IRL, URL: Poetic Computation of Gender as a form of Trans* Humanism
Anu Zaman

"I don't care what anyone says, I'm not dating a girl with pronouns!!"

      "Pronouns in bio" is a pejorative loved by people and groups across the political spectrum. This phrase belies disdain not only for trans* identities, but also for the mere possibility of support for transness. I use "trans*"[1] here as shorthand for transgender, but "trans" also initializes the words "transformation" and "transgression." *Trans*, derived from the Latin, means across or beyond: transness is a metamorphosis not only of the individual body, but also of body politics. Over time, these transmutations have expanded in scope from the real and symbolic, to the imaginary and virtual: from changes in presentation, norms, and roles, to the dematerialization of gender and the body itself.

      Gender begins with the body, but in unexpected ways. Philosopher and queer theorist Judith Butler puts forth a performativity theory of gender, where one's gender identity is established retroactively through expression, rather than existing prior to one's actions.[2] People have "intelligible genders" if they iteratively and coherently exhibit behaviors associated with their sex assigned at birth,[3] in the sequence that posits that biological sex leads to feminine or masculine behaviors, which in turn leads to cisheterosexual orientations. Gender is reinforced by this reiteration, and gender performance is necessary for a person to be intelligible to themself and to society at large within the discourse of sex and gender.[4] People who exhibit incoherent gender sequences, such as trans* and/or queer people, are thought to perform gender incorrectly or abnormally.[5] As the normality and abnormality of gender sequences are decided socially, rather than as a fact of nature, gender sequences are constructed, rather than essential, to gender identities. This view contradicts the bioessentialist view of gender, which holds that sex maps to gender.

      However, Butler goes a step further: they argue that the demarcation of sex and gender—where sex is "biologically determined" and immutable, while gender is "socially determined" and can therefore change—is also socially constructed, because sex is socially

---

[1] "Trans*" with an asterisk denotes the use of trans as an umbrella term for all non-cis identities, as some non-cis people do not identify as trans or transgender.

[2] Butler, Judith, "Performative Acts and Gender Constitution: An Essay in Phenomenology and Feminist Theory," in *Performing Feminisms: Feminist Critical Theory and Theatre*, ed. Sue-Ellen Case, (Baltimore: Johns Hopkins UP, 1990), 271.

[3] Butler, *Gender Trouble: Feminism and the Subversion of Identity*, (New York: Routledge, 2011), 75.

[4] Butler, *Bodies that Matter: On the Discursive Limits of 'Sex',* (New York: Routledge, 1993), 95.

[5] Butler, *Gender Trouble*, 39-41.

constructed.[6,7] That is, sex has no concrete, biological indicator: professor and queer theorist Kathryn Bond Stockton explains that "by birth, the baby has five layers of sex…these layers do not always agree with each other." The layers are, in order: chromosomal sex, fetal gonadal sex, fetal hormonal sex, internal reproductive sex, and external genitalia. The gender assigned at birth is dependent only on this fifth layer; the rest are invisible to the naked eye.[8] Any 'discrepancies' at the fifth layer—any deviation from the anatomical sequence of sexual dimorphism—such as in the case of intersex infants, is swiftly 'corrected' through medical and social intervention. The existence of 'discrepancies' brings the validity of sexual dimorphism into question, and the history of gynecology tells us how it came to be.

In the 1950s, the concept of gender was created "to save the binary division of sex from its own collapse."[9] (White) intersex and/or trans children who exhibited incoherent anatomical sequences were living proof that the predictors for binary sex were unreliable. To explain how these children were born "sexually indeterminate," gender was invented as the path of development into one of the two social roles.[10] Children who deviate from binary sex are then medically and socially corrected into a sex to meet gender roles. From this, we learn that sex is socially constructed, and before the invention of gender, sex comprised both the biological and the social. Thus, if sex and gender are both socially constructed, and sex was once a biosocial concept that included gender, then sex and gender tautologically construct each other.[11]

