READING TRANSNESS IN AI NARRATIVES: HOW ARTIFICIALITY CONSTRUCTS TRANSGENDER IDENTITY

by

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This thesis was prepared under the direction of the candidate's thesis advisor, Dr. Timothy Miller, Department of English, and has been approved by all members of the supervisory committee. It was submitted to the faculty of the Dorothy F. Schmidt College of Arts and Letters and was accepted in partial fulfillment of the requirements for the degree of Master of Arts.

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ABSTRACT

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Transgender identity and the concept of artificial intelligence are constructed and understood through dichotomies such as natural/unnatural and real/artificial, with each dichotomy informing the other; what is “unnatural” is often deemed to be a mimicry of the “natural,” therefore a false representation of what is “real.” By surveying various classic SF texts and their portrayal of AI characters through the lens of transgender studies—drawing upon scholars including Susan Stryker, Sandy Stone, and Florence Ashley—I assert that artificiality itself is a construction formed by cisnormative ideals and standards to exclude certain others (namely, transgender people) that requires reframing. I examine how these representations in works such as Richard Powers’s Galatea 2.2 reveal and articulate the constructed dichotomies and cultural narratives which surround transgender identity, as well as how contemporary, trans-authored works such as Annalee Newitz’s Autonomous can offer tools for responding to and reconfiguring those dichotomies.

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INTRODUCTION

Transgender identity and the concept of artificial intelligence are constructed and understood through dichotomies such as natural/unnatural and real/artificial, with each dichotomy informing the other; what is "unnatural" is often deemed to be a mimicry of the "natural," therefore a false representation of what is "real." By surveying various SF texts and their portrayal of AI characters through the lens of transgender studies, I intend to assert that artificiality itself is a construction formed by cisnormative ideals and standards to exclude certain others—namely, transgender people—that requires reframing. Sex is often inscribed as a "reality or truth" that transgender identity ostensibly denies, creating a "rhetoric of deception" which transgender philosopher Talia Mae Bettcher argues surrounds transgender people (47, 51). Many science fiction narratives that engage with artificial intelligence similarly frame AI not just as artificial in terms of its inorganic or "unnatural" form and creation, but also in terms of deception; when AIs are shown to successfully appear human, much of the narrative focus becomes about delineating the human from the nonhuman, and therefore the true representation from the false mimicry. To further explore this connection between gender performance and the definition of the human, I examine fictional representations of artificial intelligence in SF literature and offer readings that show how these representations reveal and articulate the constructed dichotomies and cultural narratives which surround transgender identity, as well as how they can offer tools for responding to and

examining texts for epistemological anxiety surrounding AI which improperly or deceptively performs gender, which allows for AI characters to be read as representative of transgender experiences or as representative of other gender transgressions; this includes both intentional and subversive representations of transgender experience and ones less intentional within classic SF that nevertheless reveal anxieties around transness.

While I incorporate contemporary texts which explicitly grapple with transgender identity in AI characters, such as Malin Rydén's interactive novel series *Fallen Hero*, my argument extends beyond deliberate instances of trans coding to the gendered implications of how AI is depicted in SF more broadly, as AI narratives overall speak to anxieties surrounding the binaries of human/other, real/artificial, and natural/unnatural. Successful gender performance is used to validate AI consciousness as human-like or human-equivalent in these stories even as there remains a persistent anxiety regarding the gender performance of beings who do not have a "natural" biological sex on which to base such a performance. This anxiety often manifests sexually when human characters find themselves attracted to AI characters, as in nonbinary author Annalee Newitz's 2017 novel *Autonomous*, paralleling real life instances of transphobia in sexual contexts triggered by the perceived inauthenticity of transgender bodies. An insistent "*having to know*"—a phrase used by Eve Kosofsky Sedgwick to remark upon the desire for heterosexuals to identify closeted gay people in *Epistemology of the Closet* (250, emphasis in original), but which is also easily applicable to the dynamic between cisgender and transgender people—surrounds AI characters regarding their status as sentient but nonhuman, particularly with respect to AI that is able to "pass" as human as well as their gender or sex characteristics. Texts which demonstrate this "*having to know*"

regarding their AI characters—either through portraying human characters who insist upon gender clarity from AIs or through an overall narrative insistence on gender clarity—point to larger underlying cultural fears surrounding gender transgression and the delineation between human and other.

The Turing test, conceived of by Alan Turing to determine the intelligence of a machine by assessing how convincingly it can impersonate human intelligence, is a frequent point of reference when discussing artificial intelligence in both fiction and real life; however, its gendered origins are often ignored in pop culture portrayals of the test. As proposed in Turing's original 1950 paper, the test involves two subjects, a real human and an artificial intelligence posing as a human, as well as a human interrogator located in a separate room. The interrogator poses questions to the subjects and corresponds with them, with the intent of determining which is the human and which is the AI; if the machine can fool the interrogator into believing it to be human, it is deemed to have intelligence comparable to humans. Turing initially uses the "imitation game" as an analogy to explain his test; instead of an artificial intelligence posing as a human one, the imitation game features a human man posing as a woman alongside a "real" woman. The interrogator's task, then, is "determin[ing] which […] is the man and which is the woman" (433). Turing's use of the concept of gender "passing"—or, the "phenomenon by which a person succeeds at consciously performing a recognizable identity which does not conform to the identity commonly mapped onto that individual, usually on a biological basis"—in order to introduce his AI test indicates how larger questions regarding the definition of the "human" have been intertwined with questions of how to perform gender "correctly" since the beginnings of digital computing (Surkan 134).

Science fiction scholar Mark Dery has connected the notion of gender performance and passing within the "imitation game" to the personal life of Turing, who lived as a closeted gay man before being outed and convicted of indecency with Dery commenting that "[t]here's something queer about Turing's Universal Machine itself, in the Sontagian sense of queerness as inextricably intertwined with an understanding of life as artifice" (Dery). Although the imitation game can be read in terms of sexual orientation and the trope of the closet, a crucial point of investigation would also be that of transgender identity, which also often entails passing as a gender one was not assigned at birth.

Both the Turing test and the imitation game must disembody their subjects in order to function; after all, if the interrogator were to be interacting with said subjects face-to-face (or face-to-computer)—rather than simply reading typewritten responses—this would necessarily "give" the game away. Even so, I emphasize the importance of embodiment when examining how AI is gendered in order to address the significance of the body to the cultural construction of transgender identity. In "Transsexuality: The Postmodern Body and/as Technology," transgender scholar Susan Stryker remarks that "the transsexual body as cyborg […] in the process of transition from one sex to another—renders visible the culturally specific mechanisms for achieving gendered embodiment" (592). The question of artificiality is intimately related to medical means of transition, as recognized by scholars such as Stryker, but "transgender" as a term is most commonly "used to describe people whose gender identity differs from the sex they were assigned at birth" more broadly ("Transgender FAQ") although its use as an umbrella term at times extends beyond this definition.[1] My argument applies to

[1] In the introduction to the first volume of Transgender Studies Quarterly, Stryker and Paisley Currah "invite [readers] to imagine the *T* in *TSQ* as standing in for whatever version of *trans-* best

transgender identity as a whole due to the perceived misalignment of said identity with the "naturally" sexed body, a conception of the body which has been critiqued by both Bettcher and Judith Butler.[2] Transfeminine jurist and bioethicist Florence Ashley discusses in "Genderfucking Non-Disclosure: Sexual Fraud, Transgender Bodies, and Messy Identities" how "[b]oth popular culture and daily experience expose the belief that trans folk are inherently deceptive," contributing to the marginalization and suppression of transgender identity since "[v]iolence often flows from this ascription of deception" (350). This violence manifests in "the prevalence of hate crimes against transgendered people (particularly the all-too-common murder of male-to-female sex workers)," but the phenomenon of "transgender panic" can be extended more broadly to the desire to ensure that trans people are always identifiably other (Surkan 131). Scrutiny surrounding transgender people has ballooned in recent years to a full-blown moral panic about "gender ideology" in countries such as the US, UK, and Brazil, resulting in conservative movements to exclude transgender and gender nonconforming people from public life, including transgender athlete bans and restrictions on gender-affirming care.[3] At times, this scrutiny extends even to cisgender people whose perceived gender nonconformity is an object of suspicion, such as cis female athletes who are found to be insufficiently

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suits you — and we imagine many of our readers, like us, will move back and forth among several of them" (1). Transfeminist Julia Serano loosely defines the term as "people who transgress gender norms or defy traditional gender categories in some way."

[2] Butler came under criticism for "treating transgender issues as an allegory of gender, rather than recognizing the materiality of people's lived experience" (Pearson 322). In recent years, Butler has expressed unequivocal support for the trans community and has retracted or reframed earlier statements which appear otherwise—despite at times transphobic attempts to misconstrue their words—and their theory remains useful for examining how bodies are inscribed through gender (Williams).

[3] For in-depth discussion on the rise of transgender moral panic in the UK and Brazil, see Hines and Balieiro respectively.

"feminine" alongside transgender ones (Manjoo). The way trans people defy sex and gender norms results in a kind of societal epistemological paranoia that seeks to ease the fear of "manipulation—the notion that we can be easily duped" by clearly delineating "deviant" gender expression and therefore reasserting gender norms (Surkan 131). This societal commitment to reasserting gender norms is reflected in AI-centered fiction both in terms of the parallel desire to reassert the definition of "human" against the AI other, *and* the use of gender norms to do so.

As the notion of gendered embodiment is significant to my argument, I primarily, though not exclusively, focus upon texts which involve AI inhabiting some kind of body; the bodies may be able to pass as human, as in the story "Second Variety" by Phillip K. Dick—whose portrayal of the fembot alongside epistemological paranoia ties gender performance to deception—and Rydén's *Fallen Hero* series, or be visibly artificial but nevertheless involve some kind of gendered coding, as in Newitz's *Autonomous*. Additionally, the manner in which AI consciousness itself is often gendered regardless of embodiment will be explored through Richard Powers's novel *Galatea 2.2*, whose AI "Helen" is more traditionally located within a computer system. My discussion of AI will also extend to, in the case of James Tiptree Jr.'s "The Girl Who Was Plugged In," a cyborgian depiction that also plays with gender performance (both ideal and failed) and passing alongside sexuality. Notably, *Fallen Hero* and *Autonomous* both evoke transgender identity explicitly in relation to their depiction of AI unlike the other works which I address; my analysis of those two texts emphasizes how they actively work to combat transphobic frameworks rather than merely revealing cultural anxieties surrounding transness. The former work's preoccupation with the real and the artificial is

most evident in its rendering of its human-passing AI protagonist, whose nonhuman status is nevertheless marked upon their skin via distinguishing tattoos placed just out of sight. The latter novel reflects upon the human obsession with gendering consciousness—as seen in works such as *Galatea 2.2*—through the gendering of robots that ostensibly have no innate gender or gender identity, commenting upon the arbitrary nature of gender performance and its construction via social and biological characteristics.

In my evaluation of these texts, I draw upon queer theory—both Butler's questioning of sex as a fundamental "truth" in comparison to gender performance and Sedgwick's discussion of queer identity in relation to epistemological anxiety—as well as more recent work in transgender studies. Susan Stryker's observations on how it is "very difficult to think of the human without thinking of it through the binary gender schema"—resulting in the dehumanization of those who are not easily categorized through said schema—in writings such as "My Words to Victor Frankenstein" serve as a guiding force regarding how to read trans monstrosity/nonhuman identity into literature (Dierkes-Thrun). Each of these scholars addresses the risk of failing to conform to gender norms with Bettcher and Ashley dealing with this risk most explicitly in their exploration of how transgender identity is inherently viewed as deceptive and therefore malicious; the perpetuation of this view, they argue, results in violence against transgender bodies being justified as self-defense. The field of somatechnics combats the notion that artificiality and therefore transness is deceptive, asserting that "the body and technology are […] *always already* mutually interdependent, woven through each other" with the "body (and gender) are only ever illusorily pre-technological," which works to unsettle the binaries

of real/artificial and natural/unnatural which construct transgender identity in a harmful fashion (Sullivan xi).

