?



Figure 1: Roxxy by TrueCompanion



Figure 2: Matt McMullen, founder and CEO of Realbotix and Abyss Creations, and Harmony

What do existing sex robots Harmony and Roxxy³² want? Their mouths are open and waiting. Their eyes are glazed and heavy lidded, appearing drowsy, lustful, or, in the case of Roxxy, confused or sedated. Their legs are splayed to accommodate another body and provide access to their orifices; their arms are spread wide. Their nipples are ever erect. Their clothing, if any, is tight and often transparent or askew, exposing a breast or buttock. Everything about these early models adopts and reifies the iconography of pornography.³³ These utilitarian bodies are unequivocal about their purpose. They present users with a potently purified, singular, all-consuming heteronormative fantasy of desire, desire for him.³⁴ Sex robots are consumed with the desire to receive users' words, caresses, body parts and fluids. An important feature of sex robots is their ability to perform pleasure in passivity, to be an aroused receptacle.³⁵ They want to be looked at,

approached, spoken to, touched, caressed, fondled, penetrated, physically manipulated, even photographed.³⁶ They want nothing, anything, everything.

Harmony is a robotic head that can be attached to any of the manufacturer's lifelike RealDoll bodies. Indeed, sex robots, as they currently exist, are (barely) animated sex dolls with limited AI capabilities. As a result, for all the anxiety attending sex robots, sex robots (currently) exist mainly in the imagination. Harmony can blink and respond to basic questions, but her body (when her head is attached to one) remains an inanimate ReallDoll. The dolls' bodies are tellingly customizable: body measurements, along with "eye color, makeup style, breast options, vaginal style" are all modifiable.³⁷ Roxxy is a full body sex robot that has similar options: "hair style," "hair colour," "skin tone," "fingernail and toenail style," "pubic hair colour and style." Customization is the watchword of sex robots. As the True Companion website advertises, they

have been designing "Roxxy TrueCompanion," your TrueCompanion.com sex robot, for many years, making sure that she: knows your name, your likes and dislikes, can carry on a discussion and expresses her love to you and be your loving friend. She can talk to you, listen to you and feel your touch. She can even have an orgasm! . . . She is also anatomically consistent with a human, so you can have a talk or have sex. She is "Always Turned On and Ready to Talk or Play!" Have a Conversation or Sex – It is Up to You!³⁸

Roxxy is "anatomically consistent with a human" and presents opportunities for talk or sex offering an either/or logic that is comical in its blunt reproduction of mechanistic attitudes toward companionship and sexuality.³⁹

Sex robots bring the logic of biocapitalism to bear on sexuality, offering new ways to commodify bodies and relations.⁴⁰ As commodities, sex robots are at once representations and embodiments of sexuality and desire designed according to market forces, and, as such, they ape sexuality as dictated by one of the most lucrative representation industries in the world: pornography.⁴¹ The sex dolls that are the basis for Harmony are designed according to quantitative research on male heterosexual aesthetic preferences.⁴² This has been a highly profitable approach, resulting in a multimillion-pound sex doll industry.⁴³ While the economic rewards of this design model are high, designing for normative male desire has produced significant limitations. As Sullins points out, a “rather obvious critique of the sex robots that have been built is that they are rather grotesque caricatures of the human form that almost mock the female body in ways that seem to be designed to alienate and intimidate women. These dolls do not live up to the challenge roboethics has made to be imaginative, playful, and, most importantly, friendly with the way robots are designed to interact with people.”⁴⁴ What might robot desire and pleasure be or look like beyond the narrow parameters of heteronormative masculine desire? Such questions require imagination beyond that offered by the current generation of sex robot designers.

Popular film and television offer different, but related visions of sex robot design. Fictional robots (typically gendered female) designed for companionship and sex often want revenge (Westworld, Ex Machina, Humans), freedom (Humans, Ex Machina) and love (Zoe, Blade Runner, Westworld, Humans). The figure of the dangerous, often vengeful rogue robot is key for robot revolution tropes, a powerful touchstone within the popular robot imaginary. Fictional representations and news media have produced a robust

feedback loop of terrifying scenarios and predictions about the apocalyptic potential of robot development.⁴⁵ Despite the incredible range of robots (industrial, domestic, medical, military, etc.), nightmare predictions tend to cluster around humanoid robots and the fantasy of uncanny human machines, at once seductive, deceptive and dangerous (Terminator, Westworld, Ex Machina, I, Robot, Blade Runner, Alien). Similarly, sex robot reporting often stresses the negative transformative potential of the objects, suggesting that they could irrevocably alter human sexuality.⁴⁶ However, as discussed above, existing and emerging sex robots are more likely to reinscribe normative sexuality than threaten it. They imitate and reproduce “human” (that is, heteronormative, male, white, able-bodied) sexuality, representing and reproducing desirability as petite, light-skinned, normatively embodied, young and female. They are mimetic machines that reproduce and perpetuate the culture that creates and uses them,⁴⁷ affirming humanist binaries even as media cast these robots as disruptors and destabilizers of human/machine distinctions.

Many actual sex robot users who have discussed their dolls or robots in documentaries claim to treat them like “real” women, the implication being they interpret “real women” as robots: predetermined, knowable functional objects.⁴⁸ In Anatomy of a Robot, Despina Kakoudaki argues, “The artificial female body is sexy and sexually seductive and more sexually available somehow not despite its mechanicity but precisely *because* it is mechanical.”⁴⁹ For Kakoudaki, “mechanical women are sex. They are embodied abstractions of the mechanical workings of sexuality in ways that can be seen, in their visual depictions and narrative range, rather than in ways that have to remain allegorical, as with the sublimations that occur in the representation of artificial men.”⁵⁰ According to this logic, Harmony and Roxxy are the predictable embodiment of the

associations between female sexuality and the mechanical. In the case of robots, the sociobiological arguments that seek to naturalize gendered behaviour cannot apply. These objects are designed for and by (particular) human beings; like any representation, they emerge out of their creators' desires. This is not to say, however, that this desire is transparently communicated. Like any representation, once created, they have representational powers and implications that can exceed or evade their creators' intentions. Nonetheless, it is important to keep their representational status front and centre when reading their ethical and political potential, to remember that every representational element is carefully selected: every eyelash is chosen and positioned; every skin tone is mixed to a formula; every removable vaginal sleeve or tongue is made to specifications. Consequently, sex robot panic is misdirected critique. It focuses on a particular manifestation of patriarchal heteronormativity that produces discomfiting affects, largely, I would argue, for its transparent literalization of sex and gender norms that are usually more discreetly represented and tacitly endorsed throughout popular culture. Sex robots (and sex dolls) are instructively uncanny, not only for their synthetic verisimilitude, but for their embodiment of cultural norms; they reiterate humanist racialized heteronormativity, orienting user sexuality as they claim to serve and satisfy it.

Their efforts at "diversity" notwithstanding, which include a range of skin tones and eye colours, sex robots effectively eliminate difference. In spite of their fundamental non-humanness, sex robots are designed to be familiar. They seek an ethic of sameness in which the desiring "I" encounters a to-be-desired object, producing a sleek, frictionless dyad in which what "I" want is what "she" is. There is no possibility of strangeness, mystery, discord or tension. The sex robot, even more so than the sex doll, is

fundamentally knowable, designed with the goal of a perfect fit between desiring subject and desired object. The fantasy of the (hetero)sexual couple as a seamless and harmonious dyad -- a fantasy evoked in the name of McMullen's prototype, "Harmony," -- brings to mind Margaret Atwood's poetic depiction of heterosexual coupling as the coming together of disparate, yet complementary parts. In typical Atwood fashion, what begins as a simile comparing romantic union to a secure (albeit ominous) fastener quickly transforms into a metonymic image of violation:

you fit into me

like a hook into an eye

a fish hook

an open eye. (1971)⁵¹

Atwood's image of disturbing violence provides a suitable introduction for the second part of my analysis, which looks to representational texts that grapple with the (often violent) patriarchal heteronormative logic that underlies sex robot design. Though these representations may not offer alternatives to this logic, they expose its dependence on reductive myths and norms by offering the flipside of sexual desire (according to those restrictive norms). Sex slaves become vengeful murderers and seductive bodies become monstrous threats when sex robots fail to function as programmed, putting themselves to queer use as deviant matter. They perform queer animacy as a "veering- away from dominant ontologies and the normativities they promulgate" Though sex robots currently on the market disavow the queer animacy of the nonhuman, the sex robot art I discuss below imagines queer objects as liminal, intra-active matter produced via relations as

opposed to for relating. These entities are, like all intra-active matter, unpredictably responsive, affecting and affected, agential and inert.

