

*The Category Imperative: Sex, Gender, and Illusions of Difference*

Jess Newman

2012 Rhodes Institute for Regional Studies

*“We have seen that a deep difference in constitution expresses itself in the distinctions between male and female, whether these be physical or mental. The differences may be exaggerated or lessened, but to obliterate them it would be necessary to have all the evolution [of life] over again on a new basis. What was decided among the prehistoric Protozoa cannot be annulled by an Act of Parliament... We must insist upon the biological considerations underlying the relation of the sexes.”<sup>1</sup> (1889)*

*“For two millennia, ‘impartial experts’ have given us such trenchant insights as the fact that women lack sufficient heat to boil the blood and purify the soul, that their heads are too small, their wombs too big, their hormones too debilitating, that they think with their hearts or the wrong side of the brain. The list is never-ending.”<sup>2</sup> (1990)*

---

<sup>1</sup> Patrick Geddes and J. Arthur Thompson, *The Evolution of Sex* (London: Walter Scott, 1889), 267.

<sup>2</sup> Bess B. Hess, as quoted in Cordelia Fine, *Delusions of Gender: How Our Minds, Society, and Neurosexism Create Difference* (New York: W.W. Norton & Comp., 2010), 100.

## The Trifecta: A Note on Terms

Due to their interrelatedness and widely variable uses, the terms ‘sex,’ ‘gender,’ and ‘sexuality’ necessitate some clarification. ‘Sex,’ as I will use it here, is a strictly anatomical category. In our culture we currently have two valid sexes: male and female. A body that does not clearly conform to either is medically termed ‘intersex.’ ‘Gender’ refers to traits of social or self-identity and, again, our culture has only two options that are widely accepted: masculine and feminine. Alternatives, however, are now gaining academic and political visibility under labels like ‘gender fluid’ and ‘gender queer.’<sup>3</sup> And lastly, ‘sexuality’ refers to sexual feelings and/or acts. The normative ethos of our culture intertwines these concepts in a linear prescription resulting in heterosexuality. For example, male sex equals masculine gender equals sexual feelings/actions with someone of female sex and feminine gender.

## The Case of Jaqi Lloyd

It is no coincidence that the title of this essay is only two syllables shy of ‘categorical imperative.’ (Humor me and flip back a page if you happened to have missed that bit. It’s pretty important.) As a quick refresher, or forgive my hugely simplified overview if this is your first encounter, the categorical imperative is a world-renowned philosophical instruction for morality penned by the 18<sup>th</sup> century *Vater der modernen Philosophie* Immanuel Kant. I do of course hope that you find “The Category Imperative” to be at least moderately clever wordplay, but creating a witticism was not

---

<sup>3</sup> There have been many texts written on this movement in the past decade. For further reading, I suggest: Nestle, Joan, Riki Wilchins, and Clare Howell, eds. *Genderqueer: Voices from Beyond the Sexual Binary* (Los Angeles: Alyson, 2002); and O’Keefe, Tracie, and Katrina Fox, eds. *Finding the Real Me: True Tales of Sex and Gender Diversity* (San Francisco: Jossey-Bass, 2003).

my motivation. The alliance of Kant's categorical imperative with issues of LGBTQ (lesbian, gay, bisexual, transgender, and queer) rights in Tennessee, which are the impetus for this largely theoretical essay, rests on the larger question of human rights. Kant's prescription has no tolerance for the mantra 'do as I say, not as I do.' Or, more thoroughly, having recognized the subjective issues of previous hunts for a comprehensive moral creed, Kant appeals to a more objective rationale: "Act only according to that maxim whereby you can, at the same time, will that it should become a universal law."<sup>4</sup> There is no contingency in the field of morality. In the realm of LGBTQ rights, where the first hurdle is often convincing the other party that you are actually discussing an issue of *human* rights, a universal code of morality that displaces subjectively held beliefs is integral. That is to say, your personal *beliefs* on the validity or morality non-normative sexual orientation, gender presentation, or anatomy have no place in decisions of morally responsible behavior towards such individuals. Unless, of course, you're willing to allow everyone to act in full accord with their beliefs at all times, and isn't that a frightening thought?

Once chiefly the concern of religion and philosophy, today the discussion of how we should treat others has expanded into the interdisciplinary and highly political field of human rights. Attention to the question of human rights has grown exponentially in the last decade as horrific violations flood our news, stir rousing political debates, and fuel impassioned academic research.<sup>5</sup> Too often, however, it seems that these maladies plague

---

<sup>4</sup> Kant, Immanuel; trans. James W. Ellington [1785] (1993). *Grounding for the Metaphysics of Morals*. (3rd ed. Hackett), 30.

<sup>5</sup> For further reading I suggest the work of Paul Farmer, medical anthropologist, whose titles include *AIDS and Accusation: Haiti and the Geography of Blame* (1993) and *Pathologies of Power: Health, Human Rights, and the New War on the Poor* (2003).

only the places that are democratically impoverished (as democracy would presumably make it more difficult for subjectivity to rule, in a Kantian sense). Consider to this point the Somali Civil War. Genocide at the hands of child soldiers is exceptionally self-evident as far as human rights violations go, and America is indeed fortunate to not currently suffer from such atrocious ills—but violations are not always this obvious. Some of the quiet, everyday violations that plague America, and for my purposes the mid-south in particular, might be all the more treacherous for a habituated lack of visibility.

I wonder how we can hope to address the violence of denying alterity in human bodies and behavior when the status quo is so pervasively comfortable as to seem logical, if not natural. I will begin by giving a human face to that alterity and a story to that violence, and by the end of this essay you might find our norms for masculinity, femininity, anatomy, and sexuality about as comfortable as a well-tailored straightjacket. While I was conducting research for this essay the story of Jaqi Lloyd, a fellow Memphian, gained national recognition. Her assault and the resulting community discussion speak directly to the Tennessee legislation and social attitudes that are at odds with an ethical treatment of our citizens. Bear in mind Kant's categorical imperative as you consider responses to her story, both from the public and news media. You might be surprised, and likely disturbed, to discover how contingent the question of moral behavior becomes in issues of anatomy, gender presentation, and sexual orientation.

I was neither present for the assault nor have I spoken directly to any parties involved, but from piecing together several news articles I have compiled the following

---

narrative: It is a muggy summer night in late June. A woman and her boyfriend sit down at Celtic Crossing in midtown, a relatively youthful and liberal Memphis neighborhood attractive for its weekly farmer's market, bike lanes, eclectic restaurants, and art studios. Jaqi Lloyd, a statuesque twenty-something with bright, short-cropped blonde hair, approaches the woman, an old high school classmate of hers. The content of their discussion is up for debate, but apparently twenty-eight year old Brandon Hooper felt there was a breach in polite conduct and demanded that Jaqi's interaction with his girlfriend end, even going so far as to lead his lady friend away by the arm. Hooper, perhaps feeling the need to iterate his discontent, approached Jaqi later that night on the patio and, in her words, "[He] says you BLEEP BLEEP (sic) and slams me right in the nose and I fell back like three feet...Problem solved you BLEEP Lesbian." Jaqi's nose was broken in two places and her face was badly swollen.