Through my exploration of AI-centric literature through a transgender studies lens, I hope to illuminate some of the gendered anxieties and constructed dichotomies prevalent in the SF genre as well as how contemporary non-binary authors have recognized the thematic aptness of AI in addressing such dichotomies; the approach that *Fallen Hero* and *Autonomous* take to AI narratives can help to reframe the real/artificial and natural/unnatural in a manner that does not relegate transgender identity to the abject. Transgender worldviews—such as Stryker's reclamation of the unnatural and call to cisgender people to "investigate your nature as I have been compelled to confront mine" in "My Words to Victor Frankenstein"—aim to unsettle these dichotomies and envision alternative approaches to authenticity and nature that do not result in a framing of transgender people as uniquely unnatural and/or deceptive (241). Bettcher has rhetorically asked how transgender people can "find the moral integrity and realness which has been taken from us," and by analyzing these depictions of AI in SF, I seek to explore and begin answering such a question (59).

CHAPTER I: CLASSIC SF WORKS THROUGH A TRANSGENDER LENS

INTRODUCTION

Richard Powers's 1995 novel *Galatea 2.2* follows its male protagonist—who shares a name with Powers and is transparently based on himself—as he instructs a developing AI on literary analysis, with the intent to test it in a Master's comprehensive exam to see if it performs as proficiently as human English students would.[4] While discussing nursery rhymes and how they are taught to "[l]ittle girls" and "[l]ittle boys" with Richard, the AI—heretofore only referred to as "H"—asks Richard whether it is "a boy or a girl" (179). Richard reacts as if the gendering of H—or Helen, as she is subsequently referred to—is an inevitable consequence of its emerging consciousness: "Even ungrounded intelligence had to grow self-aware eventually. To grab what it needed" (Powers 179). This "need" for a (binary) gender identity frames gender as essential to self-awareness and sentience, implying that gender is fundamental to the development of both artificial and human intelligence. AI characters with any prominence in SF narratives are rarely exempt from this binary gender schema and are typically gendered in their characterization; while some contemporary SF works feature AI main characters who lack gender identification or presentation, such as Becky Chambers's 2021 novella *A Psalm for the Wild-Built*, the historical prevalence of gendered AI in the SF genre seems to indicate an inability or unwillingness to imagine

[4] "Powers" refers to the author; "Richard" refers to the character.

human-equivalent levels of intelligence that lack a binary gender. In this chapter, I examine how the gendering of AI works as a validating mechanism for their consciousness and intelligence, as it does for Helen in *Galatea 2.2*, and how this gendering can simultaneously allow for AI to be read as deceptive precisely because of their inability to fully approximate gender as nonhumans, due to how gender is understood under cisnormativity.

The conflation of an unambiguous, binary gender identity and sentience is present even in disembodied AI characters—or "ungrounded" ones, as Powers phrases it, because Helen is hosted by a network of over 60,000 computers—such as *2001: A Space Odyssey*'s HAL 9000, indicating that gender is "needed" even outside of the embodied primary or secondary sex characteristics seen in androids (179). This identification of gender with humanity seems to operate in both directions: if one must have a gender in order to be human, then one must also be human in order to have gender. Ungendered AI characters that are presumably sentient, such as the machines in *The Matrix* franchise, typically remain genderless because of their lack of individual significance in the narrative as well as their lack of characterization; noteworthy AI programs in *The Matrix* films such as the Oracle are given a gender alongside human-like embodiment as they are made distinct from other AI, although a mechanical rather than human appearance does not preclude AI characters from having a gender or being gendered by others, as seen in characters such as *Forbidden Planet*'s Robby the Robot or the droids from the *Star Wars* franchise. Even in the case of androids with evident gender presentation, such as in Philip K. Dick's *Do Androids Dream of Electric Sheep?*, the refusal to gender androids serves to undermine their sentience and emphasize their artificial nature and therefore the

artifice of their gender performance. In David Huebert's analysis of *Do Androids Dream*, in which he analogizes the embodiment of androids to trans embodiment, he notes that Deckard "thinks of artificial beings without gendering them" only when "he is anxious to set up a distinction between 'genuine' and 'inauthentic' life" (250). The artificiality of androids denies them the "naturalized access to privileged gender pronouns" to which "genuine" humans are granted, and the androids, "like the pathologized transgender in contemporary society…must often suffer the pejorative 'it'" (Huebert 251). Stryker attributes many dimensions of transphobia to "a fundamental inability on the part of others to see us as fully human because we are considered improperly gendered" (Dierkes-Thrun), an observation which suggests that validating an AI character's sentience through the convincingness of their gender performance reaffirms common assumptions about gender which marginalize transgender people.

The sentience of AI is acknowledged in part through their gendering; however, their artificial nature means that their gender must always be read as deceptive according to cisnormative standards which, as Bettcher articulates, base gendered truth in the sexed body that is either lacking or artificially constructed in AIs. Bettcher observes that "[f]undamental to transphobic representations of transpeople as deceivers is an appearance-reality contrast between gender presentation and sexed body," as the supposed "concealed reality" or "truth" of the sexed body is communicated through a properly "aligned" gender presentation under a cisnormative conception of gender (48, 43). Such a conception allows for transgender people to be framed as inherently deceptive when presenting as their gender, while also impacting how AI is portrayed in SF; due to the lack of an organic and "genuine" sexed body, the gender presentation of

AI must be read as deceptive under this conception of gender presentation and sex alignment, especially in the case of androids who are able to conceal the reality of their artificiality through a human appearance. Similar to how transgender people "are open to constructions as 'really an x,'" e.g. "really a man" or "really a woman" when presenting otherwise, the nonhuman status of AI leaves them open to constructions as "really inhuman" and therefore "not really a man/woman," but an object or an "it" (Bettcher 55). In order for other characters to recognize an AI's sentience, they must produce a legible gender presentation; as a result, that which grants them sentience in the eyes of others also places them in a position to be framed as deceivers and therefore to lose said recognition.

Alongside my discussion of the disembodied Helen—who is nevertheless assigned a gender—in *Galatea 2.2*, this chapter also addresses Philip K. Dick's portrayal of internally mechanical but outwardly human-presenting androids and the accompanying epistemological anxiety which surrounds them in the classic science fiction short story "Second Variety." This short story will be used in order to discuss the social concept of "passing," as articulated by the transgender community and communities of color, in relation to androids. The ability of an AI to "pass" as human often results in a pressing desire to identify and delineate the human from the artificial, a desire which reflects the real-life social "need to know, to label and mark difference as identifiable," as argued by K. Surkan (131). James Tiptree, Jr.'s 1973 novella "The Girl Who Was Plugged In" alternatively offers a cyborgian protagonist who is organic in her embodiment but is nevertheless marked as "artificial," unsettling the binary of natural/artificial; the short story's central romance provides an opportunity to analyze how sexual anxiety arises

when human-passing AI proves to be capable of experiencing sexual feelings and/or provoking them in others, and how this anxiety works alongside epistemological anxiety regarding the differentiation of the human and the nonhuman. The threat of sexual taboo regarding intimacy between artificial and human beings and the resulting violence towards AI in response to this threat recalls real life transphobic violence and "trans panic" defenses, particularly in cases where the AI's inhuman status is emphasized through their failure to approximate human gender performance. Stryker asserts that the "transgender will to life […] serves as a point from which to critique the human as a universal status attributed to all members of the species, and to reveal it instead as a narrower set of criteria wielded by some to dehumanize others" (Dierkes-Thrun). My examination of AI narratives also intends to critique how gender is used to delineate human from nonhuman, simultaneously serving to mark AI as legitimate in their sentience and as threatening and deviant in their gender presentation.

CONFLATING GENDER AND SENTIENCE: ASSIGNED FEMALE AT BOOT-UP

In reflecting upon the connection between transgender studies and posthuman studies, Susan Stryker contends that the delineation between the human and the nonhuman at the moment of birth is one that is marked by gender:

> The first thing we say of a new child is 'It's a girl' or 'It's a boy.' Through the operation of language, we move a body across the line that separates mere biological organism from human community, transforming the status of a

> nonhuman "it" into a person through the conferral of a gender status. (Dierkes-Thrun)

The scene in *Galatea 2.2* in which Helen is granted a binary gender through Richard's labeling of her as female exemplifies Stryker's assertion that nonhuman "its" become persons through gendering. Immediately after Richard informs Imp H that it is "a girl," the narration reflects this change by referring to her with "she" pronouns and by the name which Richard chooses for her, "Helen" (Powers 179). The use of "she" pronouns continues for the rest of the novel, signifying Helen's growing consciousness and allowing her to engage more closely with the gendered human community; in N. Katherine Hayles's analysis of the novel in *How We Became Posthuman*, she notes that Helen's question about her own gender indicates that she has "grown intelligent enough" to be able to "understand gender encoding in literary texts" (263). It is worth noting that it is *Galatea 2.2*'s cisgender male protagonist who holds the power of assigning Helen a gender, and, although she gives him only two options—"Am I a boy or a girl?" (179)—he also had the power to subvert those categories; Richard opts to "securely link […] Helen to the gendered humanist tradition" instead of "allowing his cyborg Galatea to transcend gender" in a posthumanist fashion, as articulated by Kathleen Fitzpatrick (551). In fact, the possibility of gender ambiguity in Helen is something which Powers seems to recognize as a potential threat to her developing psyche.

There is an evident anxiety which surrounds the notion that Helen may not properly adopt a binary gender—or might not develop properly without one—alarming Richard and causing him to assign her a gender "without hesitation" (179). He appears to feel as if any hesitance in his answer regarding her status as either male or female would

be somehow harmful to Helen, noting that "uncertainty […] might undercut forever the strength of the connection I was about to tie for" Helen, implying that the connection that she forms to gender must be a strong one (179). An unnamed risk is associated with the liminal space located between the valid gender identities of "boy" and "girl," in Helen not being fully transported across that line which Stryker claims separates the nonhuman from the human community in essentialist views of the gender binary. Indeed, when Helen is found to be insufficiently intelligent, she is also found to be insufficiently female. In one instance, Powers observes that while "Helen made all well-formed sentences," she "did not know the difference between thing and process" and so struggles with more advanced linguistic elements such as metaphor or simile (195). He refers to her sentences as "hollow and stuffed—linguistic training bras," and the emphasis on Helen's girlhood in this moment marks her as not only lacking in her linguistic comprehension but also as lacking in terms of gender; she is not womanly enough, adolescent in her gender performance as well as her use of language (195). The description of her sentences as "hollow and stuffed" serves to highlight her artificiality and frames her as a pretender or impersonator rather than a genuine being, as a mockery of the actual female embodied form (195). The question of whether Helen ever truly adopts her gender, or whether it is something that Richard merely projects onto her, is open-ended within the novel and one which Powers appears uninterested in exploring.

When Richard first gives Helen her name and pronouns, he expresses a sense of apprehension about replying wrongly to Helen's question about her gender, implying that Helen may have a sense of identity which differs from the one that Richard assigns her. Upon telling Helen that she is "a little girl," Richard thinks to himself that he "hoped [he]

was right" (179). He appears to recognize in some sense that misgendering Helen as a little girl when she is actually a little boy—or perhaps exists outside of the two categories—would be harmful in some way. If we analogize Helen and real-life examples of transgender people, it would indeed be psychologically harmful for Powers to make such a mistake although whether he does is never suggested further in the novel. In an analysis of *Galatea 2.2* in relation to posthumanism, Matt Fox notes that Helen "always refers to herself in the singular first-person, which naturally fails to denote any gender specification" and therefore "suggests a resistance to any assignment of gender" (70). Even so, Fitzpatrick proposes that there could be no resistance for Helen due to the nature of her consciousness, citing Hayles's argument that "[c]oncepts about what it means to be an embodied creature must evolve for [Helen] out of linguistic signification" (qtd. in Fitzpatrick 550). Helen "does not have a body in anything like the human sense of the word," and so she lacks a sense of gendered embodiment which might combat Powers's assignment of her gender, a viewpoint which ties gender inherently to embodiment (Hayles 263). Although gender is typically tied to embodiment under a cisnormative perception of gender, the disembodied Helen and the gendering which accompanies her demonstrates that this is not necessarily the case.