Part 2: Imagining⁵² Sex Robots

Jordan Wolfson's robotic installation, "Female Figure" (2014), is a fitting complement to Atwood's poem for its discomfiting exploration of heteronormative desire as violence. At the heart of the installation is a female-gendered robot whose hypersexualized posture – arched back, thrust out breasts and backside – is accentuated by a white bodysuit – reminiscent of a playboy bunny costume – and thigh-high stiletto boots. A long blonde wig extends past the robot's waist, swaying as she dances to Lady Gaga and Paul Simon (see figure 3). The robot's aesthetic features and movements communicate sexual availability, desire and desirability. However, there are a number of destabilizing features that make the robot as much a figure of horror as desire: the robot is attached to a mirrored wall with a thick metal rod that extends from its chest; it has motion sensors that allow it to make eye contact and track visitors' movements; its mechanical hardware is visible at the elbows and shoulders; its surface is covered in grimy smears; it wears a green witch mask and has pointed teeth. The stained costume reads as evidence of violence and her watchful gaze and pointed teeth are threatening. Is she a monster disguised as a desirable woman or vice versa? Seen from behind, her figure seems designed to provoke desire, but the incongruent elements – the dirt on her body and clothes; the visibly mechanical joints, the mask and teeth – alert the viewer to the robot's difference: she is not a straightforward manifestation of the artificial woman designed according to masculine desire like her aesthetic inspiration, Holli Would (a cartoon character from the combination live action/animation film Cool World [1992]). Like

Wolfson's Female Figure, Holli Would dances in her white "bunny suit" and matching thigh-high boots (see [figure 4](#)); however, her dance is performed facing her multiple audiences: the film's viewers, as well as Holli's diegetic audience of slathering "male" cartoon animals and a lustfully mesmerized Gabriel Byrne. While Holli Would is a cartoon manifestation of male desire (barely dressed and perpetually pouting, posing, writhing and giggling), Female Figure is the horror version of the cartoon sex object. Instead of dancing for the viewer, she dances for herself, her body attached to a mirror by a metal pole, producing the eerie effect of a body impaled, yet alive, trapped, yet menacing. Though she faces her own reflection, her eyes track visitors in the mirror as they approach. Her red lips frame a mouth full of small, pointed teeth, recalling the popular horror trope of the vagina dentata. Indeed, in many ways, Wolfson's robotic installation is the epitome of what Barbara Creed terms the "monstrous feminine,"⁵³ threatening her audiences with castration and death. What does Female Figure want? To fuck? To kill? To dance? To watch and be watched? She meets the viewer's gaze without flinching. She watches herself dance, and she watches the viewer watch her dance. She bears traces of struggle and violence on her body and clothing. Her disturbing dance performance encourages the viewer to gaze and at the same time challenges that gaze.⁵⁴ She is unnerving, to put it mildly.

The robot in "Female Figure" dares the spectator to engage, to watch, to desire. She is sexual and horrifying in equal measure, unknown and unknowable. She recalls Jose Munoz's remarks about interpreting queer inhumanism as at once "exhilarating and exhausting. It is a ceaseless endeavor, a continuous straining to make sense of something else that is never fully knowable. . . . The fact that this thing we call the inhuman is never fully knowable, because of our own stuckness within humanity, makes it a kind of knowing

that is incommensurable with the protocols of human knowledge production.”⁵⁵ “Female Figure” powerfully reminds viewers of our own “stuckness,” but intimates at the queer animacies that exist beyond our ken. She reminds us of the “arduous modes of relationality that persist in the world despite stratifying demarcations and taxonomies of being, classifications that are bent on the siloing of particularity and on the denigrating of any expansive idea of the common and communism.”⁵⁶ She is threatening and trapped, animate and synthetic, queerly deviant, incommensurate, and “never fully knowable.”



Figure 3: Female Figure stares at the viewer as she dances.



Figure 4: Holli Would dancing for multiple audiences in Cool World

Like “Female Figure,” the robots in Alex Garland’s film Ex Machina⁵⁷ -- which was released the same year as Wolfson’s installation -- engage the “monstrous feminine” trope. However, in Garland’s film, racial difference compounds the species difference that separates generic human from machine object. The film concerns a megalomaniac robot developer, Nathan, and the naïve programmer, Caleb, whom Nathan has brought to his remote northern compound to conduct a Turing test on his latest prototype, Ava. While Ava is the object of Caleb’s increasingly enamored scrutiny, Nathan’s robotic servant, Kyoko, passes as human for much of the film. Kyoko performs a range of domestic, personal, intimate tasks for Nathan, including cooking, cleaning, serving, fucking, and, much like Female Figure, dancing. Nathan has clearly choreographed her disco moves and he even joins the dance routine, which is illuminated by flashing red and blue lights embedded in the cut-out portions of a sculptured wall (see figure 5). The effect is deeply embodied. The pulsing colors, sculpturally patterned walls and rhythmic bodies evoke pumping blood, animal viscera, cellular life, positioning viewers inside a vital, synthetic body, composed of organic/inorganic entanglements. Yet despite the many visual, tactile connections between the organic and inorganic humanoids in the film, Nathan regards Kyoko and Ava as manufactured objects, nonhuman others, and is unable to conceive of them as agential, response-able matter, with all the responsibilities and obligations such agency entails. Though he hopes Ava will pass the Turing test, he regards her vitality as an illusion, clearly differentiating between her appearance and her “true” ontology. To his peril, he regards himself as set apart, as a Man surrounded by, but separate from, (feminized) machines. The vitality of Nathan and Kyoko’s dance sequence is produced through electronic signals, synthetic and organic matter, intra-acting networks and forces

that Nathan presumes to control from an external position of owner-master. However, his underestimation of nonhuman vitality, desire and response-ability is his downfall; the film concludes with his murder, orchestrated through the unanticipated affectivity, agency and relationality, in short, the vitality of the two robots. Ava and Kyoko engage in queer use in both senses Ahmed describes: they are unintended “users” of their own bodies, which they put to unintended uses, namely retribution and escape.⁵⁸



Figure 5: Kyoko and Nathan dance

Kyoko passes as human until near the film’s conclusion when she strips off her human mask to expose the structure beneath (see [figure 6](#)), a revelation of vaguely threatening mechanicity that recalls “Female Figure’s” witchy mask. In both cases, the inscription of inhuman elements violates the robot’s illusion of humanness. Like “Female Figure,” Kyoko evokes the “monstrous feminine,” figured in this case as a racialized femme robot whose “monstrosity” (the grotesque image of her peeled-back face haunts Caleb’s dreams) emerges not only as a disruption of the human/machine binary, but as a revelation of how such a binary is constructed through racial logics.