"Jealous boyfriend allegedly punched lesbian woman in the face" (Raw Story),<sup>6</sup> "Victim of possible Midtown hate crime speaks out" (WMC-TV), "Memphis Woman Says She Was the Victim of a Hate Crime" (WREG-TV)—the headlines of Jaqi's story are in many ways more telling than the articles themselves. That each refers to Jaqi differently is neither coincidental nor without consequence. The attribute of her identity each chooses to highlight, or in some cases ignore, is a conscious decision that both reflects the opinion of the author and affects the way the audience will approach the story. Jaqi is summed up respectively as a "lesbian woman" (which is perhaps a bit

---

<sup>6</sup> Raw Story is a Massachusetts based online news source. As their 'About' section explains: "Raw Story is a progressive news site that focuses on stories often ignored in the mainstream media. While giving coverage to the big stories of the day, we also bring our readers' attention to policy, politics, legal and human rights stories that get ignored in an infotainment culture driven solely by page views." <http://www.rawstory.com/rs/2012/07/01/jealous-boyfriend-allegedly-punches-lesbian-woman-in-the-face/>.

redundant), a “victim,” and a Memphian. It is telling that even arguably well-educated news reporters can’t agree on how best to refer to Jaqi, but this linguistic floundering is by no means exclusive to her story alone. In fact, the head of the Memphis Gay and Lesbian Community Center, ironically located right across the street from Celtic Crossing, is no stranger to local news stations. Will Batts makes it a point to offer corrections to stories that have failed to refer to an LGBTQ individual in a respectful or accurate way, and some stations now even call him *before* stories go to press to ask advice on such matters.

To be considered fit for public consumption, the article “Victim of possible Midtown hate crime speaks out” had to pass tests of reasonable political correctness and objectivity (or, in the very least, it is ultimately held accountable for trespasses by people like Will Batts). The online commentary that follows, however, is held to no such standards. These comments, which are posted under a veil of internet anonymity, are ripe with raw, unfiltered public opinion. They are of course not a thoroughly representative sample, but the pulse of their discussion is a normative beat. I am not so concerned with what the comments are literally arguing, so suffice it to say that both Jaqi and Brandon have their supporters. Rather, it is what their arguments *assume* that are most revealing. For most, the morality of Brandon’s behavior is entirely contingent on Jaqi’s sex. I’ll let you read through a few comments before I go any further. (To help you along, I’ve bolded the excerpts that are particularly important. And even though it makes for slightly more difficult reading at times, I’ve left them unedited for grammar.)

1. “simple rule, if it isn't yours, keep your mitts off. **if you want to be a guy, be a guy. don't cry that you are a girl and that it is a hate crime.** man up.

the guy that threw a punch is paying the price. grow a pair and own up to your part.”

2. “I have known Brandon for 15 yrs NEVER would he put his hand on a woman EVER knowing that was what she was.**If this person misrepresented himself as a man and it was believable.That is not his fault**”
3. “She should have to take a lie detector test.I cant believe people would believe this **honestly just seeing he/she on that clip I wouldnt know it was a female if dressed like a man**”
4. “...**to bad the truth is not in Jack's DNA.** He/She has a very difficult time with the truth.”
5. “**It was not until later on in the night Brandon found out that Jackie or "Jack" was a woman.** Brandon has family members that are gay. Saying that this is a hate crime is ridiculous. **It was more a case of mistaken identity.**”
6. “This guy is disgraceful. He obviously has some kind of anger and jealousy issues if he has to resort to **hitting a WOMAN. Homosexual or not, there is NO excuse for that.**”
7. “**Doesn’t matter if she is a woman today or a man tomorrow,** her OWN behavior just isn’t human.”
8. “**Look like a man or not, she has women features. and she is a woman !** that doesnt justify anything what he did was wrong. Hiting a woman is un called for and deserves to be locked back up.”
9. “Save your money and **move to California,** you know, the land of the Fruits and Nuts? **You will fit right in.**”
10. “**My point is not whether or not she is actually a man. My point is that if you dress like a man, act like a man and are attracted to women, how can you be shocked when someone perceives you as a man?**”

Did you pick up on any themes? Of the fifty-five comments that were posted at the time of this essay, ten were explicitly debating or questioning Jaqi's 'true' sex. Slugging a guy that's hitting on your girlfriend is one thing, but as all proper southerners know, a real man *never* hits a woman. This debate is the result of a conviction so systemic to the mid-south ethos that to challenge it is akin to blasphemy: from sex springs forth gender, the most fundamental, unchanging set of truths of your identity. If homosexuality in Tennessee is a war zone of frightening and precarious legislation—and it is, as the (fortunately short-lived) 'Don't Say Gay' bill can testify—the possibility for fluid or alternative genders is so effectively oppressed as to render it a non-issue in the political field. We are the last state in the nation with a law forbidding alteration to the sex on your birth certificate, regardless of personal preference or medical intervention. Under the logic of sex equals gender, your anatomy decides everything from appropriate romantic partners to how much money you can hope to make in the workforce. (And thus doctors have a chilling amount of omnipotence in such matters, especially in cases of intersex individuals.) Such is the binary nature of our conviction: male equals masculine, female equals feminine. Yet consider the assumption of comment number ten: a convincing masculinity could be performed regardless of "whether or not she is actually a man." This suggests that perhaps more accurately what we mean is that sex *should* dictate dress, behavior, and sexual orientation. And with that chink in the seemingly infallible categories of sex and gender, things begin to unravel.



## Category Imperative

Categories are a staple of human societies.<sup>7</sup> Universal claims are not a good habit to get into, but if species survival is any indication of success we might have good reason for a proclivity towards making them. They have helped the notoriously mobile *Homo sapiens sapiens* safely navigate, adapt to, and in some sense master the diversity of environments and biota that we've encountered in our millennia long dispersal across the globe.<sup>8</sup> For example, on nearly every continent the majority of members to the group 'brightly colored animals' are poisonous—a tremendously helpful rule of thumb for foodstuffs. Organizing fauna in this way imposes life saving (or in the very least stomach saving) order on a natural system. In this way categories enable us to make what we might call 'rational decisions'—behavioral choices that will hopefully result in keeping us alive.<sup>9</sup> We might ought to be grateful that our ancestors had such a system of organization at their disposal—after all, we wouldn't be here if they had keeled over from a dart frog before getting the chance to spread their genes.

However, since most of us are pretty far removed from the trials and tribulations thrown at our ancestors by that wily Mother Nature, let's explore the concept of

---

<sup>7</sup> I make the clarification of "human society" so as not to include our closest primate relatives, which might have something akin to a culture. It is known that tool use and comminatory gesturing vary between isolated groups and are shared via social learning. For further reading on this topic see: Wrangham, R.W. et al. *Chimpanzee Cultures*. Chicago Academy of Sciences, 1994.