Despite cisnormative gender being ostensibly based on biological sex, the cisgender insistence upon gendering AI such as Helen reveals the arbitrary role of biology in gendering, although this hardly seems Powers's intended purpose. Hayles argues that Helen is not disembodied, as her consciousness is located within a neural network of computers, but that "her embodiment differs significantly from that of humans. There is nothing in her embodiment that corresponds to the bodily sensations

encoded in human language" (265). Regardless, her physical hardware cannot be taken into account when gendering her as it is not a gendered form. When "gender is imposed onto a non-sexed body of the posthuman," as Fox notes is done with Helen, sex "becomes less dependent on the physicality of bodies than on information and what shape that information takes" (Fox 64), an observation that validates Judith Butler's own assertion that "once 'sex' itself is understood in its normativity, the materiality of the body will not be thinkable apart from the materialization of the regulatory norm […] [sex] will be one of the norms by which the 'one' becomes viable at all, that which qualifies a body for life within the domain of cultural intelligibility" (qtd. in Fox 64). Stryker echoes this assertion in her articulation of how the sexing of the infant body invites it into the human community. Although Helen lacks a biological body, Richard believes that a binary gender is what Helen needs to progress on her path towards human-level intelligence. This gendering in turn highlights the arbitrariness of basing gender on biological sex, and the absurdity of the cisnormative claim that gender is always based upon sex. In declaring Helen's gender, Richard struggles with the epistemological uncertainty of gendering someone who has no sexed form on which to base said gender, but insists upon gendering her nevertheless.

THE LEGACY OF THE TURING TEST IN EASING EPISTEMOLOGICAL ANXIETY

Galatea 2.2's use of a literary Turing test in the form of a Master's comprehensive exam highlights an overall pattern of epistemological uncertainty in narratives wherein AI must be tested and assessed for consciousness; the use of gender

criteria when evaluating consciousness in these narratives mirrors real-world scrutiny of trans identities. Narratives which focus upon AI often contain either the Turing test itself or a variation of it such as the Voigt-Kampff test in *Do Androids Dream* and its film adaptation, *Blade Runner*. A key element of the Turing test which tends to remain consistent throughout variations is the use of human intelligence as a yardstick for AI performance; as Hayles observes, "[t]he human was the measure" (238). However, as both Hayles and Fitzpatrick note, the liberal human subject "has historically been constructed as a white European male"—and one can assume cisgender as well—meaning that if AI are deemed to be too close to humanity, they disrupt both human and gender categories (Hayles 4). By "firmly drawing the boundaries between human and computer intelligences," men are able to "maintain control of the category of the 'human'" (Fitzpatrick 556). In *Galatea 2.2*, Helen appears to fail the test which assesses her ability to analyze literature to a human standard although the narrative's framing of this failure does not exclude the possibility of her having a human-equivalent intelligence of a different nature. While her literary analysis does not compare to that of the human graduate student, who offers a postcolonial, New Historicist reading of *The Tempest*, Helen's reading is more artful:

> You are the ones who can hear airs. Who can be frightened or encouraged. You can hold things and break them and fix them. I never felt at home here. This is an awful place to be dropped down halfway. (326)

In a sense, Helen successfully interprets *The Tempest* by how moved she is by it—so moved, in fact, that she decides to "[s]hut herself down" (326). In Fitzpatrick's interpretation of *Galatea 2.2*, she argues that, by drawing a line between human and

machine—making it clear that Helen suffers for not being human "and that being half human is worse than not being human"—the novel reaffirms human hierarchies and "helps to define 'man' precisely as the privileged category of human" (554). Although the ability to assess Helen's intelligence via a Turing test is cast into doubt, the use of Turing-like tests to examine AI in SF overall speaks to how the existence of AI threatens the delineation between the (gendered) human subject and the other.

Notably, the original Turing test itself did not seek to eliminate epistemological anxiety regarding the intelligence of machines by concretely measuring their sentience; instead, it sought to prove intelligence through the capacity for successful artifice. Turing himself acknowledged that it is not possible to assess a machine's ability to think any more than it is possible to assess another human's ability to think: "the only way by which one could be sure that a machine thinks is to *be* the machine and to feel oneself thinking…according to this view the only way to know that a *man* thinks is to be that particular man," but "it is usual to have the polite convention that everyone thinks" (446). Turing did not seek to determine whether artificial intelligence has the equivalent of human sentience but rather only if it is able to convincingly appear as if it does. The nature of the "imitation game" is not to discourage artifice as it requires its participants to engage in artifice in order to function as intended. Turing recognized the epistemologically fraught underpinnings of the desire to assess artificial intelligence; we cannot know the interiority of others and can only assume their authenticity from what we observe. Thus, his test would not satisfy those who are concerned with the distinction between masquerade (artifice) and authenticity although marking this distinction is ironically the purpose of many fictional derivatives of the Turing test. Adaptations of the

Turing test in AI centered SF which seek to determine the human from nonhuman in an epistemologically certain fashion reinforce those categories and the gendered implications which come with them, a reinforcement that has implications for transgender subjects whose gender expression may place them in the "nonhuman" category.

EMBODIED AI AS "PASSING" FIGURES

One of the more prominent voices in AI-centric SF concerned with distinguishing between artifice and authenticity is Philip K. Dick, who once expressed that the "grand theme" of his AI fiction is the question of "who is human and who only appears (masquerading) as human" (Sandner 2). He frames said question in terms of its epistemological relevance, asserting that without an answer, "we cannot be certain of our own selves. I cannot even know myself, let alone you" (Sandner 2). There is an evident epistemological anxiety which surrounds the idea of artificial intelligence, and artifice more broadly; to question what is human is to threaten the need to clearly define the other in order to securely define oneself. This anxiety often manifests in AI fiction through the trope of the "passing" AI, or androids who are able to successfully navigate human society without being visibly nonhuman. Karl Surkan defines passing as the "phenomenon by which a person succeeds at consciously performing a recognizable identity which does not conform to the identity commonly mapped onto that individual, usually on a biological basis" (134), a social concept which has historically been used to discuss race in the US but has since been applied to transgender issues of visibility and embodiment as well (Billard 465). While Huebert provides a transgender reading of Dick's *Do Androids Dream*, suggesting that the novel works to destabilize boundaries

around both species and gender, I will focus upon applying transgender theory to his short story "Second Variety," which also addresses the themes of passing and paranoia regarding androids. While the short story does destabilize species and gender boundaries, I argue that the depiction merely serves to reinforce fear around such destabilizations as well as vilify those who destabilize them, namely passing android figures.

As noted by scholars such as LeiLani Nishime and Gregory Jerome Hampton, the passing android figure has often served to represent racial ambiguity in SF, and works which feature passing androids have evoked and explored the racial anxieties which surround bodies that defy clear categorization. In *Imagining Slaves and Robots in Literature, Film, and Popular Culture: Reinventing Yesterday's Slave with Tomorrow's Robot*, Hampton observes that the "possibility of a robot *passing* as a human was one of the most frightening and threatening aspects of […] technological advancement," which he finds to be "clearly reminiscent of the threat of the mulatto in the Americas" (4, emphasis in original). The android's liminal position between human and robot combined with their ability to pass as human suggests that they can be used to signify marginalized racial experiences, and androids who appear human are inherently read racially due to said appearance. Disembodied AI such as Helen who lack physical racial markers may be more difficult to categorize racially; Helen does ask Richard "What race am I?" but he finds this far more difficult to answer than her question about gender, seeming to imply that race is tied more to embodiment than to sentience (Powers 230). Even so, Nishime argues in "The Mulatto Cyborg" that "passing already calls into question our ability to register difference visually" and so visual racial cues are inherently cast into doubt by androids; she uses the example of *Blade Runner* to point out that "[t]he issue is not why

the actors playing the replicants are white (or human) but why or how we read them as white (or human)" (41). She claims that "androids force the question of what defines someone as human…[i]n the same way, when one 'passes' for white, all racial categories come into question" (39). The use of "passing" to articulate the social complications which result from the constructed nature of both race and gender evidences the entanglement of those social categories, but for reasons of scope and space I will continue to focus more or less exclusively on gender.[5]

Scholarship within transgender studies has commented upon the connection between the transgender conception of passing and the potential of passing androids to be read as transgender, tying the anxieties which surround passing androids to those which surround gender passing in real life. Arguing that "[a]s a metaphor, the passing cyborg character in film has special significance for transgendered and disabled viewers, whose physical bodies do not necessarily correspond to their internal sense of identity as gendered subjects" (Surkan 115), scholars such as Surkan and Huebert have proposed that "[t]he organic yet technological android exists at the definitional threshold of species plasticity, occupying a nebulous interstice between organism and machine, real and electric, genuine and inauthentic, alive and undead" and thus "becomes paradigmatically trans" (Huebert 252). As a transmasculine scholar, Surkan offers a transgender reading of the 2001 film *A.I. Artificial Intelligence* in "'I Want to Be a Real Boy': A.I. Robots, Cyborgs, and Mutants as Passing Figures in Science Fiction Film," noting that the artificial boy around whom the film is centered has an "outward appearance [which]

[5] C. Riley Snorton's *Black on Both Sides: A Racial History of Trans Identity* discusses connections between racial and (trans)gender identity at length. Certainly, it can be argued that gender is always already racialized.

perfectly disguises his mechanical interior, in exactly the same way that the surgically and hormonally altered FTM transsexual's external appearance belies his female chromosomal status and reproductive organs" (123). The dramatic reveals in which the passing androids of "Second Variety" are unveiled as internally mechanical can be read in a similar fashion, in which the interior of the body is taken to divulge a kind of sexed truth.

In my discussion of *Galatea 2.2* above, the conflation of gender and sentience necessitates that, in order for AI to be viewed as human-equivalent, AI must be gendered; by the same token, an AI's performance of gender can be taken as a kind of deception, as they are ultimately not human and gender is codified as an inherently human characteristic. In his analysis of *Blade Runner*, Hampton notes that 1982 film's portrayal of the slur "skin job" towards android "replicants" evidences "the connotation of deception with regards to identity…[a]s if a skin job was some sort of disguise that allowed someone or something to pass for something that it was not" (35). The most direct real-world comparison is of course race, which Hampton points out: "On several levels the term "skin job" suggests that the exterior or phenotype of a character may define the character, very much like race" (34). Even so, one can also read passing androids as deceptive in terms of gender. Bettcher writes in "Evil Deceivers" that "[g]ender presentation is generally taken as a *sign* of sexed body, taken to mean sexed body, taken to communicate sexed body" in a cisnormative system of representational relation in which transgender people are framed as inherently deceptive (53, emphasis in original). By presenting as their gender, they are then framed as deceptive for signifying a sex that they perhaps never meant to. Similarly, human exterior is taken to signify human

interior; when this interior is revealed to not be human—often in a dramatic fashion, as it is within "Second Variety"—a sense of deception or betrayal is evoked on the part of the human characters and often the reader as well. "[I]n a society that predicates its definition of adult human on a binary gender system," passing as human can be read as passing as a gender one is not (Surkan 133).

Philip K. Dick's preoccupation with the passing android provides an apt example for analyzing how epistemological anxieties around deception and "knowing" the human from the nonhuman have gendered implications, particularly for transgender people. Published in 1953, "Second Variety" is set in the aftermath of a nuclear war between the UN and the USSR that devastated North America; the remainder of the continent's governments have relocated to the Moon, leaving the landscape empty save for a few remaining soldiers. While the UN had responded to the Soviet Union with equal nuclear force, the tide turns for the UN only once they invent mechanical "claws" which hunt any human or animal lifeforms by body heat and devastate Russian bunkers once they manage to get inside. These robots "repaired themselves" and created new designs without human instruction, as "nobody wanted to be around them"; the plot of "Second Variety" focuses upon the creation of human passing models which infiltrate human ranks (Dick 31). Incorporating Surkan's argument about "surveillance as a means of ferreting out the passing figure" in relation to the passing transdroid, I will explore how "Second Variety" articulates epistemological fears surrounding the prospect of passing AI and the threats to the definition of human which their existence poses (125). In particular, the role of the female android—or "fembot"—Tasso will be emphasized due to the manner in which her character is both gendered and sexualized in the story, and

how this gendering contributes to her portrayal as a deceptive and threatening passing figure who eventually brings about the implied end of humanity.