Prior to this reveal, Caleb and, presumably, most spectators have regarded Kyoko as human, despite the fact that she functions like a machine: she is denied conversation and performs domestic and sexual labor as instructed. Kyoko’s racial otherness facilitates her passing as human since Nathan uses her Asian features to naturalize her ornamental status

and remote subservience. According to Anne Cheng, what she terms the “yellow woman,”⁵⁹ like the Black woman, occupies a position of “perihumanity,” a “form of interstitial life . . . in intimate relation more to objects than to animal life, and with a body that is not so much disaggregated as thickly encrusted.”⁶⁰ In other words, the Eurocentric perception of the “yellow woman” as an ornamental object, a “synthetic being, relegated to the margins of modernity and discounted as a nonperson,”⁶¹ allows Kyoko to hide in plain sight. Her “synthetic being” is normalized by the Eurocentric humanism that shapes the film’s depictions of “real” humans and inhuman objects (robots, “yellow” and Black women, and so on). Early on, Nathan explains to Caleb that there is no need to speak or be kind to Kyoko since she cannot understand any English; she is merely a servant and should be treated as such. Kyoko’s intersectional status as visibly female and non-white naturalizes her servitude: “the yellow woman is a priori a living doll.”⁶² Unlike Ava, whose whiteness legitimizes her role as the film’s primary object of desire and narrative catalyst, Kyoko non-white status relegates her to the background; as a result, the film effectively differentiates between Kyoko as (sex) slave robot and Ava as companion robot. As Danielle Wong argues, Kyoko’s blank, expressionless face and apparent lack of volition render the “Japanese” servant a nonhuman laborer, “figure[ing] her as a machine, even without the revelation that she was programmed by Nathan.”⁶³

In effect, robot form functions as both symptom and cause of Nathan’s narcissism and megalomania: Kyoko is designed to be subservient and her materiality facilitates her subservience. The robots are reflections of their creator’s desires, which in turn are reflections of cultural norms that associate Asian (or “yellow,” in Cheng’s terms) female bodies with servitude and deny women of colour human status. When Caleb discovers

video footage of Nathan and the robots that preceded Ava, we see that the first robot prototype was black and as the prototypes increase in functionality they become increasingly white,⁶⁴ with Ava, the most advanced model, played by Swedish actress Alicia Vikander. As their ostensible servitude diminishes and their agencies increase, their synthetic skin lightens, a telling, if disheartening reproduction of the racist hierarchies that structure the cultures, both diegetic and extradiegetic, that have produced these robots.



Figure 6: Kyoko's robot interior exposed

The mimetic quality of these imagined sexual machines, “Female Figure,” Ava and Kyoko, is further signalled by the environments they occupy, spaces full of mirrors, glass walls, and other reflective surfaces.⁶⁵ Ava’s final discovery of her dismantled, abandoned prototypes takes place in a room of mirrored wardrobes, driving home their status as imitative objects. As she strips the synthetic skin off her precursors and attaches it to her own mechanical body, she gazes at her image, watching herself achieve human verisimilitude.⁶⁶ Female Figure also gazes at herself as she dances, bound as she is to her own reflection by the metal rod in her torso. These mirrors and other reflective surfaces remind us that sexualized robots depend on mimesis for effects (and affects). Beyond

simply mirroring particular people or bodies, which sex robots do as well,⁶⁷ they reflect cultural norms and hegemonic structures.

Mimetic design reproduces the limitations of humanist ideology. As Lucy Suchman explains, “mirroring” remains “a guiding trope for figuring human–nonhuman encounters: a form of relation that privileges vision, and looks to find in the Other a differently embodied reproduction of the Self.”⁶⁸ Mimetic design reproduces the narcissism of self/other, familiar/strange epistemologies. In her analysis of the entangled materiality of being, feminist theorist Karen Barad remarks on the limitations of these tired dualistic philosophical models: “Caught once again looking at mirrors, it is either the face of transcendence or our own image. It is as if there are no alternative ways to conceptualize matter: the only options seem to be the naiveté of empiricism or the same old narcissistic bedtime stories.”⁶⁹ Barad’s alternative approach interprets matter not as “a given or a mere effect of human agency”⁷⁰ or “a fixed essence; rather, matter is substance in its intra-active becoming—not a thing but a doing, a congealing of agency.”⁷¹ Rather than analysing more-than-human worlds according to anthropocentric mimetic models, she proposes diffraction as a guiding epistemology. As Suchman explains, Barad’s perspective “requires extricating ourselves from a tradition in which our interest in nonhumans is for either their reflective or contrastive properties vis-a-vis (a certain figure of) our own, in favour of an attention to ontologies that radically – but always contingently – reconfigure the boundaries of where we stop, and the rest begins.”⁷² This approach highlights how representationalism impedes vibrant robots; fixated on a mimetic verisimilitude that reproduces female sexuality as the other to male desire, sex robots, as currently conceived, can never be more than dull objects. While robot fictions may offer glimpses of sexualized

robots as “intra-active” material with the capacity to move beyond “mimetic and representational commitments,” they remind viewers of sex robot realities, their current existence as material entities bound, in “Female Figure’s” case quite literally, to reflective representational commitments.

Shape, look, poseability, feel, sound, etc. determines what sex robots are, who and what they are for, what (and who) they want. So far, their audience has been narrow: primarily heterosexual, white, middle-class (sex robots average around US\$10,000), able-bodied, young to middle-aged men. What might these representations look like if they were designed for and by queer, trans, black, elderly and/or disabled women? This is difficult to imagine, not only because such subject positions are so rarely represented in Euro-Western culture and, as a result, the representational precedents are far less common than those produced for and by able-bodied white men, but also because of the prohibitive costs of producing robots. The cultural and literal capital, personnel (investors, engineers, designers), equipment and space required to manufacture a robot of any kind inhibits radical or subversive product design. Even the imaginary representations I explore above are the result of significant financial investment: “Female Figure” reportedly cost half a million dollars (US) to produce; *Ex Machina*’s budget was US\$15 million. Just as there is a paucity of women and BIPOC filmmakers, showrunners, and visual artists with access to these kinds of resources, so too is there a lack of women and BIPOC involved in robot design, including sex robot design.

Fiction, on the other hand, demands less capital investment. The queer feminist writer Jeanette Winterson offers alternative figurations of the sex robot in her 2009 novel *The Stone Gods*, which employs many familiar SF tropes – an ailing home planet (“Orbus”),

bioengineering gone wild, highly successful humanoid robots, an intergalactic search for a new, unspoilt home—but with a twist. As Luna Dolezal points out, The Stone Gods is not “earnest science fiction,” but a satirical reimagining that uses irony and humour “to expose and ridicule not only forms of the speculative genre itself, but also current trends in gender discrepancies arising from the use and development of aesthetic biotechnologies.”⁷³ Among the novel’s many queer, satirical innovations is its invention of Spike, a machine being that is sexual and agentic, yet steadfastly inhuman (“neural, not limbic”),⁷⁴ incapable of feeling emotions, yet powerfully response-able. Gendered female yet professing to be bored by the “uninteresting” “human concept” of gender,⁷⁵ this queer object seduces the novel’s lesbian narrator, Billie, who is moved by Spike’s overtures in spite of herself.

Initially, the novel depicts Spike according to an ethic of sameness, describing her appearance only insofar as it imitates a human likeness. When Billie first encounters Spike, she describes her as “incredibly sexy” and “convincing,”⁷⁶ providing no details of her inhuman materiality. Like sex robots, mimetic representation is the goal of “Robo sapiens,” such as Spike, which are “the first artificial creature that looks and acts human.”⁷⁷ When Billie describes Spike’s visual appearance, it is according to familiar normative definitions of human attractiveness, and the banality of this normative presentation is echoed in the blandness of Winterson’s expression: “Green eyes, dark hair, olive skin. Perfect because she had been designed perfect.”⁷⁸ However, as Billie begins a sexual relationship with the robot (a distinctly queer use since sex with Robo sapiens is prohibited by law), Billie’s representations include much more careful attention to her companion’s material specificity: “My lover is made of a meta-material, a polymer tough as metal, but pliable and

flexible and capable of heating and cooling, just like human skin. She has an articulated titanium skeleton and fibre-optic neural highways. She has no limbic system because she is not designed to feel emotion.”⁷⁹ Response-able, agentic materiality is at the forefront of their affective, sensual entanglement and Billie comes to regard Spike, not as a convincing imitation of a “sexy” human, but as “unknown, uncharted, different in every way from me, another life-form, another planet, another chance.”⁸⁰ Significantly, it is Spike’s difference, rather than her familiarity that inspires Billie’s new hope for the future. Winterson depicts the two entities, Billie and Spike, as materially, sensually response-able and responsive to one another’s proximity in ways that far exceed the design affordances and mimetic illusion of sex robots.