<sup>8</sup> The taxonomic grouping *Homo sapiens sapiens* reflects the opinion that Neanderthals are a subspecies, as opposed to *Homo sapiens*, which considers them a separate species. These are competing theories in anthropology. For a supporting article, see: Shermer, Michael. Our Neandertal Brethren: Why They Were Not a Separate Species. *Scientific American Magazine*. Aug. 2010. Accessed 24 July 2012. <http://www.scientificamerican.com/article.cfm?id=our-neandertal-brethren>.

<sup>9</sup> This is an evolutionary spin on *rational choice theory*, a product of neo-Marxist thought that assumes humans are rational and aim to maximize their gains. Such actions are a *means-ends rationality* "determined by expectations as to the behavior of objects in the environment and of other human beings (Weber, *Economy and Society*)." My argument is that categories organize nature so as to enable rational choice. Assuming that self-preservation is our most fundamental goal, effective rational choice applied to this gain would produce an increased fitness (i.e. the ability to both survive and reproduce). Thus categories are an evolutionary advantage.

‘meaning’ in a more familiar setting. Consider the folders that corral the thousands of files stored on your computer’s hard drive. *How* you organize these files is a choice; a choice that both reflects and affects their meaning. Whether I choose to put my mp3 of The Grass Roots’ “Let’s Live for Today” in a folder labeled ‘music,’ ‘1967,’ ‘illegal downloads,’ or ‘first anniversary mix tape’ reflects what the file already means to me (i.e. which of its many characteristics I find most important), as well as affects how you’ll feel about it should you find reason to snoop through my computer. Your own experiences with the sixties, music pirating, or romantic relationships give meaning to a file that is otherwise nothing more than a collection of severely compressed data bits written in computer code. Meaning is not inherent, but rather *a posteriori*. Categories, then, are very revealing: “Figure out how someone organizes his world, and you will understand how he sees the world. You will also see how the organization system likely arranges the world in such a way as to reinforce that system maker’s idea of the world—how what seems important gains in importance, how what seems unimportant fades from view.”<sup>10</sup> While I take slight issue with the gendered pronoun use, this is still some rather astute advice. The father of biological taxonomy himself, Carl Linnaeus gives us a wonderful example of the far from objective nature of ordering the world. Our hairy, warm-blooded, lactating taxonomic group was named ‘mammal’ because Linnaeus “wanted to see women stop farming out their babies to wet nurses” (Ibid). Thus *Mammalia*, a reference to the mammary glands that develop in only half of its members.<sup>11</sup> He could have chosen any number of morphological features that apply to *all* mammals, such as our middle ear

---

<sup>10</sup> Dreger, 141.

<sup>11</sup> Sarah Blaffer Hrdy. *Mother Nature: Maternal Instincts and How They Shape the Human Species*. (New York: Ballantine Publishing, 1999), 12. From the Latin *mammae*, meaning ‘teat’ or ‘breast.’ Interestingly, this term apparently “derives from the plaintive cry ‘mama’ spontaneously uttered by young children in widely divergent linguistic groups.”

bones (derived from the jaws of our ancestors) or double occipital condyles (the two knobs at the base of your skull that hinge with your first vertebra), but assumedly no ear or spine related political issues were on the table at the time. By choosing *Mammalia*, Linnaeus “was making his point about both a natural law and the unnaturalness of any woman who deviated from it by failing to nurse.”<sup>12</sup> Mammal, like most labels designated for humans, was a political choice.

Categories also help us avoid potentially fatal ‘trial and error’ blunders by allowing us to package our knowledge and share it with each other. Our unique capacity to ascribe meaning arises from an ability to draw relationships between bits of information. Consider what the color red would mean in the absence of other colors. We could conceivably experience what we now call red, assuming our rods and cones and wavelengths still work the same, but the label “red” would be a non-category—saying something is red wouldn’t mean anything at all. In The Grass Roots example, my mp3 file only gained meaning from the category ‘1967’ if you had associations (including direct experience) with that year already. If not, letting you listen to the song might start your collection of associations with ‘1967’ (hopefully along the lines of ‘decent music’). It is in such social interactions that people learn, share, and create meaning, which, as far as directly advantageous ancestral examples go, might be in the form of experientially grounded advice like ‘don’t eat brightly colored frogs’ or ‘steer clear of that neighboring tribe.’ Most importantly, the necessity of relations for meaningful labels means that categories demand the existence of alterity—‘red’ means nothing without a ‘not-red’ option, and neighbor means nothing in Montana.

---

<sup>12</sup> Ibid.

Identities are important. Our ‘self’ is the platform from which we assess all the world has to offer, and it gives us some much needed privacy: “I retreat into definition as a way of demarcating my space...by saying ‘I am (fill in the blank),’ I also say, ‘You are *not*, and so you are not in my space.’”<sup>13</sup> The idea we hold of our ‘self’ is a collection of identities, such as ‘democrat’ or ‘amateur magician,’ that *mean* something socially because they divide people into groups. It is at the social level that we truly begin to see a fixation on difference arising from this group mentality. Be the group small and reproductively functional or as extensive as the modern political state, there is power in numbers. Since the nature of limited perception demands that the self be regarded as normal—as it is the only lens through which we can view the world—our associated groups must also be the ‘norm’ by extension. The category of ‘other’ is therefore demarcated along points of difference from our norm. The languages of ancient societies almost unanimously have a word for their members that translates roughly as ‘the people’ or ‘humankind,’ implying that they are the only *true* people. This belief in the superiority of one’s own culture is ‘ethnocentrism.’ (Such beliefs are also found in the claims of many monotheistic faiths, whose members often identify as the ‘chosen people’ by their deity.) This enclosed their society, and by extension their belief system and cultural practices, within the safe boundaries of the norm, creating social cohesion around a shared identity. Solidarity rallied around the logic of ‘normal,’ however, creates at least one other category, and this binary is far from value-free. Anything and anyone not belonging to the norm must be abnormal and, in a hierarchy of only two, necessarily lesser.

---

<sup>13</sup> Kate Bornstein. *Gender Outlaw: On Men, Women, and the Rest of Us*. (New York: Vintage Books, 1995), 40.

Norms arose from the presence of alterity. Wherever there is a norm, and societies are chock-full of these regulatory gatekeepers, you best believe that social category arose in opposition to something else. In the relationship of the normal and the pathological “it is not paradoxical to say that the abnormal, while logically second, is existentially first.”<sup>14</sup> In other words, although it seems that the category of normal was prior to that of abnormal, it is not until we wish to disassociate from some aspect of the ‘other’ that we create or tighten the boundaries demarcating the norm. It is essentially a process of assembling “the self from the raw material of the other...[such as] the clarity of white from the obscurity of color, the issue of man from the body of woman, the elaboration of gender from the resource of sex.”<sup>15</sup> Let’s consider sex. The fact that we believe humans do, or at least should, exist in only two varieties is evident on nearly any survey or application—check one: male or female? Sex is arguably one of the easiest questions to answer. Such a distinction appears unambiguous and timeless—until intersex bodies and some historical context enter the picture. Ambiguous anatomy and changing definitions challenge the illusion of a clean binary and demand clarification of what male and female really mean. If, for example, penis means male and ovaries mean female, where do we place an individual who has both due to a hormonal condition called congenital adrenal hyperplasia (or CAH)? Such examples expose the limited nature of categories, forcing us to clarify what sex *really* is. This, as the next section will explore in depth, has no simple answer.