"Second Variety" elicits the fear of the passing figure by explicitly tying the existence of passing androids to their purpose of infiltrating bunkers, with the Cold War setting of the short story only heightening this sense of paranoia. The androids engage in a practice the human characters refer to as "tagging," in which they "tag along with" real humans in order to infiltrate their bases; it is "secrecy and speed they depend on…[t]hey push their way in before anyone has any idea" (Dick 38, 45). When the story's main character, the American Major Hendricks, encounters a little boy amongst the desolate landscape outside of the remaining bunkers, he claims to have "noticed nothing unusual" about him (Dick 52). It is only when he and the boy are discovered by Russian soldiers that the other humans are able to identify the boy's status as an android to Hendricks, having seen his model before: he is "Variety Three" of the new android models (Dick 40). The AI-run factories have created "machines so much like people that you can be fooled" (Dick 52). Surkan argues that stories which feature passing figures illustrate "a drive to identify, contain, and exile those deemed deviant or non-normative, for real or imagined reasons," and while the threat that the new varieties pose is real—as they are designed to hunt and destroy human life—their lack of a visible mechanical appearance serves to automatically frame them as the "criminalized Other," as their existence is deemed to be inherently deceptive due to the way their human appearance conceals their robotic nature (155). The depiction of androids with manipulated human appearances in "Second Variety" suggests that it "play[s] into the societal fear of infiltration by the

cunning passing figure," as Surkan articulates in relation to *A.I. Artificial Intelligence* (126).

The short story places significant emphasis upon visibility and sight, particularly regarding the interior body; while the claws "could be detected as lethal robots as soon as they were seen" prior to their building of human models (Dick 40), humans must now rely upon, to use Surkan's language, the "ability to see 'inside' a person" in order to "demystif[y] the threat of the unknown" (124). Hendricks, who is tricked first by David as well as by the soldier Klaus—who is also found to be a claw—before Tasso's final betrayal, continually "close[s] his eyes" when faced with potentially disturbing sights, such as the killing of David which revealed the boy's mechanical nature (Dick 38). Hendricks must be encouraged to "see for [him]self" and distinguish between the "[b]ones" and "[f]lesh" of human interiors versus the "wheels…parts…relays" of the claw interiors (Dick 48). When discussing surveillance in relation to trans identity and the scrutiny of transgender bodies, Surkan asserts that "[t]he ability to see the interior is equated with absolute knowledge, a means of possessing the 'truth' about what is alive and what is not" (122). While he discusses this in terms of how technologies such as the X-ray and ultrasound operate to order to allow others to view the interior, bodily interiority is only viewed in "Second Variety" through violence, and is equated with "understand[ing]" (Dick 38). When Klaus and David are killed before Hendricks, he is asked both times if now he "sees" and "understands," even by Tasso (Dick 38, 59). Interestingly enough, the eyes are the only exterior trait which seem to reveal the claws; although the commonality is never explicitly or consciously recognized by any of the human characters, Tasso and David are both described as having "big eyes" with "no

expression," to the point where Hendricks questions David if he is blind (Dick 33, 46, 50). Ultimately, it is Hendricks who struggles to see and understand in time to prevent Tasso from manipulating him into revealing the location of the Moon base, suggesting that the story aims to convey the importance of remaining vigilant and ever watchful of potential deceivers.

Tasso's character is uniquely framed as deceptive because of her joint affiliation with inhumanity and with sex work, fulfilling a stereotype of "the transfeminine as hypersexual" in the form of the fembot (Geist & Nihils 115). She has her own cellar separate from the Russian bunker it neighbors, which she evidently uses for sexual intercourse with soldiers, two of whom—Rudi and Klaus—encounter Hendricks and admit that it "happened to be [their] turn" with Tasso when their bunker was decimated by infiltrating claws, inadvertently sparing their lives (Dick 42). In their analysis of the "near universal" figure of the trans sex worker, Geist and Nihils observe that trans women's gender identities are frequently hyper sexualized by others, with "[t]he most obvious and visible facet of this hypersexualization [being] the figure of the trans prostitute" (116). Because transgender people and artificial intelligence are understood through similar binaries, fembots who are created or used for sexual purposes—and they often are—may in particular provide insight about cultural vilifications of trans sex workers. A primary example of this would be the "entertainment model android" Wendy in Syfy Channel's *Dark Matter*, whom An Sasala has analyzed through the lens of transgender identity, arguing that she "becomes a transgender villain—a double deceiver of both her gender and her secret violent intent" when she "exchanges feminine wiles for a gun and begins to speak in a male-sounding voice" after sleeping with one of the

show's male protagonists, evoking fears of sexual deception in relation to trans women (65). Tasso herself not only betrays Hendricks and manipulates him into revealing the location of the secret moon base—humanity's last refuge from claws—but she even enacts violence against other claws; her bombs are "[m]ade […] to destroy the other varieties […] for that end alone" (Dick 69). The reveal that Tasso has interests beyond surviving and serving as a sex worker for male soldiers coincides with the reveal that she is not human, reflecting the observation that Belton and Devlin make in "Fembots, Fact and Fiction" that "female AIs who resist their prescribed roles are often shown to be violent and less than human" (376). Combined with the cultural usage of trans individuals as metaphors for "deception, charade, crisis, risk, threat, and even political corruption," Tasso becomes a very threatening figure indeed, especially as it is she who brings the ultimate destruction upon humanity by invading their most secret base (qtd. in Nihils 114). In portraying her in this fashion, "Second Variety" perpetuates the cultural norms which make trans women visible only as hypersexualized deceivers.

Although the new varieties pose a threat to the continued existence of the human race, Hendricks seems to accord them a degree of respect due to their "[e]volution" into the potential "race to come after man"; their human appearance and ability to pass serves as a validation of their advanced intelligence, akin to how gender presentation offers disembodied AI such as Helen validation of their intelligence (Dick 43). Rudi exclaims that Hendricks talks "as if [the claws] were alive," which Hendricks does not deny; in spite of Rudi's assertion that though the claws may "look like people […] they're machines," Hendricks seems to find the distinction between looking and being alive far more blurred (Dick 43). The fact that claws can so carefully appear human indicates to

him that perhaps "their real potentialities will begin to show" if and "when there aren't any humans to destroy" and they inherit the Earth (Dick 43). The claws in "Second Variety" successfully pass as human because, in part, there is nothing particularly alarming about their gender presentation; Tasso is to be sexualized and used for pleasure, David is "the most effective" because "[s]oldiers are suckers for children," and the other models are fellow male soldiers who naturally draw sympathy from their comrades (Dick 39, 40). If the gender presentation of the claws was more unusual or unsettling in terms of expected norms, their abilities to manipulate humans would be hindered. Hendricks speculates that they might be "the beginning of a new species. *The* new species" (Dick 42); Belton and Devlin's suggestion that "[t]he presentation of robots as having an inevitable, innate gender is meant to reassure any potential anxiety about the 'reality' of natural gender roles" is instructive in terms of examining why the claws are recognized as a separate species only when they are able to approximate human appearances and gender (360). The notion that a species can exist without respective males and females is difficult for many to imagine, as Belton and Devlin evidence in regards to the 2014 film *Ex Machina*. While the claws reproduce within factories, the ability to successfully mimic human gender marks the claws as a valid and "natural" species, capable of reproducing and operating on their own without dependence upon humans. It is the image of reproduction which "Second Variety" leaves readers with: the final scene is "five or six Tassos, all identical, a line of them coming rapidly toward" Hendricks, who awaits his death at their hands (Dick 69). The claws may be unable to reproduce sexually—Tasso's own sexual abilities are untied to reproduction—but their abilities to approximate human

gender expression and perpetuate their species independently signals their victory and the extinction of mankind.

CHAPTER II: THE ARTIFICE OF GENDER FAILURE IN "THE GIRL WHO WAS PLUGGED IN"

INTRODUCTION

While Dick's career-long preoccupation with artifice and passing androids is revealing in terms of how the gendering of AI is intertwined with epistemological paranoia in SF, another notable SF author whose career overlapped with his own also provides a real-world example of gender "passing" within the SF literary community: James Tiptree, Jr. For many years, author Alice Sheldon wrote under the Tiptree pen name—including not just stories, but extended correspondence with other prominent SF writers in the field, forming a persona instead of a mere pseudonym—before being "outed" as a woman in 1977. Since this outing, Tiptree's own dual identity has been examined in relation to the work published under that name, including through a transgender lens. In "The Text of this Body: 'Reading' James Tiptree Jr. as a Transgender Writer," Wendy Gay Pearson notes that Tiptree's own writerly preoccupation appeared to be at least in part "the problem of 'reading the body and its identity," arguing that in particular that "the problem of 'reading' or misreading the transgender body is echoed by the importance in Tiptree's works of reading and misreading, of making mistakes and of being (mis)taken" (330).[6] Whether Sheldon's decision to write under a man's name may

[6] Pearson's work was initially presented as a conference paper in 1999 and later published in the 2015 collection *Letters to Tiptree*, where she prefaces that she "would approach trans issues in Tiptree's life and texts somewhat differently" were she to write the article in a more recent

have been informed by her own sense of gender identity has been a subject of speculation; in Farah Mendlesohn's review of the 2006 biography *The Double Life of Alice B. Sheldon*, they suggest that perhaps "far from being a persona, Tiptree was who Sheldon wanted to be," referencing personal writings by Sheldon which indicate possible gender dysphoria, or, at the very least, commonalities with how gender dysphoria often presents in transmasculine people. Sheldon's claim that "all I want is man's life" was certainly bound up with a desire for respect within a patriarchal society and literary field, as well as resentment of herself and of other women for their perceived weakness—and perhaps a way to understand her persistent attraction to women—but her statements that she did "not 'fit' my body" and "didn't want to be a pretty girl" because she "didn't fit the interactions forced on me," indicate that she perhaps had a more complex relationship to gender identity (Phillips 59). Speculation about what Sheldon's identity would have or could have been will remain forever unresolved, but the author's feelings about her own dual (gender) identity appear to be reflected in works such as "The Girl Who Was Plugged In," Tiptree's 1973 novella which depicts gender failure in relation to disability as well as the risks of being forcefully "outed" as a passing figure.

In contrast to previously discussed works such as *Galatea 2.2* and "Second Variety," which uphold human embodiment as a measure for AI intelligence, "The Girl Who Was Plugged In" offers a more complex portrayal of the relationship between embodiment—human and artificial—and validity or "realness." The novella portrays a world in which "the Huckster Act" has banned advertisements except for "displays in or

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context; however, what precisely Pearson would have done differently in relation to quotes used here is unspecified, aside from the "awkward shorthand" of "(mis)taken" in reference to transgender people (328).

on the product itself, visible during its legitimate use or in on-premise sales," resulting in companies such as the Global Transmissions Corporation recruiting or creating well-known celebrity figures that can publicly use products with the intention of covertly advertising them, a prescient 1973 prediction of the present-day ubiquity of social media influencers and product placement (Tiptree 51). Tiptree focuses the novella on one of these pseudo-influencers, a disabled human girl, Philadelphia Burke—a "tall monument to pituitary dystrophy"—whose consciousness controls a "Remote" organic body from afar (44). The original body of P. Burke is described in a grotesque fashion, portraying her failure to conform to able-bodied norms as a kind of gender failure which ostracizes her from others; by contrast, the secondary body of "Delphi" is described as the ideal picture of feminine embodiment, able to market the products which GTX aims to peddle to the unknowing masses. This duality between failed and ideal gender presentation is complicated through P. Burke's status as the original, "natural" human body (and mind) and thus her claim to being "real" in comparison to Delphi's artificiality; Delphi's organic body—with cyborgian modifications—operated by P. Burke's consciousness, also places P. Burke/Delphi outside of what would conventionally be considered artificial intelligence in the strictest sense, unsettling the categories of "artificial" and "organic" as well. Tiptree's signature commentary on gender in this novella provides an example of a SF work that does not explicitly address transgender identity, but does avoid portraying AI strictly through the binaries of real/artificial and natural/unnnatural.

P. Burke's consciousness transplanted into the more socially acceptable body of Delphi echoes Sheldon/Tiptree's own gender "deception," which the latter did not choose—and possibly would have never chosen—to reveal. Pearson asserts that the

duality of P. Burke/Delphi is "is not a literal rendering of Tiptree's own transgender state into fiction" but is certainly "a psychological metaphor, if there ever was one" (Pearson 333). "[T]he peculiar cyber-construct that is P. Burke/Delphi reveals the artifice of our cultural assumptions about gender" (335), reflecting a larger theme of Tiptree's in which bodies "are 'read' performatively and the artifice of that performance is rarely exposed until it is too late" (332). In the case of "The Girl Who Was Plugged In," aspiring rebel Paul—the son of a GTX boardroom member, and unaware of Delphi's "Remote" status despite his sexual relationship with her—causes the death of P. Burke when he misreads the connection between the two bodies, believing that Delphi is being harmed by a monstrous P. Burke (Tiptree 76). The violence which results from Paul's confrontation of the sexual "deception" by P. Burke/Delphi, when read in the context of P. Burke as a gender failure—and Delphi as the ideal feminine—can be viewed as a kind of "trans panic" response that mirrors real-world violence against trans women who are (forcibly) outed to (prospective) sexual partners in addition to possibly communicating Tiptree's own fears about the consequences which would result from being outed as Sheldon.