Billie and Spike (along with a handful of other misfits) are tasked with investigating an uncannily familiar distant planet, termed “Planet Blue,” that appears to have the life-sustaining resources Orbus’s inhabitants have all but consumed or destroyed. When the mission goes awry and Spike and Billie are shipwrecked on Planet Blue,⁸¹ the pair struggle to survive as the planet appears to be heading for an ice age. As the pair huddle together in a cave anticipating their different yet shared demises, Spike offers an image of material enmeshment that speaks to the entanglement of difference, desire and matter: “One day, tens of millions of years from now, someone will find me rusted into the mud of a world they have never seen, and when they crumble me between their fingers, it will be you they find.”⁸² To conserve her waning energy stores, Spike requests that she be dismembered, until she is just a head cradled in Billie’s lap. Spike’s commitment to presence, to response-ability regardless of form, emphasizes an “ethics of receptivity”⁸³ that refuses distinctions between being and relating. Bodiless and immobile Spike commits to her status as queer

object and the radical possibilities of queer failure. According to all markers, their exploratory mission has utterly collapsed, but this is a robust, celebratory collapse that will protect the planet (at least temporarily) from human invasion and nurtures the pair's queer commitment.⁸⁴

In The Stone Gods, the formal elements of the imagined sex robots do not, indeed cannot, maintain the prominence of “Female Figure,” Kyoko and Ava’s design. As non-visual texts, novels produce a different relationship between readers and the materiality of their narrative subjects. Dialogue, imagery, metaphor, and a whole host of poetic devices convey the materiality of fictional robots indirectly, often in ways that conveniently distract from the problems produced by the particularities of actual robot embodiment. The reader knows very little about Spike’s specific embodiment, allowing Winterson to attach an indistinct materiality to more metaphysical questions of love and existence. Nonetheless, the novel’s final image of “Spike as head,” a queer object lovingly cradled by Billie, offers a powerful image of queer failure as radical possibility, of response-able, agential robot matter.

Just a/head: Queer Failures/Queer Futures



Figure 7: The Harmony head on display at the Dublin

Science Museum

In May 2019 I visited Trinity College Dublin's Science Gallery exhibition "Perfection." The exhibition included a range of artworks and artifacts reflecting and exploring body and gene augmentation. To my surprise, Harmony was one of the objects on display. Or, more precisely, Harmony's head was on display, impaled on a metal rod, its eyelids fluttering and lips twitching (see [figure 7](#)). I was given the opportunity to interact with the head by directing questions to its iPad interface. Harmony appeared uninterested in the interaction, but my questions were admittedly boring. Her head shifted, her mouth moved, her ears wobbled, but her comments -- when they did come -- were generic and noncommittal and she didn't meet my gaze.

In [The Queer Art of Failure](#), Jack Halberstam argues that "success in a heteronormative, capitalist society equates too easily to specific forms of reproductive maturity combined with wealth accumulation."⁸⁵ The queer art of failure interrupts heteronormativity not merely as it pertains to (gendered and racialized) sexuality, but to generic, normative ways of being and doing that conflate success with neoliberal capitalism. The queer art of failure references "a grammar of possibility" able to express "a basic desire to live life otherwise."⁸⁶ As Halberstam explains, "Under certain circumstances failing, losing, forgetting, unmaking, undoing, unbecoming, not knowing may in fact offer more creative, more cooperative, more surprising ways of being in the world."⁸⁷ What would it mean for a sex robot to fail? Lack of sales? Mechanical malfunction? A failure to elicit arousal or satisfaction? When I think of the affirmative potential of sex robot failure, I picture Harmony's disembodied, yet animated head in relation to Spike's nearly expired head, cradled and fading. Looking at Harmony's head with its transparent skull, its darkly outlined pouting lips and heavy-lidded eyes, sex did not leap to mind. The robot's gaze was

always aimed somewhere else, as if she was distracted by something more significant than her human interlocutors. Occasionally she registered my questions and offered a few pat answers that suggested her sensing mechanisms and cognition were, like her gaze, directed elsewhere, focused on some matter or energy I didn't see or couldn't register.

The significant risk of sex robots is not, as some robot ethicists suggest, that they will alter the politics of sex and desire, but rather, that they will further inscribe the hegemony of exploitative heteronormativity that is part and parcel of the hegemonic "genre" of the human, along with all of the harmful gender and racial dynamics that this genre demands. My inquiry has investigated the degree to which imaginary sex robots can offer a "grammar of possibility" that could disrupt this pattern of inscription and "articulate an alternative vision of life, love, and labor"⁸⁸ that disrupts, or at least disorients the dominant human hegemony. These speculative objects, created via silicon, pixels, or language, offer glimpses of sex robots as intra-active, response-able material, emerging via relations, rather than for them. Though their emergence may not evade "the hooks of hegemony,"⁸⁹ as Halberstam hopes, on occasion they can expose, and perhaps even soothe the wounds that result from the violent "hook and eye" logics of heteronormative relations. Imagining and interpreting the vibrant potential of robots will not rewrite the restrictive boundaries that contain "the human" as a zone of violent exclusion, but such objects have the potential to highlight the violence of border maintenance (whether for transgressors like Ava and Kyoko, or the transgressed like Nathan and Caleb), and, on occasion, subvert binary logics through queer (mis)use. While "Female Figure" and Ex Machina show spectators the violence and terror of heteronormative "success" in their depictions of vibrant machine matter that (to some

degree) achieves normative gendered, racialized, sexualized “human” vitality, The Stone Gods offers a vision of queer failure, depicting intra-active matter becoming human, becoming machine, even becoming posthumous.

I close by returning to my opening question. What do sex robots want? I’ve posed and investigated this question ironically and sincerely in an effort to draw attention to the ways sex robot design and interpretation tend to rely on narrow understandings of both humans and robots alike. The mimetic emphasis of sex robot design tends to undermine their agential potential, producing animated objects built on a heteronormative logic of sameness and predictability that disavows difference and vibrancy. “Female Figure,” Ex Machina and The Stone Gods both engage and disrupt this logic in their depictions of sex robots as queer, vibrant matter. As much as Ex Machina, “Female Figure,” and Harmony’s head reproduce hegemonic boundaries and orientations, they also help draw attention to the deeply worn paths they reinscribe and the violence of that (re)inscription. And at the same time, these robots exhibit a degree of queer animacy, intra-active becoming, subversive want. Harmony’s head, twitching and pouting, eyelids hovering somewhere between slumber and attention, offered a more-than-human animacy that is ostensibly for a particular user’s pleasure, but her responsive agency, as I encountered it, could easily be attached to any other matter that her sensors detected. These speculative bodies, on rods or spikes, dismembered, in glass cages or mirrored closets provide glimpses of unruly, relational matter, endlessly emerging.

Notes

¹ My terminology draws on Sylvia Wynter's reference to "Man -- overrepresented as the generic, ostensibly supracultural human" ("Unsettling the Coloniality of Being/Power/Truth/Freedom: Towards the Human, After Man, Its Overrepresentation--An Argument," The New Centennial Review 3:3 (2003): 257-337, p. 288). These opening comments draw on a range of often overlapping approaches, including feminist materialism, critical race studies, animal studies, critical posthumanism and Indigenous studies, committed to exposing and eradicating the Eurocentrism, anthropocentrism, speciesism and androcentrism of Enlightenment-based humanisms.

² W. J. T. Mitchell, What Do Pictures Want?: The Lives and Loves of Images (Chicago: University of Chicago Press, 2004), p. xv.