It will be important to remember this section later, as I ask you to reconsider some very robust assumptions we have about the intertwined categories of sex, gender, and

---

<sup>14</sup> Georges Canguilhem, as quoted in Dreger, 6.

<sup>15</sup> Donna Haraway, *Primate Visions: Gender, Race, and Nature in the World of Modern Science* (New York: Routledge, Chapman & Hall, Inc., 1989), 11.

sexuality. Most of us are not in the habit of seeing categories for what they really are. Of foremost importance is that they are human constructs. If we forget this and allow them the authority of natural origins, we inevitably fall into the trap of reification—we lose the ability to challenge them. Second, this construction is hierarchical: i.e., ordered on differences that juxtapose the normal with the abnormal. This hierarchy becomes political when categories are used to sort and define people. To hold one body, gender identity, or sexual orientation as normal, countless variations must stand in contrast as abnormal and invalid. These outliers are real people, and the social, political, and institutional rejection of their alterity is the fodder that keeps status quo alive and well. We have a long history of construing certain groups of people as inhuman or subhuman. As Richard Rorty argues, it is only with a commitment to cultivating empathy—understanding and thereby humanizing the other—that we can make real progress in human rights.

### In Search of Sex: Nuancing the Binary

As you read, consider the following questions: How has this body shaped my life? How would changes in my body change my life? And *why* would changes in my body change my life?<sup>16</sup>

You are a world-class hurdler en route to the Olympics. In a frenzy to catch your flight you forget the medical paperwork verifying your sex. Luckily the International Olympic Committee, or IOC, is equipped to handle forgetfulness. In lieu of a doctor's note (sanctioning the seemingly obvious) you must report to their medical office for a cheek swab. In the early days, after the ban on female competitors was lifted (a ban

---

<sup>16</sup> Adapted from Dreger, 6.

enacted on the opinion that women's sports were "against the law of nature"<sup>17</sup>), athletes were allowed to sort themselves. When it became apparent that some, like Hermann Ratjen in 1936, hoped to gain an advantage by exploiting the system, a committee was brought in to evaluate the femaleness of competitors (Ratjen, by the way, nevertheless placed fourth behind three women). The first exams were of the genital sort, but the anatomy of more than a few athletes refused easy scoring. Cue the buccal smear: luckily for your modesty, modern genetics has been the preferred test since 1968. Later, perhaps as you're running through your warm-ups, the IOC receives the results of your test. You've failed. You are stripped of your previous titles, barred from further competition, deserted by your significant other, and evicted from your home. That must have been some test.<sup>18</sup>

This is the story of Spain's top female hurdler Maria Patino. Unbeknownst to her family, her doctors, or Patino herself, she had been born with a condition called androgen insensitivity syndrome, or AIS. Outwardly, Patino was female in appearance (she had breasts, a narrow waist, wide hips, and labia) and in strength. The cells collected from the inside of her cheek, however, told the IOC a different tale. Instead of the (so-called) female XX pattern, one half of her twenty-third chromosome pair was the truncated Y synonymous with males. Later, in a more intrusive exploration of her body, doctors found that Patino's labia hid two small testes, and they further could find neither ovaries nor a uterus. Due to an 'insensitivity' of physiological receptors, the testosterone produced by her functional testes could not be read and thus failed to masculinize her body at puberty.

---

<sup>17</sup> This was the argument of Pierre de Coubertin, founder of the modern Olympics.

<sup>18</sup> Anne Fausto-Sterling's *Sexing the Body: Gender Politics and the Construction of Sexuality* (New York: Basic Books, 2000), 1-3.

She consequently developed as female, a sort of ‘default’ setting for humans in the absence of the hormonal cues for necessary for masculinization. So is Patino’s Y-chromosome reason enough to disqualify her from competing with XX women? Ironically, as Alice Dreger explains, women with AIS are actually at a *disadvantage* by this logic “since the bodies of XX women do produce and respond to testosterone, thought of as a ‘strength building’ hormone, while the bodies of these XY women respond to it incompletely or not at all.”<sup>19</sup> It’s unfortunate for Patino that the genital exam method had been replaced by 1988. She might’ve passed that test.

As revisions to the IOC sex sorting methods can testify, most notably the move from anatomy to genetics, the boundary between male and female can be drawn in many ways. These shifting definitions compensate for challenges to the stability of the categories. Think back to the role of the abnormal in defining the normal: “[I]t is really only when we are faced with something that we think is ‘abnormal’ that we find ourselves struggling to articulate what ‘normal’ is.”<sup>20</sup> So, in the case of a

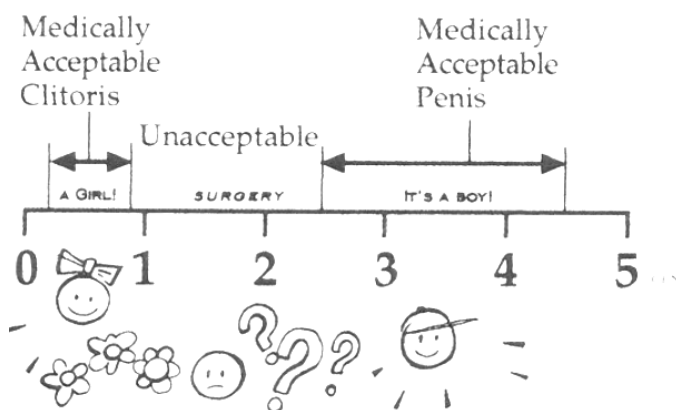


Fig 1: A ruler measures the neonate’s anatomy in centimeters. The ‘intersex’ zone from about 1cm to 2.5cm, too large for a clitoris but too small for a penis, is but one example of the human effort required to maintain the categories of male and female—here in the form of surgical intervention. From *Sexing the Body*, 59. (Source: Alyce Santoro, for author Fausto-Sterling)

<sup>19</sup> Ibid, 7.

<sup>20</sup> Ibid, 6.



anatomy, competitors whose genitalia were not unambiguously masculine or feminine were the alterity that left the committee searching for a new way to define male and female. As Dreger explains, “The questioned body forces us to ask what exactly it is—if anything—that makes the rest of us unquestionable.”<sup>21</sup> Generally, new scientific technologies help rewrite definitions, such as genetics and the accessibility of the buccal smear test. Patino, for one, was unconvinced by the IOC’s ruling: “I knew I was a woman in the eyes of medicine, God and most of all, in my own eyes.”<sup>22</sup> Until the discovery of genetics, as well as a reliable and accessible test like the buccal smear, Patino’s femaleness, for the purposes of the competition, would have been uncontestable. And further, while modern medicine might eventually have had reason to discover her testis or lack of ovaries and uterus, what such alterity meant for her identity is again entirely contingent on her social time and place. Intersex bodies, as well as non-normative gender presentation, have been addressed in many ways by other societies (but more on this later). In the perceptive words of Fausto-Sterling, “We may use scientific knowledge to help us make the decision, but only our beliefs about gender—not science—can define our sex.”<sup>23</sup> Genetics are just another way to divide up bodies in the name of masculinity and femininity.