In other words, neither sex nor gender came first: these concepts influence, reproduce, and reinforce one another. Then, in the metaphysical sense, how *do* we define gender? If gender is not defined by body, sign, or action, are there definitions of gender beyond individual identity? That is, if someone changes their gender but not their pronouns in bio, did their gender really change? At first glance, this question is a no-brainer, offensively so. Of course, the obvious answer is yes, informed by decades of trans activism for the right to define ourselves and to expect others to recognize the validity of our identities. However, what this question is really prompting is an introspection into how we define transness and trans* expressions, especially in the virtual context of new media.

Professor Karen Sichler suggests that we view performativity through the lens of media studies and the idea of realism and accuracy. When we watch a TV show or a movie, how do we decide whether an actor's performance is accurate? Do we even have the authority to

---

[6] Butler, *Gender Trouble*, 8-9.
[7] Butler, *Bodies*, 2-3.
[8] Stockton, Kathryn Bond, *Gender(s)*, (Cambridge: MIT Press, 2021), 44.
[9] Stockton, 95.
[10] Stockton, 97-99.
[11] Butler, *Gender Trouble*, 9-11.

determine this? In the same vein, how do we decide whether someone's performance of gender is accurate, and should we? Sichler says we simply can't decide whether a gender performance is accurate, as these identities are atomic:

> "rather than struggling under the unnecessary yoke of 'correctness,' the notion of reality is completely removed from the currently existing gender labels that are applied to individuals…Each gender "copy" as enacted by a body in a place in time will in itself be primary, thereby owing no allegiance to earlier, heretofore considered primary, incarnations of gendered activity."[12]

We are left without a definition of gender, but we *can* say that gender exists and that each of us express it in some way. The systemization and unity of gender occurs at the level of the "code," as theorized by philosopher and cultural studies scholar Jean Baudrillard. The code is a particular system of representation that replaces life with a set of categories and objects created from these categories.[13] The stabilized model of the code resembles machine code in its binarity; following its model, the code of gender reduces the diversity of gendered expressions to a sex-gender binary. People are then reduced to gendered subjects who exhibit coherent gender sequences, and cisheteronormative sexual unions lead to a new generation of gendered subjects.[14] Through the code, gender perfects its own reproduction; it exists without having a concrete referent.

Curator and writer Legacy Russell calls gender a "hyperobject" because of its all-encompassing scale: "it becomes difficult to see the edges of gender when submerged within its logic, thereby bolstering the fantasy of its permanence through its apparent omnipresence."[15] Indeed, the code of gender "leaves no room for revolution." When something escapes the binary model of gender, or rebels against it, it is "managed" and assigned a meaning, so "even while rebelling against the content, one more and more closely obeys the logic of the code."[16] As the boundaries of the gender binary shift to redefine a diversity of gender expressions through the binary, there is no way to challenge gender without somehow performing gender. Baudrillard says that the only way to deconstruct this code is to meet it with a similarly ambiguous form of expression: poetic language.

---

[12] Sichler, Karen, "Post Queerness: Hyperreal Gender and the End of the Quest for Origins," *Spectator* 30, no. 2 (2010): 46-47.
[13] Baudrillard, Jean, *Symbolic Exchange and Death*, (SAGE, 2017), 54.
[14] Baudrillard, 139, 145.
[15] Russell, Legacy, *Glitch Feminism: A Manifesto*, (Verso Books, 2020), 63.
[16] Baudrillard, 174.

Poetic language is the "insurrection of language against its own laws."[17] It is metaphorical, non-representational, and ambiguous. As poetic language cannot be reduced to the code, it can create new forms of social relations that do not utilize the binary.[18] The poetic language of gender would be "speculation" about gender on the basis of "general equivalence and free circulation" of terms.[19] Anyone could define gender for themselves, bringing us back to Sichler's point about how each individual can be their own primary source for gender.[20] Following Butler's argument that gender is not corporeal, any individual can contest gender in multiple ways, including in the virtual world.[21] Symbolic code becomes analogous to computer code. Poetic language becomes poetic computation.