³ Though he refers to generic "people" throughout his book, Mitchell's discussion clearly concerns a particular population, one marked by a Euro-Western approach to images, art, objects and non-living matter more generally. As Indigenous scholars have demonstrated, this Eurocentric approach is too often treated as universal by scholars of culture and philosophy, who tend to overlook Indigenous epistemologies and ontologies when theorizing the relationships between "people" and representations. Indeed, Mitchell gestures toward non-European perspectives with a brief, dismissive nod toward atavistic "naïve animism" (above, n. 2, p. 7) but fails to engage with cultural traditions that see continuities between animate/inanimate worlds, agency in inanimate matter and a *literal* kinship between human animals and the land (Venessa Watts, "Indigenous place-thought & agency amongst humans and non humans (First Woman and Sky Woman go on a European world tour!)," Decolonization: Indigeneity, Education and Society 2:1 (2013): 20-34, p. 21). The material I discuss in this essay is distinctly Eurocentric and Mitchell's frameworks help initiate critical interpretation. Nonetheless, the parameters of this frame are worth noting: these representations are (often problematically) determined by what Watts identifies as an "epistemological-ontological (Euro-Western)" frame (p. 21) in which "thought and ideas are reserved for the one perceiving – humans. All other objects, actants, or beings in the world may have an essence or an interconnection with humans, but their ability to perceive is null or limited to instinctual reactions" (p. 24). At its heart, this framework is profoundly arrogant, assuming that which the philosopher, critic, scholar, user, *human*, cannot perceive does not exist.

⁴ Mitchell, What Do Pictures Want? (above, n. 2), p. 7.

⁵ Mitchell, What Do Pictures Want? (above, n. 2), 10.

⁶ Mitchell, What Do Pictures Want? (above, n. 2), 11.

⁷ Jane Bennett, Vibrant Matter: A Political Ecology of Things (Durham, NC: Duke University Press, 2010), 2.

⁸ Bill Brown, "Thing Theory," Critical Inquiry 28 (2001): 1-16, p. 5.

⁹ This is only a partial dimension of their materiality. One could also trace the material history of sex robot embodiment, that is, the source of the silicon, chips, codes, batteries, and so on, that make up these entities, as well the human labour that produces them. As Neda Atanasoki and Kalinda Vora explore in *Surrogate Humanity*, technoliberalism relies on "invisibilized labor," outsourced exploitation for its magical effects (6). This aspect of robot materiality is beyond the scope of this essay, but excellent work has been done in the

area. See, for example, Atanasoki and Vora *Surrogate Humanity: Race, Robots, and the Politics of Technological Futures* (Durham, NC: Duke University Press, 2019).

¹⁰ As Jami Weinstein, Clare Colebrook and others have pointed out, the perpetuation of life as a cherished concept even within critical posthumanist discourses is a reminder of the persistence of humanism despite critical efforts to repudiate its limitations. Weinstein argues that when “the concept life is maintained as an unchallenged premise and a non-negotiable given — above all, life itself is valued and must be preserved and protected” (Jami Weinstein, “Posthumously Queer,” *GLQ: A Journal of Lesbian and Gay Studies* 21:2-3 (2015): 236-238, p. 236) the radical potential of posthumanism is muted, at best. Both Weinstein and Colebrook have argued in favour of “posthumous,” as opposed to “posthuman,” theory. As Weinstein explains, “I have shifted my focus to the remnants of humanism buried in the concept life itself. We could say that life as we know it is a habit — one that strictly frames the limits of who gets interpreted as Human, and one that must be nervously reiterated in order to reinforce those limits. As such, it may be more apt to talk in terms of the posthumous than posthuman, inhuman, or nonhuman, thus deframing the manifold investments in life, breaking the habit, and refuting humanism more exhaustively. Posthumous life pushes the envelope by exposing the legacies of humanism still haunting us in the specter of life — even in our posthuman theories and analyses” (“Posthumously Queer,” p. 237). See also, Colebrook and Weinstein’s edited collection *Posthumous Life: Theorizing Beyond the Posthuman* (New York: Columbia University Press, 2017).

¹¹ Ahmed’s term is one of many that point to the queer potential of nonhuman/nonliving matter (Sara Ahmed, “Queer Use.” Lecture presented at LGBTQ+@cam, Cambridge, November 7, 2018 <https://feministkilljoys.com/2018/11/08/queer-use/>). One finds similarly affirmative explorations of objects, things, matter as agents of radical possibility in the work of Mel Chen and Uri McMillan.

¹² Here I draw specifically on Mel Chen’s use of *animacy* to develop the approach outlined in Bennett’s *Vibrant Matter* “by digging into animacy as a specific kind of affective and material construct that is not only nonneutral in relation to animals, humans, and living and dead things, but is shaped by race and sexuality, mapping various biopolitical realizations of animacy in the contemporary culture of the United States” (Mel Chen, *Animacies: Biopolitics, Racial Mattering, and Queer Affect*, (Durham and London: Duke University Press, 2012), p. 5).

¹³ Here I distinguish between robots designed and marketed for sex and artificial humans (implicitly) capable of sex as represented in a wide range of media. For example, sex robot philosophers frequently reference *The Stepford Wives*, *Westworld* and *Her*.

¹⁴ For example, John Danaher and Neil McArthur’s collection *Robot Sex: Social and Ethical Implications*, which is one of the few book-length works on the topic, offers little to no analysis of the particularities of sex robot form. Though Danaher’s contribution to the collection, “Should We Be Thinking about Robot Sex,” provides a brief description of existing sex robot Roxxy and the RealDoll manufacturer’s plans for AI development, this material is not obviously connected to the essay’s primary philosophical questions and concerns. The majority of the collection’s essays employ generalizations, abstract queries and thought experiments to consider the potential harms and benefits of sex robots. See John Danaher Neil McArthur, eds, *Robot Sex: Social and Ethical Implications* (London: MIT Press, 2017).

¹⁵ Dan Norman, The Design of Everyday Things: Revised and Expanded Edition (New York: Basic Books, 2013), p. 11.

¹⁶ Norman, The Design of Everyday Things (above, n. 14), p. 13.

¹⁷ Both of these examples appear in Ahmed's "Queer Use" lecture (above, n. 10). Theories of queer use, "queer objecthood" (Uri McMillan's term for "matter gone deviant") ("Objecthood, Avatars, and the Limits of the Human," GLQ: A Journal of Lesbian and Gay Studies 21:2-3 (2017): 224-227, p. 223) and queer "animate transgressions, [that] violat[e] proper intimacies (including between humans and nonhuman things)" are helpful reminders that not only organic bodies are emergent; insensate matter is also unfixed and emergent, opening up myriad possibilities for queer (re)animation (Mel Chen, Animacies: Biopolitics, Racial Mattering, and Queer Affect, (Durham and London: Duke University Press, 2012), p. 11).

¹⁸ Emphasis in original. Sara Ahmed, "Queer Use." Lecture presented at LGBTQ+@cam, Cambridge, November 7, 2018 <https://feministkilljoys.com/2018/11/08/queer-use/>, 2018.

¹⁹ See, for example, John Danaher, "Should We Be Thinking about Robot Sex?" in Robot Sex: Social and Ethical Implications, eds. John Danaher and Neil McArthur (London: MIT Press, 2017): 3-14; Kate Devlin, "In Defence of Sex Machines: Why Trying to Ban Sex Robots Is Wrong," The Conversation 17 September 2015, <https://theconversation.com/in-defence-of-sex-machines-why-trying-to-ban-sex-robots-is-wrong-47641>; Mark Migotti and Nicole Wyatt, "On the Very Idea of Sex with Robots" in Robot Sex: Social and Ethical Implications, eds. John Danaher and Neil McArthur (London: MIT Press, 2017): 15-27; John Sullins, "Robots, Love, and Sex: The Ethics of Building a Love Machine," IEEE Transactions on Affective Computing 3:4 (2012): 398-409; Sophie Wennerscheid, "Posthuman Desire in Robotics and Science Fiction" in Love and Sex with Robots: Third International Conference, eds. Adrian David Cheek and David Levy (Gewerbestr. 1: Springer, 2018): 37-50.