"A CARICATURE OF A WOMAN": P. BURKE'S DISABILITY AS GENDER FAILURE

Before her "transformation" into Delphi, P. Burke's disability serves as the basis for her marginalization, and in a way that is informed by her inability to properly perform gender, evidencing how gender nonconformity is dehumanized. "The Girl Who Was Plugged In" has been frequently analyzed through the lens of disability scholarship because of its portrayal of the marginalization of disabled bodies although this has not

prevented Alice Sheldon herself from being critiqued for her relationship to disability due to the complexity of her biography.[7] Even before she provokes violent disgust in Paul, P. Burke's dehumanization primarily manifests in the story's narration, as she is referred to by the narrator as "a grim carcass," "an ill-shaped thing," and "the forgotten hulk" (Tiptree 55, 59, 50), amongst other derogatory terms, although the reader does not escape the narrator's insults either, which Jennifer Rhee argues places the reader in a sympathetic relationship with P. Burke (454). Rhee, amongst others, has observed that this terminology within the narration "places [P. Burke] outside of the category of 'the human'" (453), or, through the lens of Judith Butler, marks her as "precisely the body that does not matter" (Hollinger 31). P. Burke "is the abjected body relegated to the outside of what conventionally constitutes the feminine" (Hollinger 31) with her disability described in a manner that emphasizes how it locates her outside of femininity specifically: a "girl-brute […] big hands clutching at bodyparts you'd pay not to see" (Tiptree 46). This description echoes the real-world struggle of disabled women "to position themselves as women" when hegemonic norms insist "that women's bodies must function in particular ways," norms that impact transgender women negatively as well (Slater & Liddiard 86, 87). The intersection between transgender studies and disability studies has been recognized by scholars such as Ashley Mog and Amanda Lock Swarr,

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[7] Controversy has surrounded the former Tiptree Award—awarded to SF/F that explores gender issues—for its name, given that Sheldon fatally shot her elderly husband, Huntington Sheldon, and subsequently herself. The full circumstances of their deaths are unknown—such as whether Sheldon and her husband had indeed formed a suicide pact before the shooting as Sheldon wished—but Sheldon seemed to be at least in part motivated by her husband's declining ability and her own fear of disability in old age. In the words of disabled sf author Elsa Sjunneson-Henry, who petitioned the name change in 2019: "I could not fathom accepting an award named for an author who murdered someone like me." The award has since been renamed the Otherwise Award (Lothian).

who note that both fields work "with the lived bodily experiences of people who fit outside of hegemonic gender norms and the ways in which people negotiate corporeal experiences that run up against societal barriers that only privilege certain bodies" (Mog and Swarr). "The Girl Who Was Plugged In" articulates disability as a form of gender failure, inviting a transgender studies lens alongside the more commonly applied disability lens.

The fact that P. Burke is human yet dehumanized, and Delphi is "Remote" yet humanized, speaks to how the abilities to perform gender and able-bodiedness are intertwined with one another as well as how vital they are to being recognized by wider society as human. When GTX recruits P. Burke, their promise is that she will be able to inhabit the "flawless" and "perfect girl-body" they deem "Delphi" and live as her—aside from when the Delphi body sleeps and the P. Burke body must awaken—in exchange for advertising their products; through their interference, P. Burke is hooked up to "electrode jacks" which "peep […] out of her sparse hair, and […] other meldings of flesh and metal," transforming her into a cyborg who is able to control the "eighty-nine pounds of tender girl flesh and blood with a few metallic components," that is Delphi, from afar, even from around the world (Tiptree 50, 48, 47, 54). P. Burke's original body is then relegated to being "the monster, down in a dungeon," only kept alive so she can operate what the narrator calls "the darlingest girl child you've EVER seen" (Tiptree 66, 48). The contrast of conventional, attractive femininity which the Delphi body provides only serves to dehumanize P. Burke more. In her landmark speech and essay, "My Words to Victor Frankenstein Above the Village of Chamonix," Susan Stryker cites Peter Brooks in saying that "whatever else a monster might be, it 'may also be that which eludes

gender definition'" (241). Stryker identifies herself with monstrosity for this very reason, stating that she is "too often perceived as less than fully human due to the means of my embodiment" (238), a statement that echoes the portrayal of P. Burke as monstrous in her lack of able-bodied femininity; P. Burke is "about as far as you can get from the concept girl," "a caricature of a woman" (Tiptree 55, 66). In fact, P. Burke's narrative relationship to Delphi parallels the transphobic rhetoric Stryker quotes:

> Because this "true self" requires another physical form in which to manifest itself, it must therefore war with nature. One cannot change one's gender. What occurs is a cleverly manipulated exterior: what has been done is mutation. What exists beneath the deformed surface is the same person who was there prior to the deformity (qtd. in Stryker 239)

Because P. Burke finds she is able to express and embody femininity as she desires through the other body of Delphi, she is placed at risk for accusations of deception and "mutation." Here again there appears a connection between disability and transgender identity; the nonconforming nature of transgender existence results in transness being hegemonically read as a "deformity" or disability. In the case of P. Burke, her disability, and its framing as gender nonconforming, allows a transgender studies reading of the novella to be quite fruitful.

P. Burke's gender failure also seems inextricably tied to sexuality as well, more so the ability to be sexually appealing rather than necessarily experiencing sexual pleasure. The narrator states that P. Burke is "a female, yes—but for her, sex is a four-letter word spelled P-A-I-N," referencing a history of sexual trauma but also suggesting that P. Burke's difficulty in enjoying sex threatens her womanhood (55). Pearson argues

that P. Burke's "ugliness" is "all about gender…women must, after all, be beautiful in order to be desirable, i.e. useful, to men," perhaps even to be recognized as women (334). Delphi is able to be "the perfect female object of desire for the world," but she notably cannot experience sexual pleasure for herself due to having reduced physical sensations, particularly in sexual(ized) areas of the body such as her breasts (Rhee 455); P. Burke notices that "the difference between Delphi and her own grim carcass" involves "the blank spots […] where her beastly P. Burke body feels things that Delphi's dainty flesh does not" (Tiptree 55). This is certainly a potent metaphor for how women are sexually objectified whilst having their own desires minimized or vilified—Delphi's position as a sexual object is not only solidified by her own lack of pleasure, but P. Burke's body is made more "beastly" by its very ability to desire—and while P. Burke's past sexual trauma makes her initially happy with "her delicious numb little body," she later finds that this lack of sexual feeling in Delphi disturbs her as it emphasizes her physical distance from Paul, who is unaware of her existence outside of the Delphi body (Tiptree 55). The question of whether P. Burke's ability to experience sexual pleasure marks her as more "real" than Delphi, somehow, remains ambiguous as both P. Burke and Delphi are described as "real" by the narrator (54, 76).

DUAL EMBODIMENT AND DEFINING "REALNESS"/ARTIFICE

Delphi's initial status as a mere "waldo" for the "real live girl" of P. Burke becomes cast into doubt (Tiptree 54), particularly as P. Burke increasingly desires to "fuse" with Delphi as the story progresses (Tiptree 66). Delphi sufficiently embodies a conventional femininity that P. Burke is incapable of, granting Delphi a form of

validation denied P. Burke despite her status as the original (human) consciousness. Veronica Hollinger argues that women themselves are "construct[ed]/represent[ed]" as artificial, with "the masquerade [a]s the sign of women's failure to 'live up to' the demands of 'true' femininity which such an ideology posits as the marker of the 'real' woman" (28). Delphi is reassured by her technical supervisor, Joe, that she is "the realest" and asks her where she "get[s] the idea you aren't real"; her successful masquerade perhaps aligns with Hollinger's assertions about "true" femininity (Tiptree 59). Even so, the narrator goes to lengths to assert that P. Burke/Delphi is in fact "a real live girl with her brain in an unusual place," at one point referring to P. Burke's physical form as "the real living woman" (54, 76). Although Delphi is not meant to operate without P. Burke being inside the "huge cabinet like a one-man sauna" which connects her mind to Delphi, there are indications that this is perhaps not the case (Tiptree 48). P. Burke's attempts to "become Delphi" appear to be at least partially successful when Delphi is shown to talk in her sleep (Tiptree 66, 73) as well as continue to live briefly after P. Burke's physical death, continuing to speak and to call Paul's name (Tiptree 77). The novella's—seemingly contradictory—suggestion that Delphi and P. Burke are both "real," in their own ways, is perhaps reflective of Tiptree/Sheldon's own attitude towards his/her dual identity.

Sheldon's personal writing—in addition to Tiptree's "The Girl Who Was Plugged In"—flips conventional expectations of "realness" which would position Alice Sheldon as the authentic self and Tiptree as the persona, while recognizing that there is an element of "realness" in both. A parallel can be drawn between the respective "realness" of both Delphi and P. Burke to Sheldon's own confession that her "'real,' daily-life self is a long-

elaborated kind of animated puppet show, with its own validity, to be sure"—with the phrasing of "animated puppet show" being reminiscent of Delphi's animated "Remote" status—and that her time as Tiptree "was the first time I could be really real" (Phillips 367). Sheldon herself wrote that she did "not 'match' my exterior [...] I live in my body and my social presence as in an alien artifact" (Phillips 364). This, combined with her assertion and question that "[i]t commits me to a way of life that is not mine; could I somehow bring the inside out, fuse it?" (Phillips 364) evokes the idea of P. Burke's consciousness inside of Delphi's body and her subsequent "self-alienation" (Tiptree 58). If read in such a manner, Delphi is the feminine Sheldon and Tiptree the nonconforming P. Burke, and not, as others have read, the reverse; the "waldo cabinet" which P. Burke's body must enter in order to become Delphi then becomes a closeting (Tiptree 56). Even so, as Pearson notes, epistemological certainty of what is "real" is absent from Tiptree's work.[8] Pearson argues that "much of Tiptree's work" is "about the incoherence and impossibility of knowledge," with "the body" as "a particular focus…of this disconnection between the sign and its meaning, between reading and 'reality'" (325). Bearing this ambiguity in mind, transgender readings of P. Burke/Delphi may not be strictly bound to either transmasculinity or transfemininity, but to broader notions of gender nonconformity and fluidity.

Even so, P. Burke's burning desire "[t]o become Delphi"—to become and be seen as feminine—could certainly be read as a kind of transfemininity, as P. Burke may be "female" but is excluded from recognizable womanhood (Tiptree 66). P. Burke must remain in the waldo cabinet-closet, while the "girly bedroom" of Delphi's exists on "the

[8] See Hicks and Stevenson for readings of Delphi-as-Tiptree, in which "the 'perfect girl-body'…of the science fiction writer is a male body" (Hicks 73).

other side of the glass wall," a femininity which P. Burke has access to while being unable to fully "close out the beast she is chained to" (Tiptree 48, 66). Certainly Stryker's comparison between herself as a transgender woman and Frankenstein, "[m]onstrous and unnatural in the eyes of the world"—"seeking only the love of his own kind and the acceptance of human society"—is evocative of P. Burke's primary dilemma and motivation for becoming the socially acceptable, feminine Delphi ("My Words" 243). Delphi is able to garner more respect than the (fully) human P. Burke, but her access to that respect is based upon her "passing" as a conventional human to those around her—save for the GTX executives who seek to manipulate her—experiencing the double-bind Bettcher connects to transgender people, particularly transgender women: "disclose 'who one is' and come out as a pretender or masquerader, or refuse to disclose (be a deceiver) and run the risk of forced disclosure, the effect of which is exposure as a liar" (50). This double-bind becomes particularly fraught within a sexual context, in which transgender people can be accused of sexual deception.