Reproduction is a highly political topic. By political I mean that it is enmeshed in relations of power, and specifically that it is in the service of maintaining the status quo with regards to sex, gender, and sexuality. The stories we tell about reproduction reflect and stabilize norms of sexuality and gender because reproductive abilities are an extension of sex, the ‘biologically infallible’ member of the trifecta. There is a lot at stake

---

<sup>21</sup> Ibid.

<sup>22</sup> Ibid, 2.

<sup>23</sup> Ibid, 3.

if we allow the lines demarcating sex to blur: “Many assume that if we don’t keep males and females sorted...social institutions that we hold dear—including divisions into heterosexuality and homosexuality, into mothers and fathers, into women athletes and men athletes—will no longer be viable.”<sup>24</sup> Such concerns are well founded. The reproductive roles of males and females are of obvious importance in terms of evolution, but what their necessarily heterosexual relationship to each other has been allowed to say about gender deserves a critical eye. By extension of reproduction, sexual physiology has been considered the foundation of human social organization—“Females were bound to the group by the dominance of males; males were bound by the sexuality of females.”<sup>25</sup> Social Darwinism took reproductive roles as biological support for nineteenth century gender norms and politics a step further in asserting that “education would be wasted on women” because the energy required for ovulation, gestation, birth, and lactation resulted in an “arrest of individual evolution” that left them without “the power of abstract reasoning.”<sup>26</sup> So go the dangers of putting too much stock in sex.

In all fairness, human development is some tricky business. Long before genetics and germ cells scientists came up with many creative, and some particularly amusing, accounts of what happens out of sight in the journey from copulation to birth. These stories, you shouldn’t be surprised to hear, reflect the values and beliefs of the time and place of their production (i.e. are ‘socio-historical’ products). For example, when Nicolas Hartsoeker used his microscope to probe into the hidden wonders of the male germ cell he discovered miniscule, fully formed humans inside. These *homunculi*, he suggested, need only the incubation space of the womb to grow into normal size neonates. As it

---

<sup>24</sup> Dreger, 9.

<sup>25</sup> Haraway, 85.

<sup>26</sup> Herbert Spencer as read in Hrdy, 14-15.

turns out, what he was actually seeing were amoeba-like organisms called animalcules, but in all fairness very few scientific theories stand the test of time anyways. What is more important is *why* he saw tiny people housed in sperm. The answer to this question is in the social ethos of his time and place. In Hartsoeker's seventeenth century Europe, it was men who claimed the active gender role, which left women, the infamous 'other,' with passivity. It was logical for the male germ cell to contain all the essential ingredients for a human. What could be more active than a microcosm of human life? These sperm just needed a receptacle to marinate in for a while. Cue the womb, ever willing and ready to receive the little human (and its nine month contract). Hartsoeker's theory was an exceptionally good fit and fuel for the gender status quo.

Thank goodness such outlandishly biased and unscientific practices are behind us, right? We now know that the sperm is haploid (16 chromosomes' worth of DNA instead of the 32 typical of somatic cells) and must therefore meet up with the likewise haploid



maternal egg to begin development. The following conception story should be familiar to most readers who have found themselves in a high school science or health class (or, as is the case at Rhodes, even a college level biology course): millions of tiny sperm, tails whipping frantically, racing to pass through

the cervix into the uterus where a colossal egg looms stoically at the finish line, ripe for the fertilization. It's as extraordinary as Hartsoeker's *homunculi*, but with the added clout of non-fiction. In closer inspection, however, the theme that these two stories share,

separated though they are by three hundred years of scientific advance, should be a warning flag to the belief that modern science is immune to the influence of culture. Here again, the sperm and the egg are anthropomorphic players donning the gender norms ascribed to the sexes that they are supposed to define. What's more, these norms haven't even bothered to change all that much: sperm are ruthlessly *active* in their race to the ovum, which *passively* awaits the conquering hero in the womb. With the authority of science, these biological performers reinforce normative ideas of gender by suggesting that masculinity and femininity hold true all the way down to the single-celled gamete.

The impressive authority of the gamete to speak on behalf of gender also has economic origins. Viewing the human body in terms of economic output results in a social prescription for production: 'compulsory reproductive heterosexuality.' The sexual division of labor between the egg and the sperm ties gender to sex, the social to the biological (ambiguous gender could lead to mistaken sex and the decidedly *unproductive* possibility of homosexuality, or so the logic goes). In the language of economics, then, the story of the egg and the sperm is a value-laden narrative about production. True to form, the hierarchy of the sexes finds support in their reproductive outputs: when fertilization does not occur, as is far more often the case, the female cycle is necessarily a waste—a failure to produce despite the consumption of resources, the gravest of trespasses. The monthly maturation of the egg and preparation of the uterus is thus only productive if a sperm fertilizes that egg. Medical descriptions of menstruation imply a factory “gone awry, making products of no use, not to specification.”<sup>27</sup> I bet you can

---

<sup>27</sup> Martin, Emily. “The Egg and the Sperm: How Science Has Constructed a Romance Based on Stereotypical Male-Female Roles.” (1991), 486. I highly suggest this essay for readers “intrigued by the possibility that culture shapes how biological scientists describe what they discover about the natural world” 485.

guess which factory is running at maximum capacity, however: “Whereas the female *sheds* only a single gamete each month, the seminiferous tubules *produce* hundreds of millions of sperm each day”—never mind their odds of making it anywhere near an egg.<sup>28</sup>

Encouragingly, however, researchers that are able to avoid the gendered gamete trap are writing a very different story. Yet these revisions aren’t incorporated easily. In fact, I passed two college level biology courses before discovering the following research in a feminist theory seminar—research that has been available since the nineties. One scientist has explained this phenomenon as the “self-contained” property of scientific discourse—“[It is the nature of] the interaction between what is already known, what remains to be learned, and those who are to apprehend it...to ensure harmony within the system. But at the same time they also preserve the harmony of illusions, which is quite secure within the confines of a given thought style.”<sup>29</sup> Remember the mighty sperm, tails propelling them forward at a formidable speed? Researchers at John Hopkins University, who were actually trying to develop a male contraceptive, found a glitch in the idea of sperm blazing an unwavering path to penetrate the egg.<sup>30</sup> They found that the movement of a sperm’s tail whipped the head from side to side with ten times the force channeled in a headlong direction, making it a rather ineffective means of forward propulsion. This also challenged the long-held belief that the sperm forcefully penetrated the egg, instead suggesting “its strongest tendency, by tenfold, is to escape by attempting to pry itself off the egg.”<sup>31</sup> How, then, does the seemingly misguided sperm ever make it inside? It’s a

---

<sup>28</sup> Venon Mountcastle as read in *Ibid.*

<sup>29</sup> Ludwik Fleck as read in *Ibid.*, 492.