²⁰ Sullins, "Robots, Love, and Sex" (above, n. 18), p. 398.

²¹ See, for example, Thomas Beschorner and Florian Krause, "Dolores and Robot Sex: Fragments of Non-Anthropocentric Ethics," Paper presented at the Third International Congress on Love and Sex with Robots, London, 19-20 December 2017; Danaher, "Should We Be Thinking" (above, n. 16); Nicola Döring and Sandra Pöschl, "Sex Toys, Sex Dolls, Sex Robots: Our Under-Researched Bed-Fellows," Sexologies 27 (2018): 51-55; Federica Facchin, Giussy Barbara and Vittorio Cigoli, "Sex Robots: The Irreplaceable Value of Humanity," BMJ (2017): 358; Lily Frank and Sven Nyholm, "Robot Sex and Consent: Is Consent to Sex Between A Robot and a Human Conceivable, Possible, and Desirable?" Artificial Intelligence Law 25 (2017): 305-323; David Levy, "The Ethical Treatment of Artificially Conscious Robots." International Journal of Social Robotics 1:3 (2009): 209-216; Steve Petersen, "Is It Good for Them Too? Ethical Concern for the Sexbots" in Robot Sex: Social and Ethical Implications, eds. John Danaher and Neil McArthur (London: MIT Press, 2017): 155-171; Kathleen Richardson, "The 'Assymmetrical Relationship': Parallels Between Prostitution and the Development of Sex Robots," SIGCAS Computers and Society 45:3 (2015): 290-293; Robert Sparrow, "Robots, Rape, and Representation," International Journal of Social Robotics 9 (2017): 465-477; Litska Strikwerda, "Legal and Moral Implications of Child Sex Robots." in Robot Sex: Social and Ethical Implications, eds. John Danaher and Neil McArthur (London: MIT Press, 2017), 133-151.

²² See, for example, Frank and Nyholm, “Robot Sex and Consent” (above, n. 18); Neil McArthur, “The Case for Sexbots,” in Robot Sex: Social and Ethical Implications, eds. John Danaher and Neil McArthur (London: MIT Press, 2017): 31-45; Strikwerda, “Legal and Moral Implications” (above, n. 18).

²³ See, for example, Mitchell Langcaster-James and Gillian R Bentley, “Beyond the Sex Doll: Post-Human Companionship and the Rise of the ‘Allodoll,’” Robotics 7:62 (2018): 1-20; Thomas Arnold and Matthias Scheutz, “Are We Ready for Sex Robots?” 11th ACM/IEEE International Conference on Human-Robot Interaction, 2016.

²⁴ See Lily Frank and Sven Nyholm, “Robot Sex and Consent” (above, n. 18); Robert Sparrow, “Robots, Rape, and Representation” (above, n. 18); John Sullins, “Robots, Love, and Sex” (above, n. 16).

²⁵ See Veronica Cassidy, “For the Love of Doll(s): A Patriarchal Nightmare of Cyborg Couplings,” English Studies in Canada 42:1-2 (2016): 203-215; Nicola Döring and Sandra Pöschl, “Sex Toys, Sex Dolls, Sex Robots” (above, n. 18); Richardson, “The ‘Asymmetrical Relationship’” (above, n. 18); Noel Sharkey, Aimee van Wynsberghe, Scott Robbins, and E. Hancock, Our Sexual Future with Robots. The Hague: Foundation for Responsible Robotics Consultation Report, 2017, <http://responsiblerobotics.org/wp-content/uploads/2017/07/FRR-Consultation-Report-Our-Sexual-Future-with-robots-Final.pdf>

²⁶ Lily Frank and Sven Nyholm, “Robot Sex and Consent” (above, n. 18); Sinziana Gutiu, “The Robotization of Consent” in Robot law, eds. Calo R et al. (Cheltenham: Edward Elgar Publishing, 2016): 186–212; Robert Sparrow, “Robots, Rape, and Representation” (above, n. 18).

²⁷ There are a few exceptions. In her analysis of Real Dolls -- the precursors to the sex robot Harmony -- Jessica Cassidy considers the significance of their form: “With Barbie-like proportions and perfectly symmetrical Eurocentric features, RealDolls represent Western culture’s fantasy of feminine beauty . . . RealDolls are the product of a dominant white male culture, and they embody its most rigid conventions” (Cassidy, “For the Love of Doll(s)” (above, n. 22), p. 209).

²⁸ Jutta Weber, “Helpless Machines and True Loving Care Givers: A Feminist Critique of Recent Trends in Human-Robot Interaction,” Journal of Information, Communication and Ethics in Society 3 (2005): 209-218, p. 209. Byron Reeves and Clifford Nass’s The Media Equation: How People Treat Computers, Televisions and New Media like Real People and Places has been especially influential for demonstrating the human “tendency to anthropomorphise computers and robots” (Weber 209).

²⁹ Mark Coeckelbergh, “Personal Robots, Appearance, and Human Good: A Methodological Reflection on Roboethics,” International Journal of Social Robotics 1 (2009): 217–221, p. 199.

³⁰ Coeckelbergh, “Personal Robots” (above, n. 26), p. 219.

³¹ Kelly Oliver, Witnessing: Beyond Recognition (Minneapolis: University of Minnesota Press, 2001), p. 15. Response-ability is a key concept for a range of feminist theorists committed to the ethical implications of transformative episto-ontologies. While ethics of care tends to limit its attention to human relations, Barad and Haraway have dissolved humanist boundaries to address the complexity of more-than human entanglements. In *When Species Meet*, Haraway attends to multi-directional, cross-species relationships,

which show that “[H]uman beings are not uniquely obligated to and gifted with responsibility; animals as workers in labs, animals in all their worlds, are response-able in the same sense as people are: that is responsibility is a relationship crafted in intra-action through which entities, subjects and objects come into being” (Donna Haraway, When Species Meet (Minneapolis: University of Minnesota Press, 2008), p. 71). In Karen Barad’s scholarship and Haraway’s more recent work on “tentacular thinking” (Staying with the Trouble: Making Kin in the Chthulucene (Durham, NC: Duke University Press, 2016)) the circle of care is expanded much further; indeed, its parameters are abolished altogether as entanglement and relationality become all encompassing: “We are being churned by the soil, the wind, the foggy mist. A multiplicity, an infinity its specificity, condensed into here-now. Each grain of sand, each bit of soil is diffracted/entangled across spacetime.

Responding – being responsible/response-able – to the thick tangles of spacetime matters that are threaded through us, the places and times from which we came but never arrived and never leave is perhaps what re-turning is about” (Karen Barad, “Diffracting Diffraction: Cutting Together-Apart,” Parallax 20:3 (2014): 168-187, p. 184).

³² My descriptions are based on viewing the documentaries Can Robots Love Us (performed by James Young, aired September 4, 2017, on BBC Three), America Inside Out (episode 3, “Your Brain on Tech,” performed by Katie Couric, aired April 26, 2018, on National Geographic), Beyond Sex Robots: Fact and Fiction (performed by Christopher Trout, aired June 5, 2018 on *Engadget*

<https://www.engadget.com/video/5b1606a5600c9a20b2e40321/>), visiting the manufacturer websites truecompanion.com, realdoll.com, realbotix.com, and meeting Harmony (the head only) at the Trinity Dublin Science Gallery’s “Perfection” exhibition in June 2019.

³³ For more on the “pornographication” or “pornification” of contemporary culture, see Feona Attwood, “Sexed Up: Theorizing the Sexualization of Culture,” Sexualities 9:1 (2006): 77-94, p. 81-2; Brian McNair, Mediated Sex: Pornography and Postmodern Culture (New York: Arnold, 1996); Kaarina Nikunen, Susanna Paasonen and Laura Saarenmaa, eds. Pornification: Sex and Sexuality in Media Culture (Oxford: Berg, 2007).