P. Burke/Delphi experiences distress regarding her dual embodiment primarily once she enters a romantic and sexual relationship with Paul, due to her concern that she is "not what thou lovest" (Tiptree 66). When Paul discovers Delphi's cyborg nature, she becomes "sure he hates her now," convinced that he doesn't "want me anymore" (Tiptree 72). Her belief is not unfounded, as GTX member Hopkins "points out the futility, the potential embarrassment for Paul" to P. Burke, attempting to convince her to discontinue the relationship (Tiptree 69). Hopkins finds that Paul and Delphi's relationship not only defies what he knows about Remotes—"[t]hey don't have real sex, the circuits designed that out from the start," arguably a kind of disability of its own that P. Burke must accept

in order to operate Delphi—but also repulses him: "[t]he idea is grotesque" (Tiptree 69). When Paul—mistakenly believing that the purpose of Delphi's cyborgian implant is simply so GTX can control her behavior rather than allowing P. Burke's consciousness to operate an empty body—travels to where P. Burke is held, she is effectively outed from the waldo closet. "The doors tear open and a monster rises up," and when Paul attacks P. Burke in response to her reaching for him, she is torn from the closet entirely, "crash[ing] onto the floor at his feet" (Tiptree 76). While Paul is not cognizant of the situation until after he commits this act of violence—killing Delphi along with P. Burke—he finds that "the thought of that monster fastened into little Delphi's brain nauseates him," evoking real-world trans panic responses when one considers how the gender conformity of Delphi is juxtaposed with the gender failure of P. Burke (Tiptree 76). Bettcher articulates that "the movement from invisible to visible generates the effect of revelation, disclosure, or exposure of hidden truth," and that this movement at times results in transgender women not only "being the subject violence and even murder," but also "being held responsible for this violence" (50). Such is the case for P. Burke, whose—ostensibly accidental—murder is explained through the narrator's question to the reader that "[w]ouldn't you" also attack P. Burke "if a gaunt she-golem flab-naked and spouting wires and blood came at you clawing with metal studded paws" (Tiptree 76). This moment unsettlingly suggests that P. Burke's dehumanized status provides justification for Paul's violent reaction to her, and uncomfortably parallels real-world transphobic violence.

"The Girl Who Was Plugged In" critiques the gendered expectations placed upon young "women" such as P. Burke and Delphi and the dependence that their humanity has

upon these expectations socially. Its portrayal of this dependence as well as of the anxieties which surround "passing" figures like Delphi—sexual and otherwise—offers a more progressive, subversive depiction of AI and cyborgian characters than previous works I have discussed. The history of AI characters in SF has aligned much more closely with that of *Galatea 2.2* and "Second Variety," in which AI must be compulsively gendered and AIs who "pass" as human—which, given the dehumanization of transgender people, is equivalent to passing as a binary, conforming gender—are represented as the threatening other. Tiptree's sympathetic portrayal of P. Burke/Delphi—despite the tongue-in-cheek efforts of the narrator, who nevertheless allows us access to P. Burke's interiority, fears, and motivations—addresses the dehumanization which results from gender failure and critiques it rather than perpetuates it, offering a bolder interpretation of gendered AI than previously discussed SF works. The depiction of gendered AI in a more progressive fashion within SF has continued today in the twenty-first century movement of openly transgender writers who intentionally choose to use AI narratives to analogize their experiences.

CHAPTER III: "TRANS"FORMING BINARIES IN CONTEMPORARY AI SF

INTRODUCTION

Pearson argues of Tiptree that "no matter how female or feminine (or unfeminine) Alice Sheldon may have been, James Tiptree himself was a transgender sf writer" in terms of being "deliberately[…] (mis)taken for the 'opposite sex,'" a bold claim which risks painting transgender identity as a kind of performance, a view that Pearson otherwise problematizes (328). While Tiptree's potential identification with transgender identity remains ambiguous, there are contemporary SF authors whose identities explicitly factor into their portrayal of gender in AI characters. Two of these authors—namely Annalee Newitz and Malin Rydén, who both openly identify as non-binary—are where I direct the remainder of my analysis.[9] The interactive medium of Rydén's *Fallen Hero* series permits readers to "play" as a cisgender or transgender character, but the character's identity—which remains secret even to the reader until the series' second novel, *Retribution*—as a vat-grown organic body operated by an AI chip "passing" for human codes them as transgender regardless. Newitz's novel, *Autonomous,* features a military bot named Paladin who essentially transitions from male to female—with the narration's pronoun use adjusting accordingly—during the course of the novel, and, although Paladin's experiences are specifically differentiated from transgender identity,

[9] Newitz uses they/them pronouns ("They turned my gender"), whereas Rydén uses all pronouns ("Who I am"). I am unsure whether Newtiz or Rydén identify as transgender in addition to nonbinary—as this tends to vary amongst nonbinary people—but for the purposes of this thesis I will refer to them as transgender authors.

the comparison is nevertheless explicitly evoked in the narrative. Through these portrayals of trans-coded AI protagonists—in which their point-of-view and interiority is emphasized, unlike previously discussed works which feature AI—Newitz and Rydén combat aforementioned cisnormative patterns in SF which conflate sentience and gender identity and surround "passing" figures with epistemological anxiety—most notably within a sexual context—and in doing so challenge the real/artificial and natural/unnatural binaries which are often used to marginalize transgender identity.

Unpacking and reimagining the real/artificial and natural/unnatural binaries is necessary to "critically assess the modern Western concept of proper personhood" as these dichotomies shape the way we conceptualize and define what is considered to be human

("Transsexuality" 591). As Allucquére Rosanne Stone explains:

> Not only has the character of nature as yet another construct of culture become more patent, but it has become nothing more (or less) than an ordering factor—a construct by means of which we attempt to *keep technology visible* as something separate from our 'natural' selves and our everyday lives. In other words, the category 'nature', rather than referring to any object or category in the world, is a *strategy* for maintaining boundaries for political and economic ends, and thus a way of making meaning. (517)

By extension, the notion of (in)authenticity which surrounds the natural is also a strategy, namely one used to marginalize or indeed target transgender people as deceivers or pretenders who act against nature (Bettcher 51). Eliza Steinbock observes that "[f]eminism and transgender studies have paved the way to an understanding of how

gender is a kind of technology that makes the body culturally intelligible" (Sullivan 128) rather than an immutable manifestation of nature; through this lens, "bodily being in the world is always a somatechnic event," and transgender people are not uniquely unnatural or artificial (Sullivan 61). *Fallen Hero* imparts this very notion to readers by placing them in the sympathetic point of view and subject position of an "artificial" being, casting the categorization into doubt through the complexity of the protagonist's interiority. Alternatively, *Autonomous* suggests that transgender identity and interiority should be able to exist free of scrutiny and surveillance that would seek to prove their existence as either "real" or "artificial" by emphasizing the invasiveness of even well-intentioned attempts to verify gender identity, advocating for privacy as a mechanism for protecting transgender existence. Alongside one another, the two narratives unsettle how AI has been historically gendered within the SF genre as well as the dichotomies which have informed said gendering.

***FALLEN HERO*'S RE-GENES AS TRANS-CODED PASSING FIGURES**

Malin Rydén's text-based interactive novel series, *Fallen Hero,* exhibits the connection between artificial intelligence and transgender identity by representing transgender issues through the depiction of constructed humanoid beings called "Re-Genes," of which the protagonist is one. Due to the born-digital, interactive nature of the series, readers may choose to have their protagonist be either cisgender or transgender—as well as the protagonist's appearance, motivation, and skillset within this "Choose Your Own Adventure" style branching-path narrative—but the connection between Re-Gene and transgender experiences is present regardless; in fact, I argue that it is emphasized

more for readers who play "as" cisgender protagonists. Although the protagonist has internalized the idea that they are inauthentic in their presentation as a human, the access that readers have to their interiority—and the identification with the protagonist that results from the interactive form—assures readers of the sentience of the protagonist even as the narration demonstrates the protagonist's insecurities about their "realness." *Fallen Hero*'s narration expands upon the fears and motivations of a "passing" figure which are only touched upon in "The Girl Who Was Plugged In" and building sympathy for the figure that is only presented as a threat in "Second Variety." By identifying readers with an artificially intelligent protagonist—one who is coded as transgender even if the reader has chosen a cisgender identity—who struggles with the notion of being "fake" or "artificial" but who is undoubtedly as sentient as their human counterparts, *Fallen Hero* asserts that artificiality is not an immoral state or state of being at all—a notably somatechnic stance within the context of transgender identity as gender-affirming care often involves technological means—but rather a construction formed by cisnormative ideals and standards. In doing so, *Fallen Hero* addresses how "human" as a category is also constructed to exclude certain others.

Upon their introduction in the first entry in the *Fallen Hero* series, *Rebirth*, the Re-Genes are immediately identified and described as constructed; they are compared to "robotic constructs" as, even while their bodies are made from organic material, they are "created, not born" (ch. 2).[10] This description immediately frames their existence as artificial and unnatural even before they are stated to be "outfitted with artificial minds: advanced AIs that can mimic the acts of people, but aren't truly alive" (*Rebirth* ch. 2). By

[10] Because Fallen Hero is a born-digital interactive series, there are no page numbers. I've elected to provide chapter numbers instead.

the logic of this description, the Re-Genes cannot be "alive" because they are artificial; their existence can only be a mimicry of the "real" and ostensibly unconstructed intelligence of human beings. The Re-Genes which initially appear in *Rebirth* are said to be "impossible to confuse with […] a normal human" as they have "distinctive blue-gray skin" and tattoos which cover the entirety of their bodies and make passing as human an impossibility according to the novel's narration (ch. 2). However, the narration is later shown to be unreliable in the sequel, *Retribution*, as the protagonist themself is revealed as a Re-Gene to readers despite appearing human to other characters; their Re-Gene status is hinted at during *Rebirth*, but the reader's lack of knowledge regarding cuckoos—"made to infiltrate society but never really be a part of it," designed to pass as human aside from Re-Gene tattoos that are concealable under clothing—means that they may not anticipate the twist (*Retribution* ch. 17). That readers interact with the novel "as" the protagonist for the duration of the series while under the impression that the protagonist is human is significant in terms of how Re-Genes are othered in the narrative and how that othering is subverted.

Whether readers select a transgender or cisgender protagonist impacts how heavily the Re-Gene reveal is hinted at before *Retribution*, leading to readers with a cisgender protagonist receiving more indications towards the protagonist's Re-Gene identity than readers with a transgender protagonist; this interactive narrative structure implies that *Fallen Hero*'s allegory may be underlined more strongly for readers who opt for a cisgender protagonist. While there are other clues that aid in contextualizing the protagonist's background in *Fallen Hero*, the protagonist's evident issues with body image and internalized ideas about being a "*fraud*" who has hidden the "truth" from their

friends for over a decade may be read differently by readers who opt for a transgender protagonist over a cisgender protagonist considering that the transgender protagonist passes as cisgender to those around them and has chosen to "go stealth" or to not disclose their transgender status to anyone (*Rebirth* ch. 1, ch. 3). When read through a transgender lens, the protagonist's resistance to "looking at yourself in the mirror" or "undress[ing] in front of anyone else," as well as their observation that their "[c]lothes hide many things," appears to reflect the experience of body dysphoria; however, these sections of the narration are offered to all readers regardless of the gender identity of the protagonist (*Rebirth* ch. 1, ch. 2, ch. 3). While there are specific elements of the text which are reserved for a transgender protagonist—including entire scenes where the reader may opt to have the protagonist undergo top surgery, for instance—readers are unable to discern which portions of the narration are specialized without looking at the digital novel's programming and code, which contains all possible choices. Therefore, what appears to be innocuous to readers who have selected a transgender protagonist appears unusual or suspicious for readers who have selected a cisgender protagonist, alerting readers with cisgender protagonists—who are perhaps more likely to be cisgender themselves—to the allegory at play earlier than other readers. It appears as if *Fallen Hero* is intended to be read as a transgender narrative, even if the protagonist is not chosen to be explicitly transgender.