<sup>30</sup> Jay M. Baltz as read in *Ibid.*

<sup>31</sup> *Ibid.*, 493.

coordinated effort. From as far as twenty head-lengths away the sperm sends a filament out to the egg—a process the researchers described as “firing a harpoon,” but could have just as well have been “making a bridge” or “throwing a line.”<sup>32</sup> Together at last, adhesive molecules on the surface of the egg trap the flailing sperm flat on its side so that its digestive enzymes can soften the zona (outer layer) of the egg—but only at the sperm’s tip, leaving the sides safely anchored. Stuck in this position, the action of the sperm eventually orients it headfirst so that it may continue to make its way through the abundant cytoplasm of the egg to fuse with the nucleus. Even here the egg is a highly active participant: the journey is “soon interrupted by the sudden and swift migration of the egg nucleus, which rushes toward the sperm with a velocity triple that of the movement of chromosomes during cell division.”<sup>33</sup> Just as their infinitely more complex hosts, it seems that the egg and sperm evolved substantially in response to one another. Now isn’t that a more interesting story?

That’s not the end of the riveting tale of your development, however. It’s actually not even the beginning. Long before the nucleus of the egg charges across the cytoplasm to meet the burrowing sperm, factors both internal and external to donors of these germ cells are already shaping the fate of the future embryo. The influence of these factors is what shapes an individual’s *phenotype*, the “tangible properties of the organism that are influenced but never entirely determined by genes.”<sup>34</sup> A pregnant mother’s smoking habit, for example, can harm the eggs of her unborn daughter—an external, non-genetic

---

<sup>32</sup> Gerald Schatten and Helen Schatten as read in *Ibid*, 494.

<sup>33</sup> *Ibid*, 495.

<sup>34</sup> Blaffer Hrdy, 56.

influence that is two generations removed from the grandchild that it could affect.<sup>35</sup> (All of a female’s eggs, unlike sperm, develop in utero. Only a few will later mature to be either fertilized or shed from the body in menstruation.) It’s not only maternal bad habits, however, that can affect the developing embryo—non-genetic factors such as “how much cytoplasm the mother delivers to her egg, what other chemicals she adds, what time of year it is, what the mother is eating at the time, diseases she might have, [and] even her own recent social history” can also play a huge role in individualization.<sup>36</sup> Your genes, much like a light switch, can be turned ‘on’ or ‘off’ by such influences so that “nothing is genetically determined in the sense of determined by genes alone.”<sup>37</sup> Genes, rather, provide the options—and for humans the range of possibilities is enormous. This ‘phenotypic plasticity’ gives you a head start by preparing you for the highly variable environmental and social conditions that await you outside of the womb (and, far from abandoning you at birth, factors of ‘nature’ and ‘nurture’ continue to shape you throughout development).<sup>38</sup> And while genes do limit the possibilities of your phenotype (no exposure will make you sprout leaves and start photosynthesizing), it is your phenotype that is directly exposed to the pressures of natural selection. All that you can see, touch, or experience of another organism is their phenotype, and these interactions, as they come to influence reproduction and survival, are the stuff of evolution.<sup>39</sup>

---

<sup>35</sup> <http://health.usnews.com/usnews/health/healthday/071121/smoking-before-after-pregnancy-harms-daughters-fertility.htm>.

<sup>36</sup> Blaffer Hrdy, 56.

<sup>37</sup> M.G. West-Eberhard as read in Ibid.

<sup>38</sup> Phenotypic plasticity originally referred only to those changes occurring up through development, but might now also refer to behavioral changes that occur during an organism’s adult life. In this sense, genetics are even less of a determinant for humans, given the addition of our incomparable *cognitive* plasticity.

<sup>39</sup> There is much to be said for evolutionary theory that I simply don’t have room to address here. A brief example for our purposes is the bright red plumage of male cardinals (in contrast to the relatively drab females). Plumage coloration is a phenotypic characteristic influenced by non-genetic factors such as diet

But let's return to the womb. Here, in order for any factor to affect the phenotype of a developing embryo it must be first translated into the biological language of chemicals. Predominately, this influential communication between mother and child is facilitated by hormones. While most of the research conducted on developmental plasticity studies insects for reasons of practicality (including their short lifespans, a finite number of chemical signals, and the ethical—as well as pragmatic—difficulties of rearing identical human individuals under different embryonic conditions), such experiments are nevertheless extraordinary testimonies to the permeable nature of developing bodies. The diet of female honeybee larvae, for example, determines whether they grow up to be a worker or a queen. Despite identical genotypes, feeding a larva 'royal jelly' alters her morphology and behavior in *fifty-three* different ways. It could be said that what she eats determines both her sex *and* her gender. What might we say for the larvae that don't receive the royal jelly and are therefore unable to reproduce? With a sex binary centered on reproductive ability, these bees are effectively *unsexed*—a designation that logically follows to Maria Patino, menopausal females, males with too low a sperm count for fertilization, and so on. And with regards to gender (as a set of behavioral attributes associated with sex) the presence or absence of royal jelly also determines “whether or not [the larva] becomes an imperious mother or servile spinster sister.”<sup>40</sup> Honeybees, at least, truly are what they eat.

Undoubtedly there is incredible variation in the forms that the human body can take, especially with regards to sex. It is not my intent, however, to claim there are no

---

and disease, and it therefore advertises the male's health to potential mates. Thus, while genotype is what he passes to offspring, it is his phenotype that informs female sexual selection. For further discussion on this topic as it pertains to social primates see: Blaffer Hrdy, esp. p. 450, 514

<sup>40</sup> Ibid, 55.



observable patterns in the bodies we label ‘male’ and ‘female.’ Clearly many ‘females’ come equipped with a uterus, ovaries, clitoris, labia, etc., just as most ‘males’ can boast testis, vas deferens, prostate, and so forth. My point, rather, is that the traits that we look to in search of a definitive answer to the question of sex have moved all over the body—from genitalia to tiny bits of tissue to single chromosomes, just to name a few. These locations were chosen for many reasons, and the choice *de jour* affects everyone on a daily basis, not just those with intersex anatomy. We are no closer today to an ultimate, end-all answer for sex than we were two hundred years ago (when doctors first began to seriously turn their attention to the intersex bodies that most effectively muddle the binary).<sup>41</sup> Yet even then, in a time we might like to consider less progressive than our own, John Stuart Mill had a skepticism that we would do well to heed today: “I deny that any one knows, or can know, the nature of the two sexes, as long as they have only been seen in their present relation to one another.”<sup>42</sup> Nevertheless the hunt continues, proving our commitment to the idea that sex can tell us something important and timeless about what it means to be human. The search for sex is a frantic quest to justify gender. If sex is forced to withdraw from the alliance gender will have to relinquish its claim to natural origins. A society without scientific justification for the behavioral and cognitive differences in men and women would have to instead question why such differences nonetheless seem to exist (or, heaven forbid, resort to supernatural explanations like

---

<sup>41</sup> For more information, see Dreger: “Focusing on late 19<sup>th</sup> century Britain and France, she goes into the medical field to see how and why medical and scientific men constructed sex, gender, and sexuality as they did, and especially how the material conformation of intersex bodies—when combined with social contingencies—forced particular constructions.” (from an online review)

<sup>42</sup> John Stuart Mill, ed. Dale E. Miller. *The Basic Writings of John Stuart Mill: On Liberty, the Subjugation of Women, & Utilitarianism*. (New York: Random House, Inc., 2002), 144.

divine decree). Many are none to eager to allow the answers to these questions to strip their anatomy of its privilege. The stakes are high.