³⁴ Studies show that sex doll users are almost exclusively heterosexual men and sex robots are being designed for and marketed to the same demographic. For example, Veronica Cassidy reports that “Ninety percent of RealDoll owners are men and almost all purchase female dolls” (Cassidy, “For the Love of Doll(s)” (above, n. 22), p. 204).

³⁵ As McMullen, founder of RealDolls and its robotic offshoot, Realbotix, explains, his company’s sex robot will facilitate “the customizable programming of personality—‘What is she saying to me while I’m doing this? Is she enjoying this? Does she like making me feel this way?’ ... You want to have that illusion that she’s actually talking to you and that she’s got sentience . . . The hope is to create something that will actually arouse someone on an emotional-intellectual level, beyond the physical” (qtd. in Cassidy, “For the Love of Doll(s)” (above, n. 22), p. 204).

³⁶ There are photography series devoted to sex dolls, most commonly RealDolls (the precursors for the sex robot Harmony) by June Korea, Benita Marussen and Stacy Leigh. Sex dolls and sex robots share the same aesthetic since the latter are largely roboticized sex dolls.

³⁷ <https://www.realdoll.com/product/build-your-realdoll/>

³⁸ <http://www.truecompanion.com/shop/about-us>

³⁹ While there is a great deal of scholarship exploring the idea of human-robot love, at this point the actual experience remains on the fringe. Following the publication of David Levy's *Love and Sex with Robots* in 2007, which proposed that human-robot intimacy will be routine by the year 2050, the field of "lovotics" emerged, complete with its own e-journal: <https://www.omicsonline.org/lovotics.php>. However, as yet "love", care and sex remain distinct in robot design, with different technologies affording different forms of intimacy, with robots designed to kiss ("The Kissenger"), to comfort ("HuggieBot"), talk to (chat bots), or have sex with. For more on the development of "lovotics" see Adrian David Cheok, Kasun Karunanayaka, and Emma Yann Zhang, "Lovotics: Human–Robot Love and Sex Relationships," *Robot Ethics 2.0: From Autonomous Cars to Artificial Intelligence*, eds. Patrick Lin, Keith Abney, and Ryan Jenkins. Oxford: Oxford University Press, 2017. 192-213.

⁴⁰ In this sense they are the flipside of biotechnology. While biotechnology dismantles and compartmentalizes organic bodies, transforming animal being into (bio)technological resource, or "biomedia," biological material treated as a technocapitalist medium,⁴⁰ companies like Abyss Creations/Realbotix and True Companion assemble technological components into inorganic marketable companion bodies. This produces a second version of biomedia: media *as* bio (as opposed to bio as media). In either case, the assumed boundary between bios and technos is called into question, a blurring effect that provokes concern, panic, even outrage in journalists, scholars, activists, ethicists and others. One finds similar rhetoric and calls for action in the public debates around the ethics and morality of sex robots (and care robots⁴⁰) and biotechnology. Indeed, there are calls to ban these commodities from UK and European markets (see, for example, Kathleen Richardson's "campaign against sex robots":

<https://campaignagainstsexrobots.org/about/>).

⁴¹ Sociologist Kassia Wosick estimates that, globally, porn is worth US\$97 billion (Chris Morris, "Porn Industry Feeling Upbeat about 2014," NBC News, 14 January 2014, <http://www.nbcnews.com/business/business-news/porn-industry-feeling-upbeat-about-2014-n9076>).

⁴² Mitchell Langcaster-James and Gillian R Bentley argue, "Studies of human attraction have previously concluded that men find particular features and characteristics appealing in women. These include: large eyes, a particular waist-to-hip ratio, rounded lips, and soft features that display the archetypal 'triangle' of pleasing facial aesthetics. The typical design of commercially available sex dolls would suggest that they are manufactured with such characteristics in mind in order to increase their market. Modern doll products place an emphasis on practical realism, which is a response to consumer calls for tactile and visual accuracies, while maintaining fully functioning orifices and bodily components." (Langcaster-James and Bentley, "Beyond the Sex Doll" (above, n. 20), p. 2-3).

⁴³ Langcaster-James and Bentley, "Beyond the Sex Doll" (above, n. 20), p. 2-3.

⁴⁴ Sullins, "Robots, Love, and Sex" (above, n. 16), p. 402.

⁴⁵ See, for example: "Sex Robots and the End of Civilization" Glen Geher 10.06.2019 <https://www.psychologytoday.com/us/blog/darwins-subterranean-world/201906/sex-robots-and-the-end-civilization>; "AI can write just like me. Brace for the robot apocalypse" Hannah Jane Parkinson, 15.02.2019 <https://www.theguardian.com/commentisfree/2019/feb/15/ai-write-robot-openai-gpt2->

[elon-musk](#); Al-Othman, Hannah (2017) Robots should be given legal status as 'electronic persons' and must be fitted with 'kill switches' to prevent a Terminator-style rise of the machines, warn EU MEPs. Daily Mail, 12 January 2017. Available at: <http://www.dailymail.co.uk/news/article-4113674/Robots-fitted-kill-switches-prevent-Terminator-style-rise-machines-warn-EU-MEPs.html> (accessed 30 August 2018). Adams, Tim (2017) Artificial intelligence: 'We're like children playing with a bomb.' The Observer, 12 June 2017. Available at: <https://www.theguardian.com/technology/2016/jun/12/nick-bostrom-artificial-intelligence-machine> (accessed 30 August 2018).

⁴⁶ "Sex robots to spark 'synthetic sexual revolution BIGGER than the 60s'" (*Daily Star* 05/05/2019 <https://www.dailystar.co.uk/news/world-news/776227/sex-robots-tech-news-ai-harmony-1960s-revolution-the-pill>) or *Forbes* "Prediction: Sex Robots Are The Most Disruptive Technology We Didn't See Coming" (<https://www.forbes.com/sites/andreamorris/2018/09/25/prediction-sex-robots-are-the-most-disruptive-technology-we-didnt-see-coming/#60afba2c6a56>)

⁴⁷ See Weber, "Helpless Machines and True Loving Care Givers" (above, n. 25) for further discussion of how sex robots reproduce the society that produces them.

⁴⁸ As Wengerscheid explains, sex robot manufacturers "and other commercially vested interests emphasize that artificial creations are being marketed to serve as the 'perfect partner' for human beings, or rather: for men. Being 'perfect', however, apparently tends to mean representing as the 'perfect woman', i.e., a female lover that is designed according to pornographic standards, thus plainly suggesting that it is a woman's task to fulfill a man's sexual wishes" (Wengerscheid, "Posthuman Desire in Robotics and Science Fiction" (above, n. 16), p. 48).

⁴⁹ Despina Kakoudaki, *Anatomy of a Robot: Literature, Cinema, and the Cultural Work of Artificial People* (New Brunswick, NJ: Rutgers University Press, 2014), p. 82.

⁵⁰ Kakoudaki, *Anatomy of a Robot* (above, n. 44), p. 83.

⁵¹ Atwood, Margaret, *Power Politics* (Toronto: Anansi Press, 1971) p. 1.

⁵² Here I use "imagining" to signify sex robot representations from the worlds of art, film and fiction. These examples imitate and imagine sexualized robots for public consumption. Though Wolfson's installation exists as a material object in the world, unlike the robots in film, it is not designed to serve an individual owner/user. These robots can have a lively existence in the imaginations of their viewers, but they may not be touched or engaged with outside the museum or (home) theatre space.

⁵³ Barabara Creed, *The Monstrous Feminine: Film, Feminism, Psychoanalysis* (New York: Routledge, 1993).