The poetic computation of gender is a form of encoding, which Russell describes as "render[ing] the plaintext of the body (e.g., the body viewed through a normative, binary lens) as ciphertext (e.g., a glitched body, queered and encrypted)." This act of "radical production" renders the body undecipherable to those operating under the binary.[22] The trans* body, which lacks intelligible gender and is relegated to the "domain of unthinkable, abject, unlivable bodies," is able to reclaim its abnormality and comes to constitute itself through its unintelligibility.[23] Poetic computation of gender may look like *nahee.app*, an exploration of sexuality as automatic, algorithmic, or speculative.[24] It may be a call to technological emancipation like the *Cyberwitches Manifesto*.[25] It may map a body to a website to create a cybernetic body, as performed in *Immaterial Girls*.[26] It may even be a dematerialization of the body, transforming the metaphysics of expression, as done in the *Facial Weaponization Suite.*[27] It likely will not look like an MMORPG or the Metaverse, where gender-based violence can be more extreme, imminent, and immediate than in real life. Women have reported being "'virtually gang-raped' in Facebook's Metaverse, just seconds after [stepping] into the new virtual world."[28]

Poetic computation takes place in the imaginary, following the practice of pseudonymity in online trans* communities. Pseudonymity as a survival mechanism comprises any and all

---

[17] Baudrillard, 314.
[18] Baudrillard, 318.
[19] Baudrillard, 322.
[20] Sichler, 46-47.
[21] Butler, "Performative," 272, 274.
[22] Russell, 64.
[23] Butler, *Bodies*, xi.
[24] Kim, Nahee, *nahee.app*, https://nahee.app/.
[25] Haute, Lucile O., *Cyberwitches Manifesto*, https://lucilehaute.fr/cyberwitches-manifesto/2019-FEMeeting.html
[26] Wergelius, Linn, *Immaterial Girls*, https://www.linnwergelius.se/immaterial.html
[27] Blas, Zach, *Facial Weaponization Suite*, http://zachblas.info/works/facial-weaponization-suite/
[28] Sherman, Carter, "Woman Says She Was 'Virtually Gang-Raped' in Facebook's Metaverse," in *Vice News*, Vice, 1 February 2022.

identifiable information, such as likeness, name, and location. People often have anime characters or Piccrew images for profile pictures, which are always subject to change; pseudonymic names and usernames, on the other hand, are usually conserved. We get to know each other through other textual iconography: jokes, discourse, twitter threads, retweets. Gender expression on the Internet is imaginary in the geometric sense: like imaginary numbers, something can exist even if we cannot represent it visually or in the physical world. On the Internet, the body becomes a text.

The textual culture of online trans* communities is a survival mechanism in response to harassment from other users, whose intentions generally fall into one of two categories. In an essay about nineteenth-century French criminological photography, photographer and essayist Allan Sekula writes about the two modes of subjectification in constructing the criminal: typification and identification. Criminology, a form of typification, "hunted 'the' criminal body." Criminalistics, a form of identification, "hunted 'this' or 'that' criminal body."[29] In other words, typification is concerned with determining what a trans* person looks or acts like; identification is concerned with tracking and surveilling known trans* people. Posting visual media is more strongly associated with both forms of harassment, so many trans* people engage with the online world through pseudonymic avatars and textual cultures. However, this does not ensure safety, but may increase the chance of alienation: within the current trans* textual cultural landscape, transness must be made explicit in order to find community.

Myriad attempts have been made within the field of natural language processing (NLP) to detect the gender of the author of a text since 2010,[30] but little progress has been made in creating trans* textual models. What progress has been made depends on the explicit use of trans*-specific terminology, suggesting trans*-specific textual vernacular has yet to be identified.[31] Without any identifying textual traits, trans* people currently exist in a state of "generic difference," one where their digital avatars are rendered "useless" to data mining and surveillance.[32] Generic difference is associated with higher levels of online safety, as well as a heightened state of possibility for poetic computation. However, it has a significant caveat: hiding your transness means other trans* people cannot find you. Hence, pronouns in bio.