The interactive relationship between the reader and protagonist is built upon reader identification with the protagonist, a relationship which works to build sympathy for the protagonist, and therefore Re-Genes as a whole, once the protagonist's status is revealed. Readers develop this identification with the protagonist during *Rebirth* when

the protagonist is ostensibly human—passing as one even to readers—with the narration referring to the protagonist—and therefore to readers—by the second-person pronoun "you," e.g. "[y]ou're tired of hiding" (*Retribution* ch. 19). As Jeremy Douglass observes in "Enlightening Interactive Fiction," the medium's conventional use of "[s]econd-person narration ('You are') evokes first-person participation ('I am!')" from readers, building an identification between an interactive fiction's protagonist and its audience (135). This identification, which encourages readers to make choices "as" the protagonist, is carried through the narrative to the moment of reveal. The Re-Genes of *Rebirth* are distinctly othered, not just in terms of their physical appearance—one is described as having "blue-gray skin covered in black spiral tattoos" with eyes that "gleam red with optic inserts"—but in their lack of speech and violent presence in the narrative (ch. 2). They are deployed as military operatives, their only interactions with the protagonist being violent when the protagonist interrupts their mission objectives (*Rebirth* ch. 2). When the protagonist is stated to be a Re-Gene in *Retribution*, "you" also become a Re-Gene; this reframes previous understandings of Re-Genes as the other, becoming instead the self. If one assumes that readers who select a transgender protagonist are more likely to be transgender or to otherwise be accepting of transgender people in comparison to those who select a cisgender protagonist, this reframing identifies the latter group—who have received more explicit allegorical indications prior to this reveal—with transgender people within the allegory, potentially combatting internalized notions of trans people as the "other."

After the protagonist is stated to be a Re-Gene, they note that "normally you […] pretend to be human enough that it almost feels real," but that "lately, it's been harder to

ignore the truth," demonstrating that the narration's reluctance to reveal the protagonist's identity is based in the protagonist's own inability to face "the truth"; this statement also reiterates the novel's preoccupation with the real and the artificial, with the body in this instance being representative of the "truth" in its revealing of the protagonist as artificial (*Retribution* ch. 17). The protagonist "layer[s] clothes as camouflage so you can keep what might reveal you out of sight": "Your body. Your skin" (*Retribution* ch. 17). They refer to the distinctive Re-Gene tattoos which cover "every part of your body not commonly exposed to the world," allowing cuckoo models to pass by showing the lower parts of their limbs as well as their face and neck to others; the artificial form of the tattoos is emphasized to differentiate them from even normal tattoos as they "look strange against your skin, slick and shiny as if they had been inked yesterday" (ch. 17). The framework which regards the protagonist's body as somehow more "truthful" than their chosen outward presentation is similar to the cultural framework which both marginalizes transgender identity and feeds into the body dysphoria often found in transgender individuals: that "gender presentation (attire, in particular) constitutes a gendered appearance whereas the sexed body constitutes the hidden, sexual reality" that is more fundamental in its "realness" than gender presentation (Bettcher 48). Notably, this sexual "reality" is constructed by the same framework that places such importance upon the sexed body as "truth" and does not necessarily denote an actual truth; Stryker observes that

> Authority seizes upon specific material qualities of the flesh…constructs this flesh as a sign, and reads it to enculturate the body. Gender attribution is compulsory; it

> codes and deploys our bodies in ways that materially affect us, yet we choose neither our marks nor the meanings they carry. (“My Words” 249)

The meaning that is placed upon the sexed body is no more fundamental or significant than the tattoos which the Re-Genes are arbitrarily branded with to differentiate them from “real” humans; both serve as a controlling mechanism, and this compulsory meaning-making is represented in *Fallen Hero* through the literal marking of the flesh as something to be “read.”

Fallen Hero’s depiction of the “truth” frames it as a harmful construct that only serves to reinforce the protagonist’s self-hatred and invalidation of themself as a “fake […] never a person” (*Retribution* ch. 17). The protagonist has internalized the idea that they are “a pretender” (*Retribution* ch. 15), echoing Bettcher’s argument that transgender subjects are always construed as pretenders or deceivers due to their perceived misalignment between outward presentation and the “truth” of the body (55). Observing that “according to the truth, you were nothing,” the protagonist asserts that “[y]ou had to remake yourself, wrap yourself in lies until they turned real” (*Retribution* ch. 21). Nevertheless, they are preoccupied with “the single, unchangeable truth that you’re not human” (*Retribution* ch. 17), and this preoccupation leads to self-dehumanization; the narration states that the protagonist is “[t]ired of pretending that thi—
that people like you don’t exist” (*Retribution* ch. 19). The near slip in which the protagonist almost objectifies themself as a “thing” is presented in the same sentence as their feelings of invisibility; Bettcher remarks that, for transgender people, “to opt for invisibility”—to pass as cisgender, and in the transgender protagonist’s case, to go stealth—“is to remove one’s life from the domain of the masquerade into actual reality”

due to the lack of construction from others in which one is labeled as a "pretender" (50). However, this can lead to "living in constant fear of exposure," which the protagonist endures in order to be perceived as human while still internalizing the notion that doing so is an act of pretending or artifice (Bettcher 50). The work that the protagonist does to pass as a human being also extends to gender presentation, explicitly linking the ability to be seen as human with the successful performance of gender.

Regardless of whether the protagonist is chosen to be cisgender or transgender by readers, the protagonist struggles to perform gender in a way that offers them acceptance in society; to perform gender correctly is to be seen as human. Upon choosing the protagonist's gender in *Rebirth*, readers are offered passages which express the protagonist's need to follow "rules" to not stand out to others: "If you want to fit in. Stand in a certain way. Sit in yet another" (ch. 1). When the protagonist's mindset allows the narration to explicitly address how the construction of gender affects the protagonist as a Re-Gene, it notes that "you had to learn the codes. Fit in. Present yourself in the right way so nobody would stare. Play the role" (*Retribution* ch. 22). The protagonist notes this connection explicitly when they assert that they want to "[b]e a real woman. Human," with the term "woman" being replaced by "man" or "person" if the reader has chosen a male or nonbinary protagonist (*Retribution* ch. 24). However, in portraying gender presentation in such a blatantly performative fashion, *Fallen Hero* points out the constructed nature of gender presentation.

Although the protagonist has internalized the notion that they are "fake" and therefore undeserving to be treated as human, even as they seek to be, the access that readers have to the protagonist's interiority firmly establishes their sentience; likewise,

the narrative's confrontation of the constructions of real/artificial which surround the protagonist's identity serves to validate the protagonist's consciousness even as the protagonist themself demeans their own validity. Readers are incentivized to accept the consciousness of the protagonist as fully sentient as, in a sense, it is one that they share through the interactive form of the series and its conflation of the "you" that is the reader and the "you" that is the protagonist. Not unlike how the narrator's derision of the reader in "The Girl Who Was Plugged In" aligns readers sympathetically with P. Burke's similarly derided status, readers are placed in an essentially sympathetic dynamic with *Fallen Hero*'s protagonist due to the interactive nature of the form.[11] Because the protagonist's regard towards themself as artificial—fueled by the idea of the undeniable "truth" of their nature—is so blatantly harmful to their self-image, readers are primed to regard this "truth" with
suspicion. At times, the protagonist themself is even shown to doubt this truth, extending the narrative's critique of the real/artificial construction further.

Fallen Hero's somatechnic themes are most evident when the protagonist themself addresses the possibility of redefining the human along with the categories of real/artificial and natural/unnatural. The most readily apparent example of this may be when the protagonist reflects upon a sculpture that was formative in their own emerging sense of their personhood:

> [Y]ou remember standing in front of a sculpture back in... was it Boston? That feeling in your chest, the tightening, the shortness of breath... was that your first

[11] For further discussion on empathy and identification in interactive fiction, see Jeremy Douglass's "Enlightening Interactive Fiction: Andrew Plotkin's *Shade*" and Nick Montfort's "Fretting the Player Character."

> intense emotion? Something they had not programmed, but you *felt* like you had never felt anything before. Kinship perhaps, to that cold, white, marble face, yet containing more emotion than the people that surrounded you, sculpted skin as plastic as their hearts.
>
> That statue felt more real and genuine than them. And that meant you could be as well. There was more to being human than being born from a womb; there was a direct line of communication between the long-dead sculptor and you. An understanding. A shared experience. (*Retribution* ch. 15)

The sculpture is both artificial and unnatural in its status as an object that was not "born from a womb," yet the protagonist asserts that it is "more real and genuine" than the humans that surround it. This observation reverses the dynamic of real/artificial and natural/unnatural by remarking that the humans that surrounded the protagonist were "plastic" both in their use of plastic surgery—often more socially acceptable and easier to access than gender-affirming surgeries—and their disingenuous behavior, evoking the "chiasmatic interdependence of soma and techné," where "bodily-being (or corporealities) [is] always already technologised, and technologies [are] always already enfleshed" (Sullivan 3). By recognizing the possibility of personhood and humanity outside of the dichotomies of real/artificial and natural/unnatural, the protagonist re-envisions these constructs and recognizes that they do not need to be dichotomized or defined in the hegemonic fashion that they normatively are.

HOW AUTONOMOUS GENDERS BOTS (OR NOT)

Autonomous approaches the real/artificial and natural/unnatural dichotomies from a different angle than *Fallen Hero* but, nevertheless, problematizes how they work in tandem to essentialize gender and scrutinize transgender identity. The dystopian future of Newitz's novel features corporate monopolies on pharmaceuticals and robots who must earn their "autonomy key" by serving corporate interests; one of the primary point-of-view characters in *Autonomous* is a military robot, Paladin, who is tasked with hunting down the novel's pirate protagonist for pharma infringement and succeeds in achieving autonomy by the conclusion of the narrative. When an attraction develops between Paladin and his human mission partner, Eliasz, who is resistant to engaging with Paladin sexually on the basis of Paladin's perceived male identification and his own ostensible heterosexuality, Paladin begins to question his own gender assignment as male. Paladin's outward presentation of gender shifts over the course of the novel, socially "transitioning" from male to female—with a corresponding pronoun shift in the narration, one which I will emulate in my own writing—although her internal sense of lacking a gender identity does not shift. *Autonomous* reflects upon the human need to gender consciousness—as seen in other SF works such as *Galatea 2.2*—through the gendering of robots that ostensibly have no innate gender or gender identity; in doing so, the novel comments upon the social construction of gender without erasing the importance that gender identity can hold for many people, including and especially transgender identity, which the narrative explicitly evokes. The ability to choose a gender identity is framed as a vital expression of agency and privacy for bots who have their choices otherwise made for them through programming and surveillance, suggesting that the novel's transgender

politics are based in opposing the notion that identities must be verified or examined by others to be taken as "real." In other words, the right to privacy—in a legal sense, even—can be used to combat accusations of deception, particularly sexual deception.

Autonomous addresses the phenomenon of gendered AI in SF—exemplified by Richard's insistent gendering of Helen in *Galatea 2.2*—and identifies it as the result of a cisnormative unwillingness to imagine consciousness without gender. There is a fairly consistent narrative assertion that the bots of the *Autonomous* universe—not just Paladin—do not have gender and only adopt gender identification for the sake of human comfort and convenience. One of the other military bots present in the novel is Fang, who proclaims that this "anthropomorphization" is one that only serves humans; Fang states to Paladin that "we don't have gender" and explains that his own use of "he" pronouns is only due to the fact that humans will "*get confused otherwise*" (Newitz 127). Indeed, Paladin recalls that "humans had given him a gender before he even had a name" (Newitz 184). As with the case of Helen, receiving a gender marker from human creators is of primary importance for bots, allowing their consciousness to be socially recognized even before they are individuated by being given their own name; this mirrors the gendering of human infants where the gendering of the infant occurs before the act of naming, a gendering that Stryker asserts "move[s] a body" into community and personhood. In *Autonomous*'s context, only the former function applies to the gendering of bots; they are not granted the legal rights of a person unless they possess an autonomy key, which frees them from their programming by allowing them awareness of the intricacies of their coding. Gender assignment of bots appears to be socially motivated as humans are more comfortable interacting with bots if they are able to gender them.

The social aspect of gender is emphasized within *Autonomous* as a reason for why bots may choose to present as a particular gender regardless of the absence of a biological sex upon which to base their identification; this framing perhaps problematically leads the novel to flirt with the cisnormative idea that gender originates in biological sex even as it may involve socially constructed roles. In stressing that his own gendering is "*just humans projecting their own biological categories onto my body*," Fang seems to claim that the human insistence on gendering bots is reflective of a biological system of categorization of which humans cannot let go even in the absence of the very sex characteristics upon which that system is ostensibly based (Newitz 127). Because bots are artificial and not natural/biological, Fang argues, they cannot have gender; this notion that bots have no inherent gender is never contradicted by Paladin in the book although Fang's statement that gender is essentially meaningless eventually is. Even so, Paladin observes that humans tend to gender bots based on pre-existing gender roles and social expectations, "often ignoring anatomy" (Newitz 184). Paladin is read as male due to his position as a military bot, "whose hulking body, with dorsal shields spread wide over his back, took up the space of two large humans" and presents a connotatively masculine appearance (Newitz 41). By recognizing that "[g]ender was a form of social recognition" and not just a biological category, Paladin pushes back against Fang's belief that social gender roles are not applicable to bots because of their artificiality; however, an internal sense of gender identity is absent from Paladin as well as from the novel's other bots, lending Fang's stance some validity (Newitz 184).