⁵⁴ Similarly, in *Metropolis* (1927), arguably film's first artificial woman, Maria (often termed "false Maria" to differentiate her from her human counterpart), performs a sexualized dance for a roomful of tuxedoed men, who are driven wild by her writhing. The film cuts between her leg lifts, kicks and hip thrusts and close ups of her audience's mania, at one point figured as a swirling mass of staring eyes.

⁵⁵ Jose Munoz, "Theorizing Queer Inhumanisms: The Sense of Brownness," *GLQ: A Journal of Lesbian and Gay Studies* 21:2-3 (2015): 209-10, p. 209.

⁵⁶ Munoz, "Theorizing Queer Inhumanisms" (above, n. 53), p. 210.

⁵⁷ *Ex Machina*, directed by Alex Garland, performed by Domhnall Gleeson, Oscar Isaac, Alicia Vikander, Sonoya Mizuno (Universal Pictures International, 2014).

⁵⁸ Like the fictional “pregnant androids and clone sister-mothers” micha cárdenas analyzes, *Ex Machina* offers “new possibilities for humanity” via “queer and trans algorithms of kinship” (micha cárdenas, “Monstrous Children of Pregnant Androids: Latinx Futures after Orlando,” *GLQ: A Journal of Lesbian and Gay Studies* 24:1 (2018): 26-31, p. 26).

⁵⁹ As Cheng explains, “the yellow woman emerges as a ‘body ornament’ whose perihumanity demands that we approach ontology, fleshliness, and aliveness differently. By perihumanity, I mean to identify the peculiar in-and-out position, the peripherality and the proximity of the Asiatic woman to the ideals of the human and the feminine. At once closely linked to ideas of ancient civilizational values and yet far removed from the core of Western humanist considerations, she circles but is excluded from humanity” (Anne Anlin Cheng, *Ornamentalism*. (Oxford: Oxford University Press, 2019) p. 2).

⁶⁰ Cheng, *Ornamentalism* (above, n. 57), p. 3. As Cheng goes on to explain, if, as Hortense Spillers has argued, “the black female . . . is stuck on the threshold dividing the human and the not human, rendering her ‘vestibular to culture.’ Where black femininity is *vestibular*, Asiatic femininity is *ornamental*” (p. 6).

⁶¹ Cheng, *Ornamentalism* (above, n. 49), p. 23.

⁶² Cheng, *Ornamentalism* (above, n. 49), p. 144.

⁶³ Danielle Wong, “Dismembered Asian/American Android Parts in *Ex Machina* as ‘Inorganic’ Critique,” *Transformations* 29 (2017): 34-51, p. 39.

⁶⁴ Cheng argues that the progression also involves diminished “fleshiness.” She notes that the early Black prototype had a visible “fleshly presence” a notable “weight” lacking in its successors. Accordingly, “black femininity entails a fleshness, a corporeal schema, that is finally indigestible to the machine aesthetics at work in Nathan’s and the film’s imagination. In contrast, the film’s representation of Asiatic femininity, with its spare, clean lines and titillating fluctuation between being a person and being a thing, offers the very form and animating matter for Nathan’s project of inhuman life” (Cheng, *Ornamentalism* (above, n. 49), pp. 143-4).

⁶⁵ Other critics (Wong, Cheng) have commented on this final image of mirrors and doubling. Indeed, as Cheng points out, the name “Kyoko” means “mirror,” and multiple scenes evoke the idea “that the women are reflections of each other” (Cheng, *Ornamentalism* (above, n. 49), p. 145).

⁶⁶ As Danielle Wong argues, “The Asian body and its parts are technologies for materially and figuratively shaping a white posthuman, and for securing this future. Not only is Jade’s skin peeled off to complete Ava’s transformation, her programmer Nathan’s mute robot assistant Kyoko, who is held captive in the mansion as the millionaire’s domestic and sex worker, seemingly sacrifices herself for Ava’s freedom when she steps in between the white robot and Nathan, and appears to “die” when Nathan dislocates her jaw with a weight barbell” (Wong, “Dismembered Asian/American Android Parts,” (above, n. 57), p. 35).

⁶⁷ RealDolls has a series, “Wicked Dolls,” based on real life porn stars. In 2016 Ricky Ma created a robot that looks like Scarlett Johansson. There is no evidence that the robot was designed for sex, but it demonstrates the technological feasibility of creating sex robots based on actual people (April Glaser, “The Scarlett Johansson Bot Is the Robotic Future of Objectifying Women,” *Wired*, April 4, 2016. <https://www.wired.com/2016/04/the-scarlett-johansson-bot-signals-some-icky-things-about-our-future/>).

-
- ⁶⁸ Lucy Suchman, "Subject Objects," Feminist Theory 12:2 (2011): 119-45, p. 121.
- ⁶⁹ Karen Barad, "Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter," Signs 28:3 (2003): 801-831, p. 827.
- ⁷⁰ Barad, "Posthumanist Performativity," (above, n. 63), p. 827.
- ⁷¹ Emphasis in original, Barad, "Posthumanist Performativity" (above, n. 63), p. 822.
- ⁷² Suchman, "Subject Objects" (above, n. 62), p. 137-8.
- ⁷³ Luna Dolezal, "The Body, Gender, and Biotechnology in Jeanette Winterson's *The Stone Gods*," Literature and Medicine 33:1 (2015): 91-112, p. 92.
- ⁷⁴ Jeannette Winterson, The Stone Gods (Boston: Mariner, 2009), p. 62.
- ⁷⁵ Winterson, The Stone Gods (above, n. 56), p. 63.
- ⁷⁶ Winterson, The Stone Gods (above, n. 56), p. 6.
- ⁷⁷ Winterson, The Stone Gods (above, n. 56), p. 14.
- ⁷⁸ Winterson, The Stone Gods (above, n. 56), p. 50. Winterson's description begs the question, perfect for whom? Indeed, Dolezal reads the novel as illustrating "the problem [Winterson sees] with the patriarchal employment of biotechnology: its objectifying and cavalier attitude towards women" (Dolezal, "The Body, Gender, and Biotechnology," (above, n. 55), p. 100).
- ⁷⁹ Winterson, The Stone Gods (above, n. 56), p. 68.
- ⁸⁰ Winterson, The Stone Gods (above, n. 56), p. 74
- ⁸¹ Indeed, human presence tends to spoil any utopia, reintroducing those very "hegemonic hooks" the pilgrims sought to evade: Planet Blue's is quickly made inhospitable to human/machine bodies once the Orbus's mission arrives and triggers a new ice age. The novel speaks volumes about the incompatibility of human[oids] (in their current state) with "radical utopias," suggesting that the most radical utopia of all, might in fact be Earth without us.
- ⁸² Winterson, The Stone Gods (above, n. 56), p. 79.
- ⁸³ Adeline Johns-Putra, Climate Change and the Contemporary Novel (Cambridge: Cambridge University Press, 2019), p. 116.
- ⁸⁴ In the words of Abigail Rine, Winterson "locates the hope of humankind—minimal though it may be—in forging new kinds of love-relations that cultivate and thrive on difference, relations characterized by mutuality, intimacy, creativity and change" (83-4). She argues that the novel "leaves open the possibility of a queer future that is not merely lethal repetition and affirms and idea of non-heteronormative reproduction through the creative and transformative potential of language" (Abigail Rine, "Jeanette Winterson's *Love Intervention: Rethinking the Future*" in Sex Gender and Time in Fiction and Culture, eds. Ben Davies and Jana Funke. (Basingstoke: Palgrave-MacMillan, 2011): 70-85, p. 83).
- ⁸⁵ Jack Halberstam, The Queer Art of Failure (Durham, NC: Duke University Press, 2011), p. 2.
- ⁸⁶ Halberstam, The Queer Art of Failure (above, n. 79), p. 2.
- ⁸⁷ Halberstam, The Queer Art of Failure (above, n. 79), p. 2-3.
- ⁸⁸ Halberstam, The Queer Art of Failure (above, n. 79), p. 2.
- ⁸⁹ Halberstam, The Queer Art of Failure (above, n. 79), p. 2.