---

[29] Sekula, Allan, "The Body and the Archive," in *October* 39, (Cambridge: MIT Press, 1986), 18.
[30] Mukherjee, Arjun, and Bing Liu, "Improving Gender Classification of Blog Authors," in *Proceedings of the 2010 Conference on Empirical Methods in Natural Language Processing,* (Cambridge: MIT, 2010), 207-217.
[31] Ehrenfeld, Jesse M., Keanan Gabriel Gottlieb, Lauren Brittany Beach, Shelby E. Monahan, and Daniel Fabbri, "Development of a natural language processing algorithm to identify and evaluate transgender patients in electronic health record systems," in *Ethnicity & Disease* 29, Supp 2, (2019).
[32] Russell, 92.

The English-language digital world is a hostile landscape for trans* people, a reflection of (most urgently) American and British moral panic over queer and trans* rights. There are currently 406 anti-LGBTQ bills advancing legislatures across the United States,[33] while the Council of Europe has condemned the United Kingdom for the rise in anti-trans* rhetoric across the government and populace.[34] People die after waiting for years to be treated by the NHS,[35] and in one weekend, at least four drag events in the US were shut down by "Neo-Nazis, Proud Boys, militiamen, Christian nationalists, and culture warriors."[36] While all conservative or part of the far-right, the actors and ideologies evoked in these few examples are diverse, suggesting there are several distinct, but related, political and cultural reasons for the rise in transphobia. One mode of propaganda that is not as widely discussed as conservative governments and far-right actors is anti-trans* and transphobic rhetoric spread by prominent leaders in the tech industry. Elon Musk, the CEO of Twitter, is one of many examples of techie transphobia, having liked and endorsed anti-trans* content in addition to posting it himself.[37] Alarmingly, Musk owns the very platform through which so many trans* people have found community and survival; the irony does not escape us. Perhaps more ironically, transphobic techies like Musk who deny queer and trans* identities on the basis of being unnatural, often espouse transhumanist ideologies in support of humans merging with machines.[38]

Philosopher Nick Bostrom describes transhumanism as "the intellectual and cultural movement that affirms the possibility and desirability of fundamentally improving the human condition through applied reason," especially through technology that enhances human abilities. Bostrom lists applicable technologies such as molecular nanotechnology, brain-computer interfaces, and neuropharmacology, while deeming other technologies such as "prostheses, plastic surgery, intensive use of telecommunications, a cosmopolitan outlook and a globetrotting lifestyle, androgyny, mediated reproduction (such as in vitro fertilization), absence of religious beliefs, and a rejection of traditional family values" as being "of dubious validity." The technologies he deems unworthy are typically associated with socially liberal or left-leaning

[33] American Civil Liberties Union (ACLU), "Mapping Attacks on LGBTQ Rights in U.S. State Legislatures," American Civil Liberties Union, ACLU, 10 March 2023.
[34] Parliamentary Assembly of the Council of Europe (PACE), "Combating rising hate against LGBTI people in Europe," PACE, 25 January 2022.
[35] Murphy, Oliver, "How NHS waiting times are leaving trans people bankrupt and on the brink," in *Metro*, 23 July 2022.
[36] Owen, Tess, "The Far-Right Attacked Drag Events in 4 States This Weekend," *Vice News*, Vice, 5 December 2022.
[37] Hurley, Bevan, "Elon Musk, who has a trans daughter, likes anti-trans tweet from notorious right wing account," in *The Independent,* 27 December 2022.
[38] Holley, Peter, "Elon Musk: To avoid becoming like monkeys, humans must merge with machines," *Washington Post*, 26 November 2018.