Autonomous complicates its treatment of bio-essentialism further through Paladin's status as a kind of cyborg—or "biobot," as he is called within the novel—with a

biological human brain implanted in his abdomen to aid with facial recognition processing although Eliasz and other humans attribute more weight to the human body part's role in the lives of biobots. While Paladin's biobrain is "used […] mostly like a graphics processor" by the bot (Newitz 33), Fang remarks that "the bad guys always take out the brain first" when fighting models such as Paladin (Newitz 127). The human brain is assumed to be the biobot's most vital part, the same logic that undergirds Eliasz's question to Paladin about the identity of his brain's original owner, information that Paladin does not at first have access to: "Isn't it important to know who you really are? Why you feel what you do?" (Newitz 33). Despite the fact that "[n]one of Paladin's emotions or ethics were processed in his human brain," Eliasz assumes that Paladin's only biological component is where his identity can be located, a different kind of bio-essentialist thought than the one Fang presents in relation to gender (Newitz 33). Fang's attribution of gender to biology does not extend to the biological parts of biobots as he scoffs at Paladin's suggestion—influenced by his conversations with Eliasz—that perhaps gender identity is "different for biobots" and that Paladin's gender identity can be found in that biological element (Newitz 127). It's not uncommon even for transgender people to cite gendered brain differences in order to "help them prove and affirm their own gender identities to medical and legal authorities that act as gatekeepers to their accessing basic rights," a bio-essentialist perspective which *Autonomous* seems to resist (Fehr 387). Fang states that Paladin's "brain is nothing more than a processing device for facial recognition" and that he "can operate almost as effectively if it goes offline," foreshadowing the very damage which occurs to Paladin later in the narrative (Newitz 127). Paladin's brain "*doesn't reveal some essential gender identity"* through its

neurology—a position which Paladin ultimately seems to agree with—but this does not prevent him from allowing Eliasz to think so, particularly when Paladin's brain is revealed to come from a female donor in seeming contradiction to his male presentation (Newitz 127).

When Eliasz takes the female origins of Paladin's biobrain to mean that Paladin himself is fundamentally a woman, Paladin realizes that this assumption grants him the opportunity to be in a relationship with the "heterosexual" Eliasz; she then begins to socially present as female, recognizing the social value of gender even as she (internally) maintains that she has no personal identification with it and narratively marking gender identification as something quite arbitrary. In the chapter "Other True Self," Eliasz remarks that Paladin's discovery of his "female" brain means that he now "know[s] who [he] really" is and asks if Paladin's pronouns should adjust accordingly (Newitz 183). Paladin agrees, thinking that the change of pronouns "merely substitute[s] one signifier for another"; thus, it is not a "false"—or artificial—representation of Paladin's self, but rather an "other" true self which Paladin can embody (Newitz 184). Paladin thinks that "changing his pronoun would make absolutely no difference at all" in terms of his own identity, but Eliasz's positive reaction to the prospect serves to motivate Paladin to essentially transition (Newitz 184). Paladin's outward appearance remains unaffected after her change of pronouns, but Eliasz begins to correct others when they seemingly "misgender" Paladin as male and becomes suddenly comfortable with forming a sexual relationship with Paladin. In "All Hail the Trans Cyborg," wherein Jacob Barry also analyses *Autonomous* through a transgender studies lens, Barry argues that Paladin's "transition" actually reflects the "experience of accepting pronouns that do not

necessarily sit comfortably with one's perception of their gender identity in an effort to alleviate the discomfort or ignorance of others," representing not self-actualization but the repression of the self for the comfort of others (127). Barry's observation holds merit, but the novel's portrayal of "a genderless bot repeatedly encountering the human obsession with gender" is somewhat more complex (127), especially when one considers the titling of this chapter as "Other True Self." Such a title indicates that Paladin's new pronouns do not indicate a further repression of Paladin's sense of gender but an expansion of it and its relevance in social contexts that allows Paladin to make gender work to her advantage.

Although Paladin is not transgender, her narrative transition from a male to female bot intentionally evokes comparisons with transgender identity. Eliasz invests in a rather odd form of bio-essentialism; Paladin notes that once she shifted pronouns, "[s]he was pretty sure that Eliasz anthropomorphized her as [transgender], imagining she had been assigned the wrong pronoun at birth" (Newitz 299). Interestingly, Eliasz ascribes a female gender to Paladin according to her biology but also reads her as a transgender woman when transgender identity ostensibly denies the sexed body under the bio-essentialist schools of thought that Bettcher articulates. Barry observes that Paladin is read by Eliasz as a transgender woman via the "discourse of the wrong body model of trans subjectivity formation wherein the sexed body is perceived as wrong in relation to an inner, real, and authentic gender identity" because she possesses a "female brain" within a male-coded bot form (128). Bettcher cites this narrative as potentially subversive due to how it reverses bio-essentialism "by representing the body itself as somehow deceptive," but, in Paladin's case, Barry argues that it "draws a parallel to the experience

of having a sex/gender imposed upon one's body in order to become intelligible to the dominant culture," a sentiment which Newitz may be particularly eager to communicate due to their own non-binary identity (Barry 128). Eliasz accepts Paladin as a woman—because of its convenience for his own heterosexuality if nothing else—but requires a biological basis to be present in some form in order to verify "her" identity: still somewhat locating gender within a biological context even as he employs the "trapped in the wrong body" narrative. Paladin herself articulates that she is not transgender—thinking that perhaps "Eliasz would never understand that his human categories [such as] transgender […] didn't apply to bots" (Newitz 299)—but her narrative is clearly meant to be, as Barry puts it in the title, "an [a]nalogy of [t]rans [b]ecoming." In line with Barry, I read this analogy positively in terms of transgender representation for how it critiques the imposition of the gender binary and bio-essentialist thought, but some critics have found the novel's use of transgender identity to be rather flippant in its portrayal of gender and pronouns as something one can strategically choose for social convenience.

Although Paladin's choice of identity may be strategic—and seemingly based upon validating the cisnormative assumptions of a man insecure about his sexuality—it functions as Paladin's primary expression of agency within the narrative, ascribing it weight that extends far beyond Paladin's relationship with Eliasz. Paladin's choice to present as a female bot may not be significant in terms of affirming any particular gender identity of her own, but it is in terms of how it provides her an agency that she has otherwise been denied. Early in the novel, Paladin notes that even though "gender designations meant very little among bots," "some autonomous bots preferred to pick their own pronouns" (Newitz 40). This seems to be less of an indication that autonomous

bots have gender identity—as Paladin becomes autonomous by the conclusion of the novel, and this does not suddenly shift her perception of her own gender—and more of an indication that autonomous bots choose their own pronouns because they *can*. Paladin thinks that even though Eliasz was "asking the wrong question" when he asked about her pronouns, it matters more to her that "he was asking her consent" and most that it was something she was capable of giving despite her programming (Newitz 236). After all, Newitz dedicates the novel to "all the robots who question their programming," and Paladin's character arc centers upon using gender to do precisely that.

Similarly, Paladin's choice to allow Eliasz to remain ignorant regarding her true lack of gender and its lack of connection with her brain—even after her brain becomes damaged and is no longer usable—also functions as an expression of agency, one related to privacy. Transfeminine jurist and bioethicist Florence Ashley has cited the importance of legal privacy for transgender people due to the "the criminalisation of (trans)gender history non-disclosure," particularly in sexual fraud cases, in which defendants are accused of sexual assault for not disclosing their transgender identity to partners before or after transition (Ashley). Such cases are relevant to Eliasz and Paladin's own relationship as Eliasz remains unaware that Paladin's female identity—upon which his consent appears to be predicated—is not one that Paladin actually holds, at least not in the same way he understands her to. Ashley argues that the defense in these cases should not be based on authenticity but on privacy, stating that "[g]ender identity is a private matter and people should not be forced to figure it out or communicate it to others to have an intimate life" (Ashley). It speaks to the progressive politics of *Autonomous* that Paladin's withholding of her gender identity—or rather, her lack thereof—is not narratively

regarded as a form of deception, particularly that of a sexual deception. While Paladin does not identify herself as transgender, the surveillance she has been subject to as a bot—whose thoughts and programming are able to be adjusted by her employers—mirrors the real-life scrutiny which transgender people face regarding their personal history and identity. The titular autonomy portrayed in the novel relates not just to the right to make choices which reveal and express one's interiority but the right to deny others' access to it.

While there are legitimate criticisms of the novel which suggest that the arbitrary portrayal of gender performance in the novel trivializes the powerful identification that many people—including and especially transgender people—feel regarding gender, *Autonomous* rests Paladin's narrative primarily upon the power of agency to choose one's gender presentation. *Autonomous* articulates that while gender may not be fundamental to consciousness—or to biology—human society relies upon gender as a form of "social recognition," and so it inescapably impacts how one is perceived by others. The ability to influence how one is seen, then, by choosing a gender identity, may be one of the only expressions of agency available regarding gender as—just as in Paladin's case—the option to escape it entirely cannot be offered in our society. By portraying Paladin's "transition" as a meaningful act of agency rather than a meaningful act of identification, *Autonomous* rejects bio-essentialism and affirms that it is the ability to choose one's gender that is most important not necessarily the details of the choice itself. In doing so, the novel also powerfully suggests that the details of one's gender identity and history are not owed to anyone, even one's sexual partners; such a stance, if taken seriously, is

instrumental to protecting transgender people from invasive scrutiny—interpersonal or otherwise—regarding their bodies, feelings, and moral integrity.

CONCLUSION

The real-world parallels of the SF tendency to frame transgender-coded or otherwise gender non-conforming AI figures as deceptive, threatening, and in need of surveillance, categorization, and scrutiny cannot be understated. Currently in the US—-as well as other countries such as the UK—bills attempting to limit transgender people's access to gender-affirming care and to public visibility, as well as to categorize and identity them as deviant—such as efforts to criminalize drag in Tennessee (Freeman)—are being proposed at an alarming frequency across many states. Concerns regarding real-world transphobia even extend to uses of AI, which, when employed in a gendered context, have alarming implications for transgender people. A primary example of how AI may negatively impact transgender people is "automatic gender recognition," used, for instance, to verify ticket buyers at International Women's Day in 2019 Berlin (Johnson). AI researcher Os Keyes—who specializes studying AI and its racialized and gendered implications—expresses that facial recognition systems programmed to determine gender "could lead to increased encounters with law enforcement that lead to trans people getting discriminated against, overly monitored, or killed," especially given that facial recognition technology rarely accounts for transgender people during testing phases (Johnson). Keyes asserts that "the worst case scenario […] is some bright spark has the idea to fit it to bathrooms, then we can alert an operator when a bloke tries to walk into the women's bathroom or something," assuring the ability to police public transgender existence (Johnson). The potential uses of AI in a society that is hostile to

transgender people—and that may be becoming increasingly hostile—are very alarming indeed.

However, fictional depictions of AI by transgender authors such as Rydén and Newtiz offer promising reimaginings of the gender binary and other harmful dichotomies. Barry states that in *Autonomous*, “Newitz engages the discourse of somatechnics […] in their ability to situate science fiction (i.e. a genre that is simultaneously concerned with technology and functions as a soft technology in and of itself) as the *techne* through which to explicate the gendered *soma*,” a method that could perhaps be said to apply to Rydén and other emerging trans authors as well (126). My exploration of the trans-authored works in the third chapter of this thesis only touches upon transgender voices within speculative fiction; in particular, I encourage attention towards the writings of transfeminine and binary transgender authors who are not represented here as well as those of authors of color. Both *Fallen Hero* and *Autonomous* themselves would benefit from further scholarship which addresses how each work analogizes transgender identity through their AI characters; for instance, they each feature villain protagonists, a connection which may be productive to read through Stryker’s theory of trans monstrosity but which is beyond the scope of this study. These works, as well as further works by transgender writers that depict AI and gender in ways unconventional to SF tradition, can radically reimagine how gender may appear in nonhumans and thus reflect upon society’s use of the gender binary to surveil, stigmatize, and control the lives of transgender people.

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