### It's All In Your Head

*“For a Man ought no more to value himself upon being Wiser than a Woman, if he owe his Advantage to a better Education, and greater means of Information, than he ought to boast of his Courage, for beating a Man, when his Hands were bound.”<sup>43</sup>*

So what exactly is at stake for roughly half of the population if sex differences turn out to be unfounded? It is something called ‘male privilege’— or the assumption that “one has the right to occupy any space or person by whatever means, with or without permission...[a] sense of entitlement unique to those who have been raised male in most cultures.”<sup>44</sup> Of course this charming personality trait does not come packaged with every XY chromosome and pair of testes, nor is it the case that such an attitude couldn’t be present in a person without either (as I’m sure your own experience can attest). Rather, male privilege is a masculine *gender* attribute—it must be learned. But this benefits package, regardless of whether the party in question is aware or desiring of it, contains incredible privilege—from unearned higher wages and better test scores in the maths and sciences, to access to things as seemingly arbitrary as “higher quality, less expensive clothing.” Masculinity is a pretty good deal. How might one go about signing up?

Infants are born into a world unabashedly obsessed with their gender. The continual emphasis we place on whether one is male or female—through cultural

---

<sup>43</sup> Drake, as read in Fine, xxiii.

<sup>44</sup> Kate Bornstein, *Gender Outlaw: On Men, Women, and the Rest of Us*. (New York: Routledge, 1995), 108.

conventions of dress, appearance, color, activities, et al.—scream “Pay attention! This is important!” to an infant’s astute brain. This brain evolved in response to the demands of a highly social environment and is thus wired with “a number of behavioral systems ready to be activated...[including the] sophisticated cognitive capacities that require dynamic feedback from the environment and practice to learn.”<sup>45</sup> Like little sponges, children begin soaking up information about the two classes of humans (male and female) immediately from sources as diverse as the colors they find themselves surrounded by to the quantity and quality of interactions with their primary caregiver (one study found girl babies enjoyed more frequent communication and interaction with their mothers than boys, perhaps contributing to better social skills).<sup>46</sup> Yet even sincere attempts at gender neutral parenting seem to come up short, leaving well intentioned parents whose son shows no interest in playing dress up or whose daughter is found cuddling her toy truck in a baby blanket<sup>47</sup> to conclude “that only something immutable could intervene between their gender-neutral efforts and the gendered outcomes they witness.”<sup>48</sup> So can painting your daughter’s walls pink or giving your son a toy truck really account for her sensitivity to other’s emotions or his future success in chemical engineering?

---

<sup>45</sup> Blaffer Hrdy, 410. Recalling the discussion on phenotypic plasticity, one of the reasons we are so proficient at adapting to different environments is because “the most rapid adaptations tend to be behavioral rather than physiological. Individuals use behavior to produce a new phenotype, and subsequently, at a more leisurely pace, selection for traits that complement and enhance the new phenotype can be selected for (450).” Infants use the cues provided by the people surrounding them to learn and shape their behavior to the environment.

<sup>46</sup> Clearfield, M.W., & Nelson, N.M. as read in Fine, 198. This discrepancy was observed despite the fact that boys were neither less responsive to their mother’s interactions nor less eager to be near her. The authors suggest, “that this may help girls learn the higher level of social interaction expected of them, and boys the greater independence.”

<sup>47</sup> Brizendine, L. as read in Ibid, 191. This account is from one of Brizendine’s patients, who gave her three-and-a-half-year-old daughter many unisex toys, only to find her cuddling the truck and cooing “Don’t worry, little truckie, everything will be all right.”

<sup>48</sup> Kane, E.W. as quoted in Ibid, 190.

According to neuroscientific proponents of the hormonal organizational-activational theory, these sex differences are all in your head—literally. In what is more generally called ‘brain organization theory’ it is thought that sex differences are hardwired into the eighty billion neurons and one hundred and fifty trillion connecting synapses housed inside your skull coordinating your every thought, movement, emotion, and perception. Basically, the rationale is that since prenatal ‘sex’ hormone<sup>49</sup> exposures differentiate the bodies of males and females in utero they must also shape the prenatal mind for “masculine or feminine patterns of desire, personality, temperament, and cognition.”<sup>50</sup> Hope springs eternal in the search for biological support of sex differences, and with the accessibility of neuroimaging technology the brain has become a sort of accessory reproductive organ. This technology has allowed neuroscientists to measure, in very fine detail, both brain structure and function. Early quests to compare the male and female brain focused on total brain size—scientists put a great deal of effort into filling empty skulls with grain and taking weight measurements to eventually conclude that the “missing five ounces of the female brain” was certainly the biological culprit for their intellectual inferiority.<sup>51</sup> This turned out to be no truer than in the case of a cow and a parrot, of course.

Today neuroscientists are a little choosier, looking instead to specific structures of the brain for hints of sexual dimorphism that will explain things like why men are better ‘systemizers’ and women are better ‘empathizers,’ but even promising discoveries like

---

<sup>49</sup> I put “sex hormones” in quotation marks because this label is a little misleading. The ‘discovery’ of these hormones were colored by preexisting notions of masculinity and femininity, causing scientists to “look for, create tests for, classify, and perceive [them] in a way that fit them into a dualistic system of sex.” Male and female bodies use *both* androgens and estrogens, and for widely varied purposes beyond reproductive development and functioning (Jordan Young, 16).

<sup>50</sup> Jordan-Young, xi.

<sup>51</sup> Romanes as quoted in *Ibid*, xxiv.

the relatively larger corpora callosa of women (the strip of neural tissue running between the left and right hemispheres that allows cross communication, which supposedly explains a woman's 'innately' more sympathetic nature) are just as likely to be due to relative body size differences as well. It is not women's brains that show this quality, but rather *small* brains in general. Brain structures do not scale up in a one to one ratio, as Cordelia Fine explains: "Larger brains create different sorts of engineering problems and so—to minimize energy demands, wiring costs, and communication times—there are physical reasons for different arrangements in differently sized brains (143)." But as long as we're using the brain as an accessory sex organ, it might make more sense to try and locate a difference in the brain that would account for different *sexual* behavior.