values, including gender equity and support for trans* people and gender nonconformance. Indeed, Bostrom claims that "it is perfectly possible to be a transhuman – or, for that matter, a transhumanist – and still embrace most traditional values and principles of personal conduct."[39] Transhumans (short for "transitional humans") are the theoretical products of transhumanism and the first step of human-controlled evolution toward an eventual posthuman state. However, it seems that orthodox transhumanists are not necessarily supportive of trans humans, who already have a generative relationship with technology.[40]

Philosopher and historian Émile Torres has documented the associations between Nick Bostrum's body of work and scientific racism.[41] An alternative vision of transhumanism, similarly techno-utopian but without the tacit endorsement of eugenics, can be found in the cyborg as defined by biologist and scholar of science and technology studies Donna Haraway. Haraway describes the cyborg in four ways, as a "cybernetic organism, a hybrid of machine and organism, a creature of social reality as well as a creature of fiction."[42] These definitions are co-determinate, rather than mutually exclusive. A cyborg functions through a process of communication and control; it contains organic and inorganic materials; it exists in the present; and it exists in the future. Haraway argues that cyborgs already exist in modern medicine, manufacturing, and warfare; increasingly blur the lines between humans and technology; and are linked to oppressive traditions of racist, patriarchal capitalism; scientific progress; extractivism; and the construction of abnormal subjects. Most importantly, she argues that this can change: we can find "pleasure in the confusion of boundaries and…responsibility in their construction."[43] Haraway published this cyborg manifesto in 2004; twenty years later, trans* people are proof of this change. They hold a certain 'cyborg' relationship with technology, such as in hormone replacement therapy, gender-affirming surgeries, or poetic computation, through which they confuse the binary boundaries of sex and gender.[44] Evidently, both trans* people and transhumans manipulate the "permeability of boundaries in the personal body and in the body

---

[39] Bostrom, Nick, *The Transhumanist FAQ: A General Introduction*, (World Transhumanist Association, 2003), 4-7.

[40] The visual culture of online trans* communities, a poetic language in its own right, has been given some level of attention, though not enough. The archetypes of trans* people and especially trans* women are informed by media representations and popular memes online. Of these archetypes, the 'more positive' ones include the programmer, electronic musician, and Twitter user; curiously, they all feature generative relationships between humans and computers. To be trans* is to be the ghost in the machine.

[41] Torres, Émile P., "Nick Bostrom, Longtermism, and the Eternal Return of Eugenics," *Truthdig*, 20 January 2023.

[42] Haraway, Donna, "A Manifesto for Cyborgs: Science, Technology, and Socialist Feminism in the 1980s," in *The Haraway Reader*, (New York: Routledge, 2004), 7.

[43] Haraway, 10-13, 8.

[44] David DeGrazia, "Prozac, Enhancement, and Self-Creation", in *Hastings Center Report*.

politic."[45] It is ironic, then, that transhumanists do not see trans* people as transhuman. It may be that the trans* cyborg "views [themself] as embedded in the world," rather than trying to escape the limitations of the body.[46] Trans* innovation does not assume limitations in the self, only the ability to change.

      Poetic computation of gender as a method allows trans* people to change themselves in ways that cannot (yet) be physically embodied. It reclaims the electronic, the digital, and the virtual from surveilling users, transphobic techies, and separationist transhumanists to construct IDEs for gender experimentation. It allows trans* people to embed themselves in the world without the requirement of embodiment. Through poetic computation, trans* people aim to "advance [the] social and cultural logic" of our people.[47] In this way, poetic computation is a form of pleasure, but it is not an indulgence. It is crucial for survival; it is a necessity.

---

[45] Haraway, 30.
[46] Verkerk, Willow, "Reification, Sexual Objectification, and Feminist Activism," in *The Spell of Capital: Reification and Spectacle*, ed. Samir Gandesha and Johan F. Hartle, (Amsterdam University Press, 2017), 158.
[47] Russell, 29.