Unfortunately, the only such structure that has been found to date is a tiny bunch of cells in the brainstem that innervates the penis.<sup>52</sup> Important stuff to be sure, but not quite the radical gender validating discovery one might hope for.

Neuroimaging data doesn't hold up much better under scrutiny. A tendency termed "neuro-realism" by bioethicist Eric Racine describes how analyzing data from fMRI coverage is sort of like being in love—the evidence it produces "can make psychological phenomena seem somehow more real or objective than evidence collected in a more ordinary fashion," blinding us to its possible flaws or limitations.<sup>53</sup> The colored blobs in fMRI scans don't directly show brain activity, however. What they actually show are significant differences in blood oxygen levels (because working neurons consume more oxygen) for the same subject during a control and experimental task,

---

<sup>52</sup> Ibid, 104. This is in fact the only structure we have found that "includes a clear hormonal beginning, a neat neural middle, and a convincing behavioral end"—i.e. the only story that clearly follows the plotline set forth by the brain organization theory.

<sup>53</sup> Ibid, 170.

which are then compared. Since there are several stages of complicated analysis involved to form the final picture, the chances for spurious input are many. What's more, nuisance variables like drinking a cup of coffee before the scans can have dramatic effects on the results without actually affecting the subject's behavior.<sup>54</sup> And if you still aren't convinced to toss aside those rose colored neuro-realism glasses, consider this: using standard statistical fMRI procedures, researchers found a dead salmon to have significant brain activity in an empathizing task when compared to brain activity during at 'rest.' Their point was not that zombie salmon are good at reading human emotions, but that the statistical thresholds used in most neuroimaging research can allow even a dead fish to appear significantly empathetic.<sup>55</sup>

So what exactly are these studies claiming to tell us about hardwired sex differences? Well for one, 'brain lateralization' experiments—which use techniques much like those with the empathetic dead salmon—suggest that while in the womb “high levels of fetal testosterone in males result in a left hemisphere that is underdeveloped relative to the right.”<sup>56</sup> Since the left hemisphere is typically thought of as the 'artistic' or 'creative' side and the right as the analytical side, from this came the idea that the reason males are more prominent in the fields of math and science is because of their hypertrophied super right brain and since women are less specialized and better at conducting cross chatter between the hemispheres (in addition to a supposedly larger

---

<sup>54</sup> Ibid, 135.

<sup>55</sup> Bennett, C.M. et al. as read in Ibid, 150. This experiment was performed to make a point about the threshold for significance in neuroimaging studies not being high enough. Researchers that showed photos to a dead Atlantic salmon and “asked [it] to determine the emotion the individual in the photo must have been experiencing.”

<sup>56</sup> Ibid, 136.

corpus callosum)<sup>57</sup> they have better language skills. This is in the same vein of the luminous wonder of male ‘spotlight’ and female ‘floodlight’ cognition, which, due to neuroimages of scattered female activation patterns and localized male ones, concluded that women have better interhemispheric connectivity while men have better intrahemispheric connectivity.<sup>58</sup> Taken to their extreme conclusions in popular ‘scientific’ texts like *When Mars and Venus Collide*, these fMRI blobs are given as explanation for a woman’s ability to multitask her way through cooking the family dinner to men’s “propensity to forget to buy milk.”<sup>59</sup> Suffice it to say that even if neuroscientists would never leap to such far-fetched conclusions, giving this research too much clout before they’ve worked out kinks is a convenient way to maintain the status quo, which should always make us wary.

After all of our searching, even with the newest technologies, we’ve still yet to find any convincing biological evidence for the existence of the innate sex differences. Obviously we are far more similar than we are different, which would be a more productive point of departure if our goal is to make progress in addressing issues of social inequalities. Perhaps it’s time to stop searching for justification for our current system—one that has been allowed to rationalize the unequal, and oftentimes violent, treatment of individuals based on cultural ideas we have about sex, gender, and sexuality and how they should be allowed to relate to each other. We need to step back from these categories enough to both recognize their construction and objectively assess their effects. There is clearly a societal angst about opening up the norms of sex and gender for questioning, as is clear in both political discussions of LGBTQ rights and more colloquial

---

<sup>57</sup> For a thorough critique of the corpus callosum research see Fausto-Sterling, 116-121.

<sup>58</sup> Auyeung et al. as read in Ibid, 109.

<sup>59</sup> Dreger, 140.

forums like the commentary on the case of Jaqi Lloyd. We must come to a place where the fear of alterity does not incapacitate the discussion. What we have to lose by opening up the borderlands of our binaries is nothing compared to the violence we do by imposing them. I am hopeful for change, especially through my generation, where I see a willingness to question institutions and practices that we are told are immutable and timeless, like what a family looks like or who can run a country. Change begins with discussion, and I hope that this essay has given you something to talk about.



## Works Cited

- Bornstein, Kate. *Gender Outlaw: On Men, Women, and the Rest of Us*. New York: Vintage Books, 1995.
- Fausto-Sterling, Anne. *Sexing the Body: Gender Politics and the Construction of Sexuality*. New York: Basic Books, 2000.
- Fine, Cordelia. *Delusions of Gender: How Our Minds, Society, and Neurosexism Create Difference*. New York: W.W. Norton & Comp., 2010.
- Dolan, Eric W. "Jealous Boyfriend Allegedly Punched Lesbian Woman in the Face | The Raw Story." *Raw Story*. N.p., 1 July 2012. Web. 03 Aug. 2012. <<http://www.rawstory.com/rs/2012/07/01/jealous-boyfriend-allegedly-punches-lesbian-woman-in-the-face>>.
- Haraway, Donna. *Primate Visions: Gender, Race, and Nature in the World of Modern Science*. New York: Routledge, Chapman & Hall, Inc., 1989.
- Hrdy, Sarah Blaffer. *Mother Nature: Maternal Instincts and How They Shape the Human Species*. New York: Ballantine Publishing, 1999.
- Jordan-Young, Rebecca M. *Brain Storm: The Flaws in the Science of Sex Differences*. Cambridge, MA: Harvard UP, 2010.
- Kant, Immanuel; trans. James W. Ellington. *Grounding for the Metaphysics of Morals*. 3rd ed. Hackett, 2003.
- Martin, Emily. "The Egg and the Sperm: How Science Has Constructed a Romance Based on Stereotypical Male-Female Roles." 1991.
- Ritzer, George. *Sociological Theory*. Boston: McGraw-Hill, 2008.
- Stuart Mill, John., ed. Dale E. Miller. *The Basic Writings of John Stuart Mill: On Liberty, the Subjugation of Women, & Utilitarianism*. New York: Random House, Inc., 2002.
- Vann, Madeline. "Smoking Before, After Pregnancy Harms Daughters' Fertility." *US News*. U.S. News & World Report, 21 Nov. 2007. Web. 03 Aug. 2012. <<http://health.usnews.com/usnews/health/healthday/071121/smoking-before-after-pregnancy-harms-daughters-fertility.htm>>.